Operations Manual

I. GENERAL

1. Knowledge. All members of the Thoroughbred Flying Club (the "Club") are required to be familiar with the regulations of the Federal Aviation Agency required to be followed by private pilots (the "FARs"), the By-Laws of the Club and the operating rules and procedures contained herein, including amendments and modifications thereof as are announced at a general meeting, published in the Club newsletter, distributed to all members via e-mail, or otherwise circulated to all members in a means approved by the Club's Board ("Board"), and incorporated herein.

2. Compliance. All members of the Club are required to observe all FARs and Club rules and procedures. Failure to observe such rules and regulations may result in action against a member by the Board. Requests for deviation from any rule or procedure should be presented to the Club President or, if unavailable, another officer of the Club, who will in turn present the request to the Board for decision.

3. Special Rules. Special rules for the pilots may be adopted from time-to-time by the Club's Board. Such rules when adopted and in effect are made a part hereof.

II. PROFICIENCY, CURRENCY, AND SOLO PRIVILEGES

1. Initial Checkout:

   A. The new Member must meet the Initial Checkout requirements for at least one Club aircraft.

   B. Successfully complete an Initial Checkout flight with a Club approved CFI.

   C. Subsequent Initial Checkouts for other models of aircraft owned by the Club may be completed with any Club approved CFI.

   D. Experience. Each Airplane has Minimum Requirements that must be met before flying without an instructor.

2. Proficiency.

   A. Members are required to maintain currency. No member may act as PIC of a Club aircraft unless that member has logged as PIC at least 3 takeoffs and landings within the previous 90 days in an airplane. Members whose currency has lapsed under this rule must fly with a CFI in any airplane before acting as PIC of a Club aircraft. Note this does not require a formal review or CFI checkout.

   B. Biennial Review. To operate a Club aircraft, each pilot must have fulfilled the biennial review requirement required by the FARs.

   C. Night Operations. To operate a Club aircraft at night, each pilot must have fulfilled and be current with the night flight requirements established by the FARs.

3. Instrument Flight. To operate a Club aircraft under instrument conditions, each pilot must have fulfilled and be current with the instrument flight requirements established by the FARs.

4. A Non-Member CFI may be used by a Club Member with prior approval by the Board. That CFI will be listed on our Roster in Flight Schedule Pro so that he is covered by our insurance policy

5. Use of Club Aircraft to provide training to Non-Members is prohibited. We do allow Discovery Flights and Young Eagle Flights, but All Takeoffs and Landings must be performed by the member.

III. AIRCRAFT OPERATION

1. Pilot-in-Command. Only a Club member who is in good standing in terms of payments owed to the Club, has satisfactorily completed required checks, and has met the experience requirements for the type of plane and flight to be conducted may act as pilot-in-command of a Club aircraft; provided, however, that notwithstanding the foregoing a Club-approved CFI may act as pilot-in-command and provide dual instruction to a Club member in a Club aircraft.
2. Preflight. Prior to flight, all aircraft must be inspected as provided in the pilot's operating manual for such aircraft. The pilot-in-command is encouraged to review previous pages of the aircraft's logs and squawk book (including any squawks noted on Flight Schedule Pro or any other place designated by the Board). Satisfactory repairs must be accomplished before flight to any equipment or to alleviate any malfunctions or squawks noted in the aircraft's logs and/or on Flight Schedule Pro or such other place designated by the Board if the aircraft may not be operated in a safe manner because of an equipment problem or malfunction.
3. Landings.
    A. Except in an emergency, Club aircraft should only be landed on runways at airports included in the official Airport/Facility Directory.
    B. If the airport is not in the AFD (i.e., Private Airports) then the Pilot in command must ensure the landing area is safe and the Owner/Manager permission is obtained.
    C. All Cirrus Aircraft must be operated from Hard Surface Runways with a minimum of 3000ft x 50ft to operate to runways less than this requires Owner's approval.
4. Accident, Damage, Malfunction Reports. Club members are required (i) to record (with necessary details) all accidents, damages, incidents, equipment failures and malfunctions in the squawk module on Flight Schedule Pro, or in such other fashion designated by the Board. Report all accidents, damages, or other incidents directly to the Club President or to a member of the Board. Equipment malfunctions and items in need of maintenance should be reported as quickly as is practicable.

5. Securing Planes.

A. After any use of a Club aircraft, the following procedures should be followed:

In a Hangar:

1. Avionic master switch off or, if none, all avionic switches off
2. Master switch off
3. Aircraft trim in take-off position
4. Windshields and Leading edges cleaned
5. Cabin clean
6. Seat belts folded
7. All other procedures indicated on the “engine shutdown” and “securing aircraft” sections of any checklist.
8. Postflight walk around
9. Complete Flight Schedule Pro Check-in, Record any squawks and oil added
10. Add Invoice and Pay for flight

Tied Down; In addition to the items above

1. Aircraft tied down securely
2. Control lock in place
3. Pitot tube covers attached and in place
4. Windscreen cover on
5. Intake and pitot tube covers in place

B. The Hobbs and / or tach times, oil added and squawks are to be entered into Flight Schedule Pro as soon after the flight as practicable.

C. If a dangerous condition exists, a note shall be attached to the yoke of the aircraft President or Board member must be notified immediately. The Board member will than contact the Owner or Maintenance as soon as possible.

