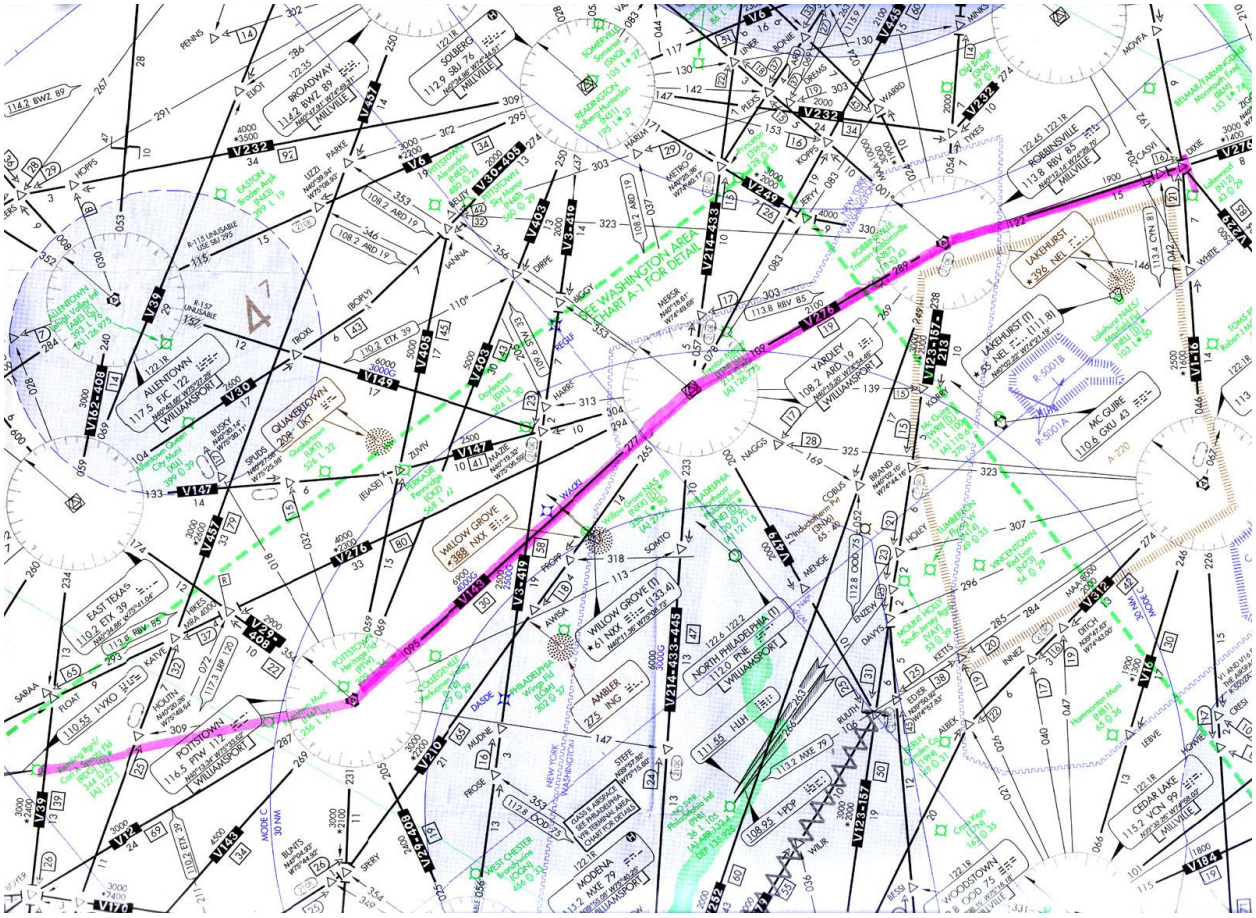
Reviewing Techniques for Low-Time IFR Pilots
"Techniques That Are Learned but Often Forgotten"

by

José Velázquez, Ed.D, Instrument Pilot and
Mark Velasquez, Esq., CFII



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CONTENTS

PREFACE iv
LISTING OF FIGURES vi
1 Pre-Fight Planning, Departure and Transitioning Procedures 1
2 Enroute Flight 23
3 Intercepts & Navigation 26
4 Holding 30
5 Planning for the Approach, the Five A's 34
6 Instrument Approach Procedure Charts, Approach Segments and the Procedure Turn 38
7 DME Arc 41
8 ILS Approaches 44
9 VOR Approaches 48
10 ADF Approaches 51
11 GPS Approaches 53
12 Landing 56
13 Partial Panel, Practice Approaches and Charts 59
14 Global Positioning System (GPS) and Integrated Display 61
15 VFR 65
16 Conclusions 78
17 Commonly Used Terms and Phraseology 79
Acronyms 103
Index 104
NOTES 107

