

Quick Reference Guide to IFR Flight

Planning

A. Check all NOTAMS

- Flight service (unpublished)
- Notices to Airmen (published)
 - NOTAM L (local information, taxiway closings)
 - NOTAM D (distance pertinent to route of flight, VOR outages, Go/NoGo)
 - FDC NOTAMS (regulatory in nature – charts, regulations)
 - GPS NOTAMS (must specifically be requested in a briefing)

B. Airport Facility Directory (current)

- Airport information (runway lengths, frequencies, fuel, hours, nav aids)
- VOR checks
- Chart changes
- IFR Preferred Routes

C. All pertinent Charts (current)

- Taxi
- Departure Procedures (DP's)
- STARs
- Area Charts
- Approach Charts (departure, destination, alternate, and route of flight)
- Low Enroute Charts
- VFR Sectional and/or WAC Charts

D. Weather Briefing

E. IFR Alternate

1. Does the destination have an approach? (if not, an alternate is required)
2. Does the destination meet the 1-2-3 rule
 - 1 hour before to 1 hour after ETA
 - 2,000' ceilings
 - 3 miles of visibility

F. Minimums for an alternate

- Standard alternate minimums
 - If alternate has a precision approach...600' ceilings & 2 miles visibility
 - If alternate has a non-precision app (non-GPS)...800' ceilings & 2 mi vis.
 - If alternate has no approach...descent and land from MEA in basic VFR
- Non-standard alternate minimums
 - Published with approach charts
 - Alternate not authorized

G. Flight Log

- Fixes, frequencies, identifiers
- Magnetic headings,
- Distances
- Winds
- True airspeed
- Ground speed
- Times between fixes
- ETE
- ETA
- Fuel burn

H. Flight Plan

- File at least 30 minutes prior to departure
- Last minute weather information (PIREPS, etc.)

Preflight Preparation

A. Pilot

- Certificate & Radio Operator's permit for International flights
- Medical
- Valid Photo Government ID
- Currency
 - 3 T/O & landings within 90 days (at night & in taildraggers to a full stop)
 - "Biennial" flight review
 - IFR currency
 - within 6 calendar months:
 - 6 instrument approaches
 - appropriate navigation intercepts and tracking
 - holding procedures
 - between 6 and 12 months:
 - same as above, but with safety pilot or in approved FTD
 - more than 12 months:
 - Instrument Proficiency Check
- I illness
- M medication
- S stress
- A alcohol
- F fatigue
- E eating/emotion

B. Aircraft

- A airworthiness certificate
- R registration (federal and state)
- R radio station license (for international flights)
- O operating limitations (POH/AFM, placards, instrument markings)
- W weight and balance
- Equipment list
- Inspections
 - H hundred hour (if for hire)
 - A annual
 - S static/pitot & altimeter check within 24 months
 - T transponder check within 24 months
 - E ELT within 12 months, ½ life of battery, or 1 hr cumulative use
- VOR check within 30 days
 - VOT +/-4°, 180° to or 360° from
 - Designated Ground Checkpoint +/-4°
 - Designated Airborne Checkpoint (AFD) +/-6°
 - Pilot designated airborne, prominent on airway >20 NM +/-6°
 - Dual VOR check within 4° of each other
 - Bench check (maintenance) in logbook +/-4°
- VOR check requirements to record: (SPED)
 - Signature
 - Place
 - Error
 - Date

C. Required Aircraft Components

VFR Day (TOMATOES AFLAME) (91.205 b.)

- Tachometer
- Oil pressure gauge
- Magnetic compass
- Airspeed indicator
- Temperature gauge (liquid cooled engines only)
- Oil temperature gauge
- ELT
- Seatbelts

- Anti-collision lights
- Fuel gauges
- Landing gear position indicator
- Altimeter
- Manifold pressure gauge (for each altitude engine)
- Emergency equipment

VFR Night (FLAPS) (91.205 c.)

- Fuses (or circuit breakers)
- Landing lights (if for hire)
- Anti-collision lights
- Position lights
- Source of electric power (such as alternator or generator)

IFR (GRAB CARDD) (91.205 d.)