D. Loading and Unloading. Passengers are not allowed to embark or disembark while the aircraft engine is running.

6. Cold weather flying. On the first flight of the day if the outside temperature is thirty-two degrees Fahrenheit (32F / 0C) or lower, or the outside temperature has been at or below twenty degrees Fahrenheit (20F / -7C) for more than 2 hours within 12-hours the preceding the flight, Club aircraft may not be operated unless a suitable pre-heating procedures are used. The cost of such pre-heating procedures is to be borne by the member using the aircraft personally.

B. Preheat Conformation. A member must confirm that the preheat was successful, by confirming that the engine is warm to the touch and that oil is flowing freely from the dipstick.

C. Use of a heated hangar. If a member chooses to preheat using a heated hangar, the aircraft must be in the hangar for at least 8-hours prior to the flight.

D. Recommendation. If a member has the time and the resources, the Club requests, but does not require, that the member use a heated hangar.

7. Smoking. No Smoking is allowed in Club aircraft at any time.

IV. BOOKING AND SCHEDULING

1. Booking. An aircraft may not be flown without a booking first having been made in Flight Schedule Pro.
2. To allow equitable aircraft availability to all Club members, the following rules for booking Club aircraft are to be followed:
   A. Maximum booking length: 7 days
   B. Maximum overnights: 14 per year (Basic Level.), 21 per year (Advanced Level)
   C. Maximum number of bookings on Flight Schedule Pro at one time: 6

Note: The above rules may be waived in advance for extenuating circumstances by the Board. Members should make the request to a Board member, who shall present the request to the entire Board for approval.

3. Cancellation of Bookings. A booking should be canceled as soon as a Club member is aware for whatever reason (including IFR or marginal VFR weather) that the Club Member will not be able to utilize the Club aircraft that he has booked. In the event an aircraft returns to its home base, the booking should be updated to reflect that the plane is available for use by other Club members.
4. Alternate or Standby Bookings. In the event a Club aircraft is booked at a time that a Club member wishes to use the aircraft, the Club member may use Flight Schedule Pro to book a standby schedule or request to be notified via email or text if the aircraft becomes available.

5. Flying Time Limitations. For the safety of all club members and protection of the aircraft, the following flying time limitations are to be followed:
    A. Daily Flight Time Limit: 8 hours Hobbs time
    B. Monthly Flying time limit: 50 hours Hobbs time
    C. Annual Flying Time Limit: 500 hours Hobbs time
    D. Minimum rest before flying: 10 hours
    E. Minimum rest between any 2 flying periods: 10 hours
    F. Maximum length of any flying period without a rest period: 14 hours
    G. Maximum flying period length is reduced to 10 hours, if any part occurs between 11 pm and 6 am EDT.
6. Return to Home Base. All flights should return to the home base by the end of the time for which the aircraft was booked. If poor weather or unavoidable factors prevent a flight from returning on time, Flight Schedule Pro should be updated. The Club member shall also ascertain from the schedule the Club's members whose bookings will be affected by the delay in return and the Club member shall telephone such members to advise them of the delay. If the aircraft is not booked until the expected time of return, the booking should be extended by "Edit End Time" in Flight Schedule Pro.
7. Aircraft Left Away from Home Base. A Club member who must leave a Club aircraft at an airport that is not its home base is financially responsible for the return of the aircraft to its home base as soon as conditions permit. The aircraft must always be left correctly tied down or hangered while away from its home base.
8. Grounding. Any two of the Club's officers and members of its Board may ground a Club member from using Club aircraft if they believe the Club member has operated an aircraft in an unsafe manner. A Club member who is grounded may request that the Club Safety Board conduct an investigation as provided in the Club's By-Laws and a Safety Board meeting will be held within 15 days to determine whether such grounding was warranted. Whatever the outcome, the member is not relieved of any financial responsibilities as described in the TFC Bylaws.

V. FINANCIAL

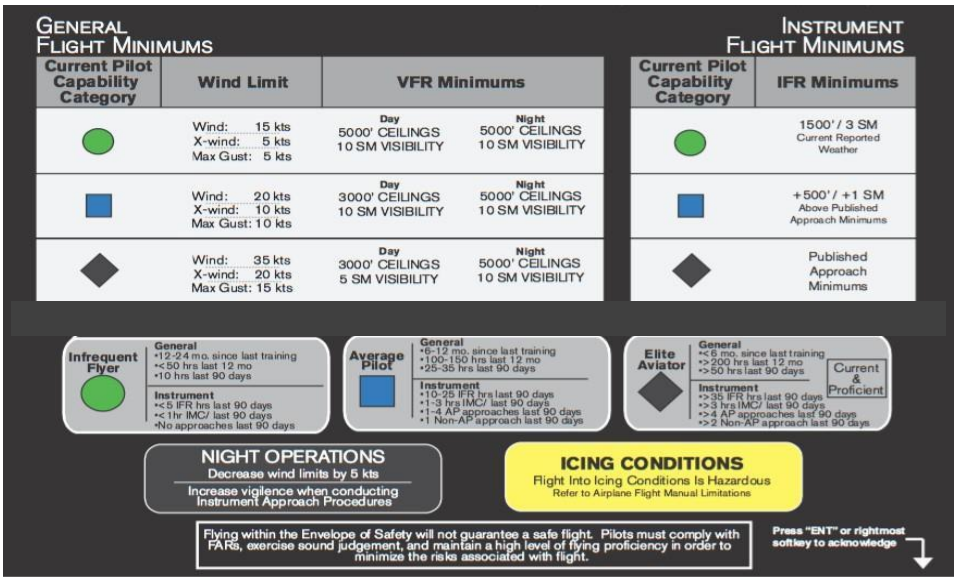
1. Payment of Dues and Charges. Monthly dues are charged to the Debit or Credit Card on file on the First of the Month. All flights should be paid through Flight Schedule Pro by Add Invoice and Complete Sale at the completion of each flight.
2. Delinquency. Any Club member who has failed to pay any monies due the Club within Fifteen (15) days after such monies are due shall be considered a delinquent member and shall be prohibited from flying Club aircraft.
3. Fees. All landing and parking fees are to be paid personally, if possible, by a Club member at the time of occurrence.
4. Fuel Charges. The aircraft are to be returned to the Club at the specified level for each