LISTING OF FIGURES

Figure 1 Weekly forecast for Montgomery Field, MYF, San Diego, CA 2
Figure 2 TAF at Reading Regional, PA, RDG 4
Figure 3 TAF at RDG using NOAA web site 5
Figure 4 Search for Terminal Procedure Publications (TPP) 6
Figure 5 Source of airport charts 6
Figure 6 Flight planner printout 7
Figure 7 FAA Form 7233-1 8
Figure 8 Frequencies at Robbinsville VOR to contact FSS 9
Figure 9 Flight bag 11
Figure 10 Airport diagram for N12 12
Figure 11 Take-off Minimums and (Obstacle) Departure Procedures at N12 13
Figure 12 Route from N12 to RDG 14
Figure 13 Setting radio and navigation frequencies 15
Figure 14 Airport diagram for RDG 17
Figure 15 Departure procedure at RDG 17
Figure 16 McGuire tower building 19
Figure 17 McGuire tower operation 19
Figure 18 McGuire Departure Approach Control 20
Figure 19 Aircraft compass 23
Figure 20 Setting fuel tank 24
Figure 21 Standard holding pattern 30
Figure 22 Setting altimeter 35
Figure 23 Selecting the approach 36
Figure 24 DME procedure 42
Figure 25 Activating the approach 53
Figure 26 GPS satellite constellation 61
Figure 27 Air Force Monitoring Stations 62
Figure 28 Flat panel, Aspen EFD 1000 Pro PFD 64
Figure 29 Traffic pattern 65
Figure 30 IFR Enroute Low Altitude Chart 81
Figure 31 AIM 82
Figure 32 Rotating beacon 83
Figure 33 Voice and data communications 83
Figure 34 A/FD 84
Figure 35 Automated Surface Observing System (ASOS) 85
Figure 36 Automated Weather Observation System (AWOS) 85
Figure 37 ADF Antenna 86
Figure 38 Ceilings and floors of layers in New York City Class B airspace 90
Figure 39 Decision height 93
Figure 40 Principle of DME operation 94
Figure 41 DME shark's fin antenna 94
Figure 42 Final approach fix for ILS approach at lightning bolt and for localizer approach at Maltese Cross for Toms River (MJX) 95

Figure 43 Electronic glideslope 96
Figure 44 GPS antenna 96
Figure 45 Localizer at the end of approach runway 97
Figure 46 Surface observation 101
Figure 47 Two VHF antenna for two transceivers 101
Figure 48 VOR antenna 102

1
Pre-Fight Planning, Departure and Transitioning Procedures

In this section:

- Pre-Fight Planning
  - *Prelimary*
  - *Intermediate*
  - *Final*
- Obtaining Clearance At An Uncontrolled Airport
- Obtaining Clearance At A Controlled Airport
- Rotating
- Departure
- Transitioning To Enroute Flight

➢ Pre-Fight Planning

There can never be enough said about pre-flight planning. You probably remember the large amount of time spent studying instrument flight rules (IFR) planning, especially in comparison to your visual flight rules (VFR) training. Those were not mere exercises to be discarded once you obtained your certificate. Each aspect of planning a flight must be considered even if only briefly. The level of planning that you should do will depend upon the weather conditions, the length of your anticipated flight, the airspace you will encounter on your anticipated flight, and your proficiency.

Remember, the Federal Aviation Regulations (FAR's) only requires the *minimum* amount of planning that must be done before every flight. Safety and professionalism dictates the actual amount of planning that must be done. FAR Section 91.103, "Preflight Action," states:

> Each pilot in command shall, before beginning a flight, become familiar with *all available information concerning that flight*. This information must include:
>
> 1. For a flight under IFR or a flight not in the vicinity of an airport, weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, and any known traffic delays of which the pilot in command has been advised by air traffic control (ATC);
>
> 2. For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information…

It should be apparent that you must not only do planning before every flight, but you must review all of the information that is routinely provided in a standard weather briefing. I have seen numerous Federal Aviation Administration (FAA) certificate actions against pilots based on this FAR and poor pre-flight planning. There is no defense against not conducting the required pre-flight planning. Most importantly, the "required" amount of pre-flight planning is not based on your opinion of what is satisfactory, but what the FAA thinks is satisfactory planning, which is nothing short of reviewing every single piece of information available.

