

## Cross Country Requirements

### Private Pilot

- A couple of short cross-country flights, one day and one at night. The trip would be about 50nm (25nm for Rotorcraft) from your airport. You'll plan and fly these just like any cross-country to get familiar with cross-country planning.
- A solo cross country, day, to the same airport.
- A training cross-country to 2 different airports, at least one of them a controlled airport.
- A solo, "long" cross-country to meet the requirements.
- If you want additional solo cross-country time, your CFI will make a way for you to get it.

### Commercial Pilot

- Two cross country flights with your CFI:
  1. One cross-country flight of at least 2 hours in a single-engine airplane in day VFR conditions, consisting of a total straight-line distance of more than 100NM (50nm for Rotorcraft) from the original point of departure
  2. One cross-country flight of at least 2 hours in a single-engine airplane in night VFR conditions, consisting of a total straight-line distance of more than 100NM (50nm for Rotorcraft) from the original point of departure
- Your "long" solo cross country to meet the requirements of FAR §61.129a: One cross-country flight of not less than 300NM total distance (no minimum for Rotorcraft), with landings at a minimum of three points, one of which is a straight-line distance of at least 250nm (50nm for Rotorcraft) from the original departure point.

This plan is designed to efficiently train you to safely perform cross-country flight. If you or I feel that you need additional cross-country training, your CFI can add it to the schedule. Ask your CFI if you want more exposure to tower controlled airports,

Which airports we go to is up to you. Obviously your CFI will have some recommendations and you may find that there are some airports your CFI might veto (for example you won't be getting a sign-off for repeated trips unless there's a good reason for it). Make sure you've discussed your airport choices with your CFI before you go to the trouble of planning a flight that might be appropriate.

## Does Everybody Do This?

Yes, and this is why:

- It's considered the best practice for VFR cross country flight planning.
- You'll be expected to perform cross-country flight planning on your check ride.
- You'll use the same method when you make long cross-country flights to determine the maximum capabilities of your aircraft. How far, how long, how much, how high, and what airport.

## Responsibility & Authority of the PIC (§91.3)

The PIC is directly responsible for and the final authority in determining the airworthiness and operation of the aircraft. The PIC may deviate from any FAR to meet the requirements of an emergency. If the PIC deviates from and FAR, he or she shall, if requested, send a written report of the deviation to the Administrator.

## Disclaimer

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# Basics of VFR Flight Planning

**Darren Smith**, ATP, CFII

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## By Darren Smith, ATP, CFII/MEI

**1. Schedule your time properly.** If you know how to plan a cross country, schedule 30-60 minutes ground session to explain your plan to the instructor. If you got it right, you'll fly the dual cross-country together. If you don't have good skills yet in cross country planning, you'll need to schedule at least a 2 hour ground session to plan your flight. Don't show up at a 2 hour flight lesson without a cross country plan, your instructor simply won't be able to accommodate a flight and a planning session.

### 2. Get the equipment you'll need:

- VFR Sectional Charts. You'll want up to date charts that cover the route you'll be flying.
- Airport Facility Directory (A/FD). You'll need this to find all the detailed information on the airports you'll be flying to. It must be a current version as they are published every 56 days.
- Plotter. We'll need to measure courses on our charts so we'll need a plotter.
- Flight Computer. I recommend a basic E-6B rather than the electronic type. If you pull out an electronic E-6B, the examiner will probably take your batteries. So either bring a 2nd set (see how that flies) or learn the basic E-6B.
- Navigation Log. You can buy these at FBOs and various pilot stores, there are versions available on the Web and lot's of FBOs have flight planning logs just hanging around for you to pick up and use. At a minimum your Navigation Log needs to include spaces for Course, Heading, Distance, Time and Fuel.
- Kneeboard. You need a way of organizing the information in the cockpit and and something to rest on when you're updating your navigation log. I suggest either a simple strap on knee board or go to a stationary supply store and buy an 8x11 clip board, some extra clips and some foam to stick on the back so it doesn't slip.
- Pencils and Eraser. You're going to be writing stuff down during the trip. That's multiple pencils by the way, don't bring one, break it, and then ask what to do next.