aircraft. All Fuel charges are paid for by the Club Member.

5. Club Fees: Joining Fees and Equity Share Fees, to be fixed by the Board, will be charged to the member upon admission to the Club as specified in the Club By-Laws.

Personal Minimums

Thoroughbred Flying Club encourages pilots to regularly assess their recent flight experience, training, and pilot certification to develop personal minimums for wind, ceiling and visibility, and instrument approach minimums. The following figures should be used as a starting point for determining your own personal minimums and should be reviewed periodically. Reducing your own personal minimums should be done strategically.



Guidance for Establishing Personal Weather Minimums

General Flight Guidelines

	1	2	3	4	5	Your Rating
Years Actively Flying (Maintained FAA req. currency)	>10	6-10	2-5		<2	
Last Recurrent Training Event	<6 months		6mo-12mo		12mo-24mo	
Certificate Held	ATP or CFI	Commercial w/instrument	Private w/instrument	Private Pilot	Solo Student Pilot	
Total Time	2000	1000-2000	750-1000	500-750	<500	
Hours logged last 12 months	>200	150-200	100-150	50-150	<50	
Hours in last 90 days	>50	35-50	25-35	10-25	<10	
Pilot Mishap Last 24 months				Incident	Accident	
Landings last 30 days	>10	6-9	3-5	1-2	0	
						Total

Age: Add 2 pts for 65 years or older
Time to Achieve Private Pilot: Add 2 pts for 100+ hours
Time to Complete Transition Training: Add 2 pts for 30+ hours
Crew: Subtract 1 pt for flying with licensed pilot

Pilot Category	
●	≥ 23
■	14-22
◆	≤13

Category ◆ Not Applicable for pilots in first 100 hours of aircraft operation.

Checklist Philosophy

Checklists are in each aircraft. When used properly, checklists enhance the safety of flight by confirming the aircraft is appropriately configured for the flight condition.

Checklists can be assigned one of three classifications:

Normal Procedures used during normal flight operations. Normal checklists can be found in the Normal Procedures section of the POH. Normal checklists should be completed by use

of a flow pattern, then each item verified with a checklist. It may take several hours of training to develop these flow patterns.

Abnormal

Procedures used in response to system failures and malfunctions that, while not immediately threatening, may affect safety of flight if not addressed. Abnormal checklists can be found in the Abnormal Procedures section in the POH if such section exists for your aircraft. Abnormal checklists should be completed by reference to a checklist in the specific order written. In other words, read then do. Flows or "going by memory" should not be used for abnormal procedures.

Emergency

Procedures used in response to system failures and malfunctions that are an *immediate* threat to the safety of flight. Emergencies require immediate action by the flight crew to ensure a safe outcome. Emergency checklists can be found in the Emergency Procedures section of the POH. All emergency checklists are made up of bold **Memory Items** that should be completed by memory or flow pattern. If time allows, checklists should be used to verify all necessary steps have been taken.

For normal procedures, Thoroughbred Flying Club encourages using flow patterns to accomplish tasks; then reading a checklist -line by line- to verify completion of each task.

Section 1, Flight Procedures

Normal and Crosswind Takeoff and Climb

Prior to each takeoff (excluding multiple touch & go's) a takeoff briefing should becompleted even if it is to yourself. It helps develop an good mental picture for safe operation of the Aircraft and prepares you in case of an emergency. While the exact wording is up to the pilot giving the briefing, it should sound something like this:

This will be a_____(normal, short, soft) takeoff from runway_____. Rotation speed is _____KIAS climb at _____. Initial heading after takeoff is_____degrees to an altitude of_____feet. Abort the takeoff for any engine failures/abnormalities prior to rotation. If the engine fails after rotation I will_____. At_____

_____feet MSL a turn to return to the airport on runway _____becomes an option.

Perform the takeoff or crossing takeoff procedures listed in your aircraft's Operating Handbook.

CROSSWIND TAKEOFF

Deflect the ailerons into the wind during a crosswind takeoff. Maintain directional control with proper rudder input. Allow the aircraft to accelerate to a speed slightly higher then Vr prior to rotation. Lift the aircraft off the ground slightly quicker than with a normal takeoff. Shortly after rotation, crab the aircraft into the wind to track the aircraft along the runway centerline. Maintain coordination during climb with proper rudder input.

CLIMB

Begin the initial climb at published Vx or Vy speeds as required. After clearing all obstacles along your intended flight path begin to accelerate to a cruise climb airspeed and retract flaps at a speed appropriate for your aircraft. Your instructor will give you detailed instructions for your aircraft. After crossing a minimum 1,000' above ground level and well clear of the traffic Pattern turn off fuel pump and landing/taxi lights and complete the climb checklist.