Think of planning for an IFR flight in stages—*preliminary*, *intermediate* and *final*. The first stage consists of preliminary planning involving long term weather forecasts. Results of this effort will allow you to make an early go-or no go decision, based on obvious considerations and limitations in conjunction with your current level of proficiency. The second stage consists of intermediate planning taking into account near term forecasts, your aircraft performance, equipment considerations, airport facilities, available approaches and filing file plans. The third stage consists of final planning being those activities just before going to the aircraft.

Prelimary Planning

A good site for your preliminary planning to determine weather conditions for the next several days is www.aviationweather.gov developed and maintained by the National Weather Service of National Oceanic and Atmospheric Administration (NOAA). This internet site can be accessible anywhere since it doesn't require a login. Enter the City and State, zip code or a three letter waypoint to obtain the long term weather forecast. For example, figure 1 shows a seven day forecast from 26 April for Montgomery Field, CA, MYF.

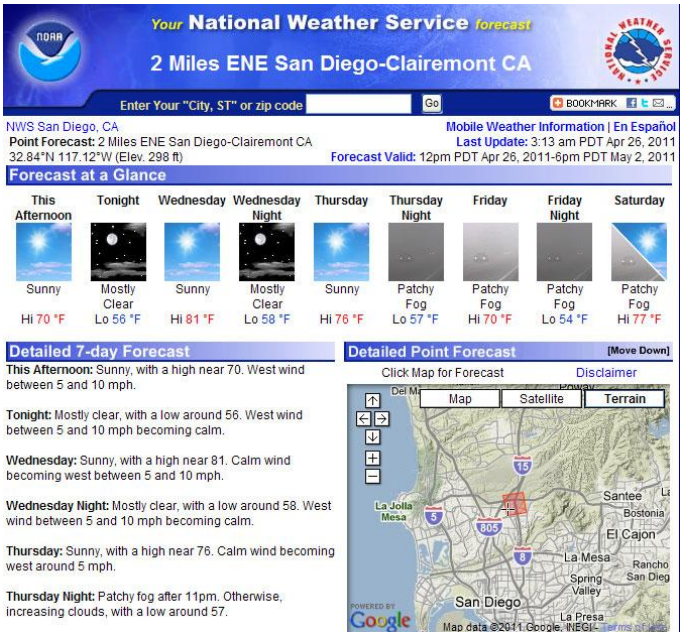

Figure 1 Weekly forecast for Montgomery Field, MYF, San Diego, CA

Besides the above general weather forecast, the area forecast, convective forecast and progressive charts will give you very good idea of what the weather will be. All of these charts can be found for free, thanks to the tax payers, at the above web site.

Other excellent web sites with long term forecasts are: http://www.wunderground.com/ (Weather Underground) and http://www.intellicast.com/ (Intellicast).

For the next twenty-four hour period, you can get a weather briefing of planned route, called outlook briefing, from a FAA flight service station (FSS) by calling 1.800.WXBRIEF or using a pc to the direct user access terminal system (DUATS) web site.

Intermediate Planning

After preliminary planning, the intermediate stage will involve activities starting several hours prior to your flight. This will be where the majority of your planning is involved. These activities will include

1. A standard briefing,
2. Aviation routine weather reports (METAR's),
3. Terminal aerodrome forecasts (TAF's),
4. Obtaining copies of approach plates, airport diagrams and minimums,
5. A flight planner,
6. Filing a flight plan,
7. Calculating weight and balance and
8. Having adequate contents in the flight bag.

A Standard Briefing

You should obtain a *standard briefing* as close as possible to departure in order to obtain the latest conditions in terms of

1. Adverse weather conditions,
2. Synopsis of area weather,
3. En route forecast,
4. Destination forecast,
5. Winds and temperature aloft,
6. Temporary flight restrictions (TFR's),
7. Notice to airmen (NOTAMS) for airports of intended use and
8. Terminal forecasts for airports in your area.

This information will assist you in the planning process that you will really need to be doing before your flight. For example, a forecast of clear skies along your route of flight would

indicate a probable go decision with only a short amount of time necessary to complete your pre-flight planning. However, a forecast for moderate weather in the area of your flight, in conjunction with low proficiency and minimum aircraft equipment would indicate a probable no go decision. At the very least, such conditions indicate more time will be required to complete your planning. Closure of intended airports, low freezing levels, gusting winds, and thunder storms are just some of the things that I can think of that can help you make the early go or no-go decision.

It is inexcusable to not have the current weather conditions and forecasts when you depart even for a short hop, and you should monitor any development as your flight progresses.

