Flight Planning & Filling Out Planning Forms

A. Flight General Information

The top of the Flight Planning Form allows you to enter general aircraft information, flight information, ATIS or AWOS information, temperature, winds, altimeter settings, runways in use, time at takeoff and Hobbs or Tach meter start and end reading.

AIRCRAFT:			VFR FLIGHT PLANNER					N-NUMBER:

DEPARTURE:	DESTINATION:	DATE:		TIME OFF:		START:	STOP:	FLT TIME:

ATIS CODE:	WIND DIR/SPD:	VSBY:	SKY:		TEMP/DPT:	ALTIMETER:	RUNWAY:	RMKS:	EST GPH:

B. Planning the Course

1. Draw your planned flight course on a chart and choose checkpoints between your departure and that you will use as ground speed checks in-flight and as reference to ensure you are on course.
2. Using your plotter, determine the true course and measure the distance between your checkpoints and note the magnetic variation closest to your route.
3. Plan a proper VFR cruising altitude (0-179º odd thousands + 500ft & 180-359° even thousands + 500ft) using the terrain, obstructions and airspace along your route.

A quick online source to preview a flight route etc. is Skyvector at http://skyvector.com/.
Right click on ck points and then click plan.

C. Weather Briefing (Flight Service call: 1-800-WX-BRIEF)

Get a weather briefing for the weather data along your route and include:
1. Wind direction & velocity (surface & aloft)
2. Temperature at cruising altitude
3. Sky coverage, ceiling, visibility and in colder weather freezing level

Roll the mouse over blue reporting points to preview current metar and taf information.

Weather Station KHCD HUTCHINSON (34m ago)
KHCD 221334Z AUTO 34012G16KT 10SM OVC028 10/05 A3016 RMK AO2 T00950048

One of the best preview sources of online weather is the NOAA Aviation Digital Data Service (ADDS)

Weather Station KMSP MINNEAPOLIS (20m ago)
KMSP 221400Z 33012G19KT 10SM BKN021 OVC035 08/03 A3013
TAF KMSP 221123Z 2212/2318 33015G22KT P6SM SCT017 OVC022
    TEMPO 2212/2214 OVC017
    FM221500 33014G21KT P6SM SCT035
    TEMPO 2215/2217 OVC030
    FM230000 33004KT P6SM SKC

http://www.aviationweather.gov/adds

D. Airspeed & Headings

To fill in the VFR Flight Planner, you will need to know your checkpoints, true course between checkpoints, planned altitude, wind direction and velocity from your weather briefing, your aircraft's true airspeed, magnetic variation from the sectional chart and compass deviation for your aircraft.

CK POINTS	Freq Ident	Route To/From	Altitude	TAS	Wind OAT	TC +/- WCA	TH +/- VAR	MH +/-DEV	Comp Hdg

1. List each checkpoint, beginning with your departure airport.
2. Enter frequency and identifier for checkpoint navaids.
3. Enter your course (route) such as Victor airways, GPS direct or bearings To/From navigational aids.
4. Enter your intended cruising altitude for each leg of the flight. (Terrain, airspace and weather should be considered)
5. Enter your planned true airspeed. (Airspeed should be listed in the Pilot's Operating Handbook - POH).
6. Enter the wind direction and velocity in the top box from your weather briefing. (May need to interpolate for your selected cruising altitude)
7. Enter the temperature at your intended altitude in the lower box from your weather briefing. (May need to interpolate for your selected cruising altitude)

8. Enter the true course measured with the plotter for each leg between the checkpoints in the top box.
9. Enter the computed wind correction angle (WCA) in the lower box.
10. Enter the computed true heading (TH) in the top box.
11. Enter the magnetic variation (VAR) from your sectional chart in the lower box.
12. Apply the magnetic variation to the true heading for your magnetic heading. ("East is Least" and is subtracted from true heading; "West is Best" and is added to true heading.)
13. Enter the computed magnetic heading (MH) in the top box.
14. The compass card deviation (DEV) is entered in the lower box.
15. Apply the deviation to the magnetic heading to obtain your compass heading. (Compass deviation card is located in the aircraft.
16. Enter the computed compass heading (Comp Hdg).

E. Enroute Information

Compute ground speed for each course leg using the E6B, using your true headings, the true wind direction, the wind speed and your aircraft true airspeed.

	G/S Est/Act	Dist Leg/Rem	ETE ATE	ATE ATA	Fuel Leg/Rem

1. Enter the computed groundspeed in the top box. The actual groundspeed, as determined by in-flight calculations, is entered in the lower box.
2. Enter the distance of each leg in the top box of this section. The distance remaining for your flight is entered in the lower box.

Using your ground speed and distance along with your E6B, calculate your estimated time enroute, arrival times and fuel consumption.
1. Enter your estimated time en route (ETE) to each checkpoint in the top box. The actual time en route (ATE) is entered in the lower box.
2. Enter your estimated time of arrival (ETA) at each checkpoint in the top box. The actual time of arrival (ATA) will be entered in the lower box.
3. The fuel that will be used for the leg is entered in the top box. The fuel remaining is entered in the lower box.

http://youtu.be/9QJ6zl_r898
Calculate Ground Speed w/E6B (YouTube Video)

F. Weight and Balance Information

Enter weight information for the aircraft, fuel, passengers and baggage for your proposed flight. Enter the arm for each position from the POH, calculate and also enter the moment. Divide the total moment by the total weight to obtain the CG. Using total weight, total moment and CG calculation for the aircraft, use loading graphs for the aircraft to determine you are within proper weight and CG limits.

WT & BALANCE	WEIGHT X	ARM =	MOMENT	N
Aircraft Empty Wt				
Front Passengers				
Rear Passengers				
Fuel x6#/Gal				
Baggage				
Total Gross Wt		TOTAL MOMENT		
CG=Total Moment/Total Weight →			Wt & CG within Limits?	