Normal and Crosswind Approach and Landing

Normal landings should be made with full flaps. Final approach speeds should be adjusted to account for gusts exceeding 10 KTS by adding half of the gust factor (Example winds are 10 gusting 16. Gust factor is 6, so 3 KTS should be added to the approach speed). Reduce power smoothly and begin slowing from the final approach speed at a time that allows an easy transition from final descent to round- out and flare with minimum floating or ballooning. Touch- downs should be made on the main wheels first at speeds slightly above stall. Gently lower the nose wheel after the mains are on the ground.

CROSSWIND

It is recommended to crab the aircraft into the wind sufficiently enough to track the aircraft along the extended centerline of the runway. Hold the crab until the beginning of the round-out. At the start of the round-out, enter a slip by applying rudder pressure to align the longitudinal axis of the aircraft with the runway and simultaneously apply upwind aileron to keep the aircraft tracking the runway centerline. Touch-downs should be made on the upwind main landing gear first, followed by the downwind main landing gear, and nose gear. Hold aileron correction into the wind during the rollout and apply rudder as necessary to maintain directional control.

Rudder aligns the aircraft with the runway centerline. Aileron controls side-to-side drift over the runway.

Soft Field Takeoff

Ground roll distance will be significantly longer than what we experience on paved runways, review the POH for takeoff distance prior to a takeoff from any contaminated or soft surface runway. Always ensure that the quality and condition of the runway surface is adequate to support the aircraft. Avoid turf runways with long grass, wet or soggy soil, large ruts or holes. Follow the aircraft POH for specific soft field takeoff procedures and techniques.

Soft Field Landing

A soft field approach is quite similar to a normal landing approach. Touch-downs should be made on the main wheels first. A soft touch-down will reduce the stress on the landing gear and make it easier to keep the nose wheel from digging into the turf preventing a loss of directional control. Keep the nose wheel off the ground as long as possible by applying sufficient back pressure to the control yoke. A little power can be added immediately after touch-down to aid in keeping the nose wheel off the ground. Braking should be minimized. Excessive braking could lead to a loss of directional control on the runway. Higher power settings will be required to taxi on a soft field.

Short Field Takeoff

First and Foremost, If the airport you are going to requires the use of a Short Field Procedure to operate The Club encourages you to Choose another airport!

A short field takeoff procedure should be used any time the runway available is less than twice the takeoff distance required, as calculated in the performance section of the aircraft POH considering the current weather conditions and aircraft weight.

Configure the aircraft as specified in the POH and position the aircraft at the very end of the runway, leaving no useful runway behind you. Allow the engine to achieve full power prior to releasing the brakes, note that very heavy brake application may be required. Most aircraft have a published initial climb speed that is very close to the rotation speed. This generally requires a relatively aggressive, but still smooth, pull on the controls. Do be aware than an excessive pitch can cause a tail strike or stall, both of which should be avoided. Once clear of obstacles transition to a normal climb following the normal takeoff procedures unless specified otherwise in the POH.

Short Field Landing

Landings on short runways should be made with 100% flaps. Final approach speeds should be adjusted to account for wind gusts exceeding 10 KIAS by adding half the gust factor.

Progressively reduce power after clearing all approach obstacles. Proper airspeed and power control should result in an approach with minimal floating in ground effect without excessive sink rates during the approach. Touch- down should be made on the main wheels first.

Immediately after touch-down, ensure power is at idle, lower the nose wheel and apply brakes as required. To decrease stopping distances, consider retracting the flaps and holding the control yoke full aft. Emphasis should be placed on the accuracy of the touch-down to ensure enough runway remains after touch-down to stop the aircraft.

Go Around

A go-around should be executed anytime an approach does not meet the stabilized approach criteria outlined in this manual for instrument or visual conditions. A go-around should be completed from memory since it is a time critical maneuver.

In addition to the stabilized approach criteria, execute a go-around/missed approach for these conditions:

- Excessive ballooning during round-out or flare.
- Excessive bouncing or porpoising.
- Landing beyond the first third of the runway.

- Any condition when a safe landing is in question.
- Unstable approach.

The first priority of executing a go-around is to stop the aircraft's descent. Smoothly and promptly apply full power while simultaneously leveling the wings and pitching the aircraft to stop the descent. Maintain coordination while adding power by applying rudder pressure as necessary.

Retract the flaps to Takeoff. Do not fully retract the flaps at this point in the go-around because it may lead to excessive altitude loss. Begin pitching for a climb attitude once the aircraft's descent rate has been stopped and the aircraft is accelerating. Pitch for Vx if obstacle clearance is an issue. Pitch for Vy for all other situations. Retract flaps once the aircraft is climbing, clear of obstacles, and has established a safe airspeed.

A go-around is an important maneuver which must be practiced frequently to maintain proficiency. Choosing to go-around should not be viewed as a failure of the approach, rather a smart decision and an opportunity to practice a skill equally as important as landing.

to accomplish this is by watching how the nose moves right or left across the sky. Correct any side-to-side drift with rudder only. This is easiest to do on a day with some clouds.

Emergency Descent

There are multiple situations that require the use of an emergency descent. For example, fire, medical emergency, or an O2 malfunction are just a few. Whatever the reason, the main purpose of performing an emergency descent is to lose altitude as quickly as possible to avoid life- threatening hazards. For some scenarios, landing the aircraft at an airport or suitable off-airport landing site may be an additional objective.