Note # 1: The FAA has also indicated that there is no defense for not knowing about TFR's, NOTAM's and current weather conditions even if they became available after your flight began. Basically, the FAA has spent time and money to make sure pilots have the ability to get current information, and expects pilots to get such information.

Aviation Routine Weather Reports (METAR's) and Terminal Aerodrome Forecasts (TAF's)

A pilot can obtain the surface observations at departing and arrival airports from aviation routine weather reports (METAR) and the Terminal Aerodrome Forecast (TAF) report of your destination from the online DUAT. An example of a TAF from Golding Eagle (downloaded from www.flightprep.com), in plain text, is shown in figure 2, for Reading Regional, PA, RDG. Or a TAF can be also gotten from the NOAA web site, www.aviationweather.gov, in a slightly different format, figure 3.

```
Reading PA (Reading Rgnl/Carl A Spaatz Field) [KRDG] terminal forecast issued
    on the 26th at 1:21pm EDT (1721Z), valid from the 26th at 2pm EDT (18Z)
    through the 27th at 2pm EDT (18Z):
  2pm EDT (18Z):             wind 190 degrees at 12 knots gusting to 23 knots,
                             visibility greater than 6 miles, 4,000 feet
                             scattered
  2pm (18Z)-6pm EDT (22Z):   temporarily 4,000 feet broken
  8:00pm EDT (0000Z):        wind 170 degrees at 5 knots, visibility greater
                             than 6 miles, 4,500 feet broken, wind shear from
                             surface to 2,000 feet AGL: at 2,000 feet, wind
                             210 degrees at 40 knots
  4am (08Z)-6am EDT (10Z):   temporarily visibility 5 miles, mist, 1,500 feet
                             broken
  6:00am EDT (1000Z):        wind 160 degrees at 5 knots, visibility 3 miles,
                             mist, 800 feet broken
 10:00am EDT (1400Z):        wind 180 degrees at 7 knots, visibility greater
                             than 6 miles, 2,500 feet broken
 12:00 noon EDT (1600Z):     wind 180 degrees at 10 knots gusting to 20 knots,
                             visibility greater than 6 miles, 3,500 feet
                             broken.
```

Figure 2 TAF at Reading Regional, PA, RDG

Forecast for:	KRDG (READING , PA, US)
Text:	**KRDG 261721Z 2618/2718 19012G23KT P6SM SCT040**
Forecast period:	1800 UTC 26 April 2011 to 0000 UTC 27 April 2011
Forecast type:	FROM: standard forecast or significant change
Winds:	from the S (190 degrees) at 14 MPH (12 knots; 6.2 m/s) gusting to 26 MPH (23 knots; 12.0 m/s)
Visibility:	6 or more miles (10+ km)
Clouds:	scattered clouds at 4000 feet AGL
Weather:	no significant weather forecast for this period
Text:	**TEMPO 2618/2622 BKN040**
Forecast period:	1800 to 2200 UTC 26 April 2011
Forecast type:	TEMPORARY: The following changes expected for less than half the time period
Ceiling:	4000 feet AGL
Clouds:	broken clouds at 4000 feet AGL
Weather:	no significant weather forecast for this period
Text:	**FM270000 17005KT P6SM BKN045 WS020/21040KT**
Forecast period:	0000 to 1000 UTC 27 April 2011
Forecast type:	FROM: standard forecast or significant change
Winds:	from the S (170 degrees) at 6 MPH (5 knots; 2.6 m/s)
Visibility:	6 or more miles (10+ km)
Ceiling:	4500 feet AGL
Clouds:	broken clouds at 4500 feet AGL
Wind shear:	at 2000 feet (610 m) AGL, from the SSW (210 degrees) at 46 MPH (40 knots; 20.8 m/s)
Weather:	no significant weather forecast for this period
Text:	**TEMPO 2708/2710 5SM BR BKN015**

Figure 3 TAF at RDG using NOAA web site

An excellent summary of weather issues in pre-flight planning and a go or a no-go decision to fly is: http://www.faasafety.gov/gslac/alc/libview_normal.aspx?id=6850

Obtaining Copies of Approach Plates, Airport Diagrams and Minimums

In addition to the outline briefing, standard briefing, METAR and TAF, a pilot can obtain free approach plates, airport diagrams and minimums via terminal procedure publications (TPP) from another FAA web site. The steps are:

1. Enter http://aeronav.faa.gov/index.asp?xml=aeronav/applications/d_tpp,
2. Select digital Terminal Procedures (…),
3. Select State with curser and
4. Enter the Airport Identifier/Name getting figure 4. The airport procedures form will be presented. As an example, we enter MYF, which is Montgomery Field,