### 3. Practical tips for cross country flights - additional equipment you'll want

- Let's face it, the better equipped your aircraft, the easier the trip. Things like autopilots, GPS equipment, radar, and storm scope/strikefinder equipment only assist you in safely arriving at your destination.
- Additional handheld equipment such as a radio & GPS.
- Consider purchasing the Carbon Monoxide Detector. This is the card or sticker with the spot that turns brown when CO is present.
- Aircraft supplies: tow bar, oil, tie down ropes.
- Pilot organization: extra pens, flashlights, a kneeboard, spare batteries, and failed instrument covers. Consider a laptop with flight planning software and an external GPS antenna which can be a great backup for lost/destroyed charts or a broken (installed) GPS.
- Winter flights: Extra clothing such as baggy sweatpants to put over your clothing to add extra warmth. Bring another jacket to hang over the back of the seat to put on quickly if necessary. See [Simple Rules for Winter Flight](#) for practical tips on Winter Flying from my website
- Over water flights: Large black garbage bags to get into (preserves body heat), life jackets with strobes, and an inflatable raft. See article: [Ten Commandments for Overwater Flight](#) from my website: [www.cfidarren.com](http://www.cfidarren.com)
- Things you never want to use: first aid kit and survival gear such as an axe, matches, signaling mirror, etc.
- Personal comfort: medications, chewing gum, small snacks & water, spare sunglasses and/or eyeglasses, cell phone and/or calling card.
- Happiness items: favorite book, camera, extra cash.

### 4. Cross Country Planning Overview - from your ground school preparation:

#### The night before:

- a. Verify you have current charts.
- b. Obtain departure & destination information from AF/D
- c. Draw the airports, runway length/width, runway numbers, pattern altitude, and traffic pattern on your navlog.
- d. Notate all frequencies to be used on your navlog.
- e. Draw your course on the Sectional chart.
- f. Measure your True Course.
- g. Identify Visual Checkpoints and mark them on the chart - about one every 7-10 miles is good.
- h. Put the Checkpoints on your Navigation log.
- i. Measure the distances between the checkpoints and enter that on the navlog.

- j. Notate magnetic variation and compass deviation figures on your navlog.
- k. Get an outlook weather briefing from the FSS.
- l. Emergency planning
  - What if you can't complete the flight as you planned it?
  - Enroute weather changes?
  - Lost communications plan?
  - What if you get lost?
  - Fuel emergency? Off airport landing?
  - Equipment emergency: your backup plan?

#### One hour before:

- a. Compute a weight & balance, considering fuel.
- b. Very thorough pre-flight, especially checking oil and cleaning the windows.
- c. Obtain a standard weather briefing from the FSS.
- d. Determine cruising altitude...
  1. Winds aloft (FD report)
  2. Base of the clouds.
  3. Length of the trip
  4. Airspace requirements
  5. VFR Cruising altitude rules
- e. Determine Wind Correction Angle (WCA) from Winds Aloft
- f. Calculate True Headings (with WCA), Magnetic Headings (Variation), Compass Headings (Deviation)
- g. Calculate True Airspeed, Ground Speed, Fuel Usage, RPM Settings from POH
- h. Determine the Time between checkpoints.
- i. Determine the Fuel used between checkpoints.
- j. Determine if fuel is adequate for the trip, including reserves.
- k. Review any en-route ATC services.
- l. Prepare and file a VFR flight plan.
- m. Develop an alternate plan in case you can't complete this one.
- n. Obtain logbook endorsement from your CFI if this is a solo cross country.
- o. Work up a Personal Minimums Checklist

As you fly each leg, note the Actual Time Enroute (in minutes past the hour) to compare with your estimates. You'll also calculate an Estimated Time of Arrival (in minutes past the hour). If the estimate and the actual vary significantly, you'll need to recalculate fuel consumption and Fuel Used.