To enter an emergency descent, reduce the power to idle and lower the nose approximately 10 - 15 degrees to intercept Vne. Pitch the aircraft to Vno if significant turbulence is expected during

the descent. Alternatively, if the manufacturer doesn't specify a procedure, flaps can be fully extended and the pilot should pitch for Vfe.

Banking the aircraft up to 60 degrees will help the aircraft descent more quickly as well as keep loading positive during the maneuver. Early in your training, it is helpful to establish a pitch attitude that will give a desired airspeed before introducing bank. Ultimately, the goal is to be able to establish pitch and bank simultaneously.

Set the mixture control as recommended and turn the boost pump on. Clear the engine every 1000 feet by increasing throttle as necessary, then reducing back to idle. The combination of high airspeed and low power will cause CHTs to cool. It is good practice to allow the engine to warm before applying high power settings. When possible restore power to minimum necessary for level flight until CHTs return to green.

Inform ATC of the emergency and intended actions and request any assistance if necessary when workload permits.

Emergency Procedures

When practicing engine related emergencies other than fire, the **ABC** checklist is a great place to start. It works well for engine failure scenarios, as well as other problems such as a rough running engine.

This doesn't replace knowing the memory items covered in your POH and checklist!

A - AIRSPEED - Set the plane for "Best Glide Speed".

B - BEST FIELD - Locate a suitable landing site, don't overlook any close airports, but otherwise find a good looking field that's wide and long and oriented into the wind. Turn towards this field. It's not good enough to just locate a field, you have to be able to land on it. If you arrive over the field too high you can always circle down to lose altitude, if you're not going to reach the field because you didn't turn immediately towards it there's nothing that can help you gain altitude.

C - COCKPIT CHECK - Why did the engine stop and can you re-start it? Don't overlook the obvious, if you just moved something and the engines stops, move it back! In the Diamond this flows back to front and right to left.

- Fuel Selector, ON, switch tanks.
- Mixture, as required.
- Throttle, open.
- Alternate Air, open.
- Fuel Pump, on.
- Master Switch, verify on
- Mags, cycle L,R, Both.

If you have time, review your emergency checklist.

D - DECLARE AN EMERGENCY - Tell somebody what's happening. If you were already in contact with ATC or FSS or even Unicom at an airport, tell them. Otherwise use the emergency frequency (121.5) to call your Mayday and location. Set your transponder to 7700 if not already assigned a code.

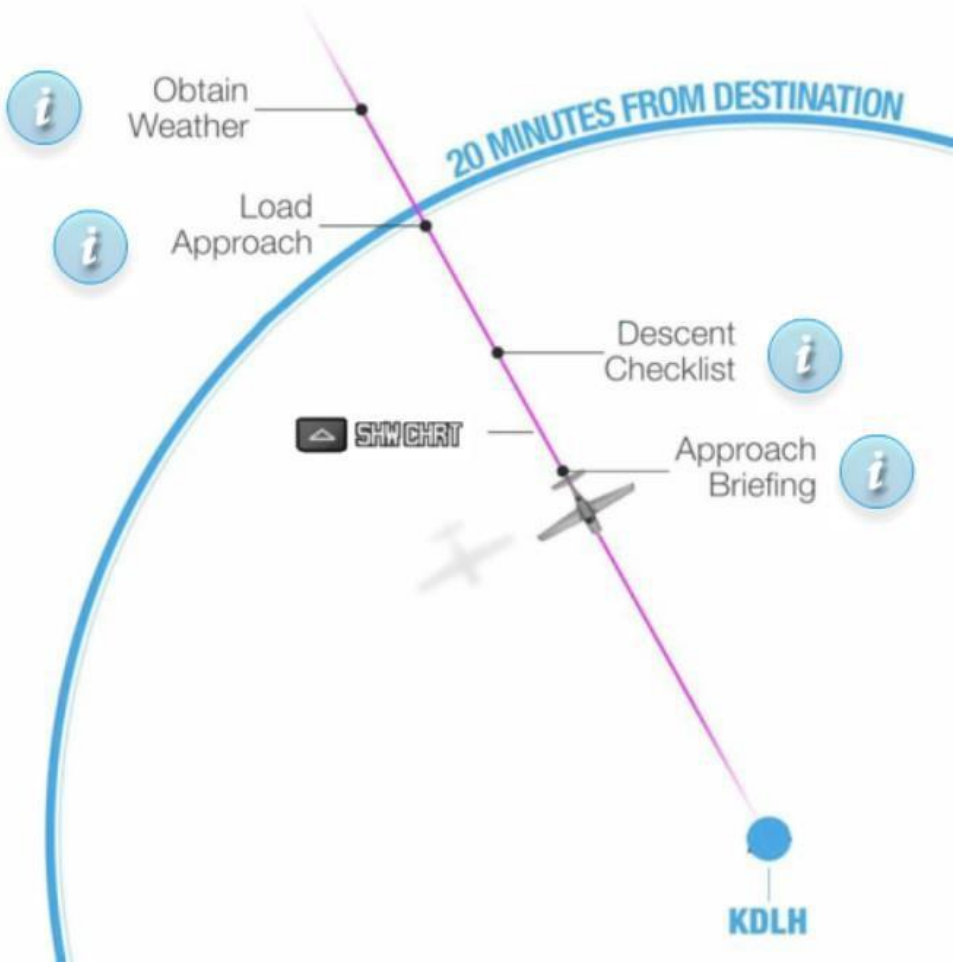
E - EXIT, PREPARE - Brief you passengers and make other preparations for the forced landing. You should cover issues such as seat belts fastened, how to exit, and where to meet after landing.

Instrument Procedures

Preparation for approach

Preparation for any approach should begin on the ground before departure. Considerations such as forecasted weather, approach available, and required databases and charts should be considered well prior to departure.

When in flight, 20 minutes prior to reaching the destination, accomplish these 4 simple tasks.



IFR Stabilized Approach Definition

All briefings and appropriate checklists should be completed prior to the IAF for instrument conditions.

An instrument approach is considered stabilized when all of the following criteria are met prior to the FAF, and continues to touch-down:

- Proper airspeed.
- Correct flight path.
- Correct aircraft configuration for phase of flight.
- Appropriate power setting for aircraft configuration.
- Normal angle and rate of descent.
- Only minor corrections with pitch and power are required to correct airspeed and glide path deviations.
- Normal bracketing (+/- 5 degrees) is used to correct for lateral and vertical navigation deviations.

A missed approach must be executed if the above conditions are not met at any point during an instrument approach.

Approach Briefing

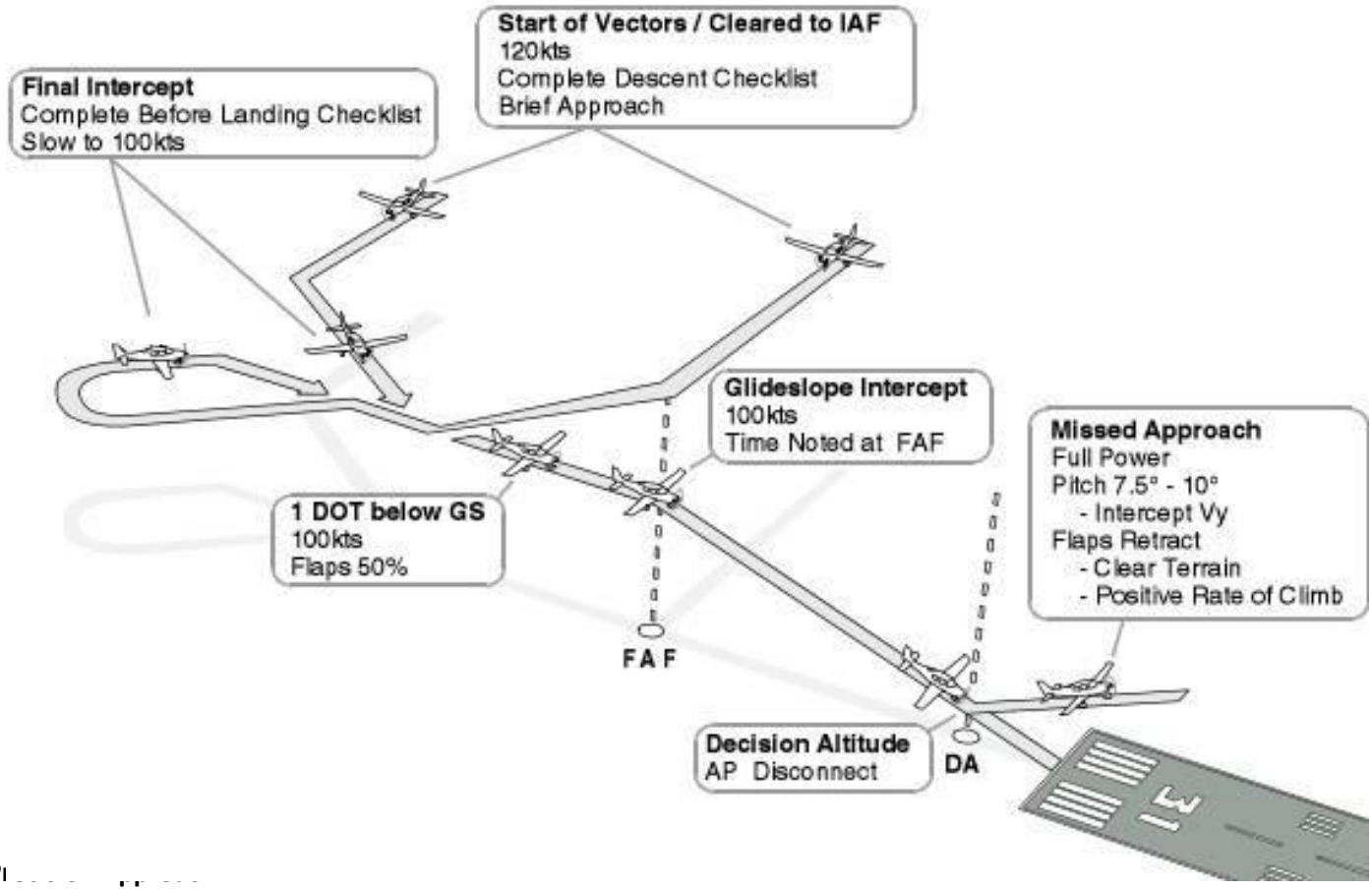
The purpose of an approach briefing is to prepare the pilot to execute an instrument approach procedure. Pilots should brief the instrument approach procedure when time and workload permits. Preferably, the approach should be briefed approximately 20 minutes prior to the IAF or start of vectors. The approach briefing should include the following items:

- Type of procedure and runway (e.g. ILS 35L),
- Transition to final (vectors or IAF),
- Applicable COM and NAV frequencies,
- Approach altitudes and DA or MDA,
- Airspeeds and configuration changes,
- MAP and missed approach procedure.

Sample Approach Briefing

This will be a_____(ILS, GPS...) approach to_____airport, RWY_____via the _____ transition (VTF or IAF). The proper navigation source (GPS, VLOC) for the approachis selected and the proper course of_is set in the HSI. Applicable approach frequencies are tuned and identified. Final approach speed is_____KIAS with approach flaps set prior to the FAF. Call out 1000 feet, 500 feet and 100 feet above minimums.The minimum altitude for the approach is

_____feet. The missed approach procedure is climb to_____altitude and turn left/right to the_____fix and hold.



Pl

The speeds listed below are specific to the Cirrus SR20. With the help of your instructor, fill out the speeds necessary at each point along the approach for the aircraft you are flying.

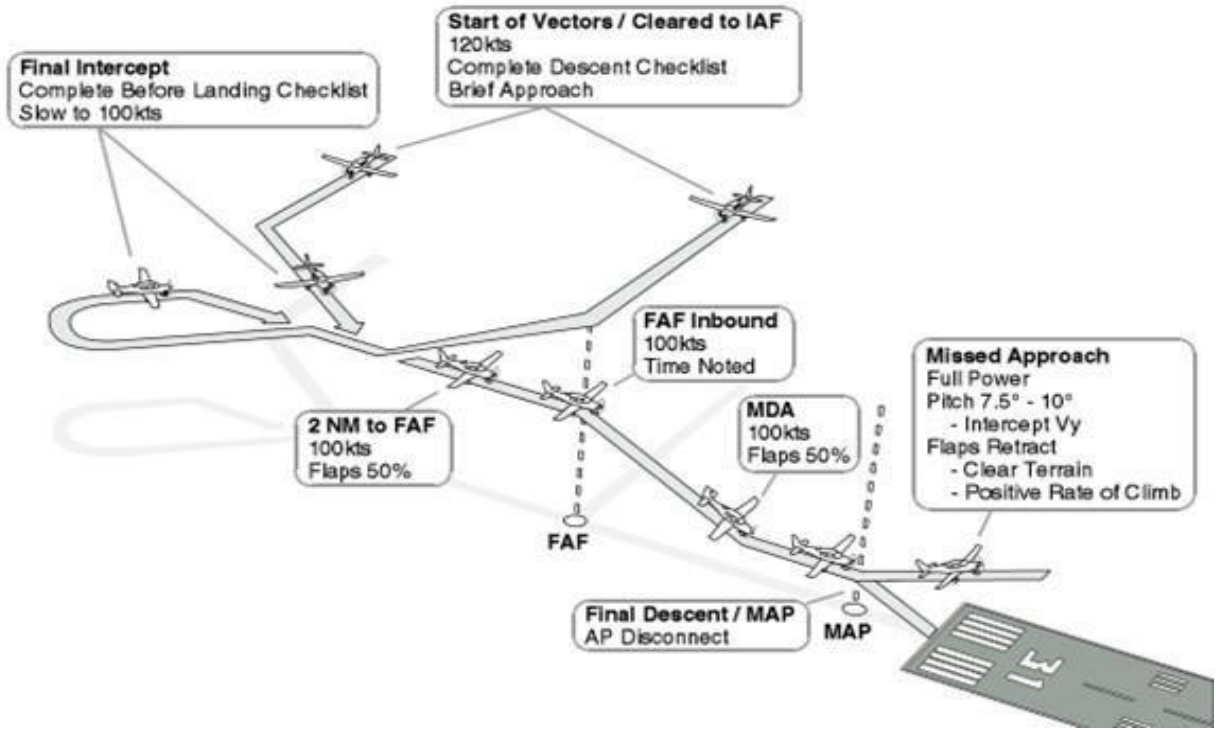
AUTOPILOT CONFIGURATION

Approach Segment	DFC90		S-tec or KAP 140	
	Lateral Mode	**Vertical Mode**	**Lateral Mode**	**Vertical Mode**
Vetor to Final	HDG-1	As Required	HDG	As Required
Cleared to IAF	NAV (GPS)	As Required	NAV / GPSS	As Required
Proc turn/ corse reversal	NAV (GPS)	As Required	NAV / GPSS	As Required
Inbound to FAF	NAV (GPS, VOR, LOC	ALT	APR	ALT
FAF inbound	APR	APR	APR	APR
Missed Approach	NAV / HDG	VS + ALTS	NAV -flight director	ALT-flight director

1. Arm NAV when cleared to intercept final, arm APR when cleared for the approach
2. At the decision altitude or missed approach point. Ensure the altitude bug is set to the assigned missed approach altitude.

Non-precision Approach

The speeds listed below are specific to the Cirrus SR22. Fill out the speeds necessary at each point along the approach for the aircraft you are flying.



Approach Segment	DFC90		S-tec or KAP 140	
	Lateral Mode	**Vertical Mode**	**Lateral Mode**	**Vertical Mode**
Vetor to Final	HDG-1	As Required	HDG	As Required
Cleared to IAF	NAV (GPS)	As Required	NAV / GPSS	As Required
Proc turn/ corse reversal	NAV (GPS)	As Required	NAV / GPSS	As Required
Inbound to FAF	NAV (GPS, VOR, LOC	ALT	APR	ALT
FAF inbound	APR	VS + ALTS	APR	VS + ALT
Missed Approach	NAV / HDG	VS + ALTS	NAV -flight director	ALT-flight director

AUTOPILOT CONFIGURATION

1. Arm NAV when cleared to intercept final, arm APR when cleared for theapproach
2. At the decision altitude or missed approach point. Ensure the altitude bug is set to the assigned missed approach altitude.

Section 2, Reference material

ATC Communications

Who you're calling
Who you are
Where you are
What you want

Never accept a clearance you cannot do safely, or are uncomfortable with.

-Just say "Unable"

Don't be afraid to ask the controller to repeat anything they have said.

- Just say "Say again"

If a controllers requests are ever unclear or you don't fully understand their instructions, ask them to clarify.

Don't be afraid to switch to plain English if necessary to have clear communications.

LiveATC.net is a great way to get familiar with procedures and the lingo.

Cross Country Planning Guide

1. **CHOOSE YOUR DESTINATION**

Sometimes this is simple, other times it isn't. A flight to Asheville, NC with one airport requires no decision making. If you want to go to Asheville, your destination airport is Asheville Regional. If you want to go to Indianapolis, there are nearly a dozen choices. Generally, you'll choose an airport close to whatever it is you want to do in the city you're visiting, but other factors such as services available, member cars, landing fees, and fuel prices may influence your decision.

Don't assume just because an airport sells fuel you'll be able to stop and get all you need. Some self-serve pumps are closed at night, and even at large airports fuel could be sold out or the truck could be broken. If you will be relying on a fuel stop, call ahead.

2. **CHOOSE YOUR ROUTE**

The best route is usually the shortest route, and that means a direct route. Unfortunately, it's not always that easy. Terrain, airspace, and temporary flight restrictions (TFR) often prevent flying direct. Map out your route on a sectional, choosing a route that avoids airspace conflicts, flight over hazardous terrain such as extended flights over water, and clear of TFR's.

Have a method of maintaining awareness of where you are at all times.

3. **GET A WEATHER BRIEFING/ CHECK NOTAMS**

The best option is to call Flight Service at 1-800-wx-brief and ask for a weather briefing. It's a free service that puts you in contact with a trained weather briefer that will provide you with a complete picture of the weather, as well as any Notices to Airmen (NOTAMS) that may be relevant to you.

ForeFlight is a great product available for the iPad . For Android and Windows people, a good options is Garmin Pilot and Aerovie. Use the ForeFlight online training to learn how to use the File and Brief feature.

4. **CHOOSE AN ALTITUDE AND CALCULATE CLIMB/CRUISE/DESCENT PERFORMANCE**

Based on the winds aloft report from the weather briefing, and the terrain and airspace restrictions found earlier, you'll choose the most advantageous altitude for your trip. Your instructor will teach you how to use the performance charts for your aircraft to find true airspeed, ground speed, and fuel flow.

5. **COMPUTE TIME, AND FUEL CONSUMPTION**

Using the data from the previous step, as well as the distance for each leg, use an E6B (manual or electronic. Give the manual one a try, you'll find it's simple and quick to use) to calculate time and fuel for each leg as well as total time and total fuel. Be sure to have 1 hour of extra fuel reserves.

6. **FAMILIARIZE YOURSELF WITH THE DESTINATION AIRPORT.**

There is nothing more embarrassing than landing at a large airport with several FBO's and not having an answer to the ground controller when he asks "say parking." Choose an FBO (if there

are more than one) based on fuel prices and services available. Many pilots find it helpful to read reviews on ForeFlight or Airnav when making a decision. Once you decide on an FBO, find them on a map and make an educated guess on what taxi routes you're likely to be assigned. Even at non-towered airports with a single FBO its good practice to do the same. Some of the biggest surprises come from non-towered airports.

Another important consideration to be aware of is hours of operation for both FBO's and ATC. Many towered airports are part time.

7. **DOUBLE CHECK EQUIPMENT**

Is the aircraft equipment functional and up to date? What your your charts? Don't overlook the small things like having spare batteries for a flashlight and headset, as well as a charged phone and tablet. Be sure to take a spare phone charger with you, and consider investing in a USB battery pack.

8. GET AN UPDATED BRIEFING

Weather can change quickly and unexpectedly. Check the weather again within half an hour of your departure to see if anything has changed. Be prepared to change your plans if the weather changes.

9. FILE A FLIGHT PLAN

A VFR flight plan is a valuable tool that adds a layer of safety to every flight. They can be filed through flight service or online through a variety of services. Once filed, a VFR flight plan can be opened several ways.

- In flight through FSS radio frequencies found on sectional charts
- Over the phone prior to departure. Tell the briefer you want to activate your flight plan 10 minutes from now, or however long you think it will take to depart.
- ForeFlight now allows app-based flight plan activation. Just clickactivate.

Upon landing, be sure to close your flight plan. A good way to remind yourself is with an alarm or location-based reminder on your smart phone.

10. BE PREPARED FOR CHANGES

Weather changes prior to departure may force you to delay or cancel your departure.

Weather changes enroute can have the same impact. It's always best to divert to an airport along your way early while you have plenty of options rather than to push through into worsening conditions hoping for the best. Many times, an early "pit stop" can give you an opportunity to take on additional fuel, reevaluate the weather, and come up with a new plan to fly around troublesome weather. Rarely is racing the weather the best option.