- Generator or alternator
- Radios (2-way)
- Altimeter (pressure sensitive)
- Ball (inclinometer)

- Clock (that shows seconds)
- Attitude indicator
- Rate of turn indicator
- Directional gyro
- DME for operations above FL240. (if using VORs)

D. Fuel Requirements (91.167)

1. Fly to the first airport of intended landing, then fly 45 minutes at normal cruise
2. If an alternate is required, fly to the first airport of intended landing, then to the alternate then 45 minutes at normal cruise

E. Cockpit Check – Organize:

- Checklists
- Charts
- Compass
- Clipboard
- Clearance (CRAFT)
 - C Clearance limit: Destination or fix with expect further time
 - R Route of flight: As filed, ATC amends, or DP
 - A Altitude: to with expect in 10 minutes
 - F Departure frequency
 - T Transponder code
 - Other pertinent information

F. Taxi Checks

- Clock set
- Airspeed at or near 0
- Attitude indicator up and erect within 5 minutes and within 5 degrees
- Altimeter within 75' of airport elevation with correct altimeter setting
- Turn coordinator warning flag gone, bank to the turn, ball outside the turn
- Heading indicator number increase with turns to the right, decrease left
- Vertical speed indicator: note the position for zero
- Magnetic compass full of fluid, indicates known headings, swings freely, right turns increase, and left turns decrease
- Alternate static air shows jump on altimeter and VSI (approx. 44 kts, 40 ft, and 200 fpm in flight)

G. Runup/Setup

- A. Checklists
- B. Review/set as many frequencies ahead as possible

Departure Functions

- A. Departure Checklists
- B. Upon reaching safe altitude (min 400' AGL) or as described by DP
 - Establish cruise climb
 - Fly initial ATC headings and altitudes
 - Tune and identify appropriate navigation aids
 - Contact departure control

Enroute Functions

- A. Maintain an accurate flight log
- B. Identify all navigation aids
- C. Check and reset heading indicator every 15 minutes
- D. T's at reporting fixes
 - Time
 - Turn
 - Twist
 - Throttle
 - Talk
- E. Reports to ATC (*denotes item is required by FARs)
 - In radar and non-radar environments
 - Leaving an assigned altitude
 - VFR altitude changes
 - Arrivals at an assigned holding fix (time and altitude)
 - Departing an assigned holding fix
 - Missed approach
 - Unable to climb or descend at 500 fpm
 - TAS variation from filed of 5% or 10 knots, whichever is greater
 - * Loss of any navigation or communication ability
 - * Any unforecast weather or any other information relating to safety
 - In non-radar environment
 - Leaving the FAF or OM inbound on final approach
 - Revised ETA for a fix of more than three minutes
 - * Compulsory reporting points (or any fix ATC directs to report)
- F. Position report format (IPTATEN or I-PATTEN)
 - Identification 2009Y
 - Position over Bards
 - Type IFR
 - Altitude 5 thousand

Time (current)	35 after
ETA of next fix	Ester at 48 after
Next fix after that	Percy next

G. Update weather information

EFAS – Flight Watch on 122.0, weather information only, at or above 5000'

FSS – 122.2 over most VORs or as published on charts

TWEBS – As published on charts

Arrival Functions

A. There are many ways to set up, be systematic. Preparation is everything!

Approach Setup: Use the radio panel as a checklist (com 1, com 2, nav 1, nav 2, marker beacon, ADF, DME, etc., listening, tuning, and identifying where necessary) then check the compass for precession.

Approach Briefing: Briefing Strips – brief the approach in the order on the approach plate briefing strip.

Always end a briefing with "any questions?"

Pre-landing checklist: (GUMPPSS)

Gas - fullest tank or both

Undercarriage - down and locked

Mixture - full rich

Props - forward for the go-around

Pumps - fuel pumps on

Seatbelts - secure

Safety - radio calls made/traffic in sight

(Cowl flaps and flaps as appropriate)

T's (at FAF):

Time

Turn

Twist

Throttle

Talk

Landing Gear: 1 dot below glide slope intercept or 1 mile from the FAF

Alternate Setup:

A's

ATIS, ASOS, AWOS, as appropriate

Altimeter set

Audio panel set and stations identified

M's

Magnetic compass checked with heading indicator

Marker beacons tested and set

Mixture full rich (or as appropriate)

Minutes (time estimate)

Minimums for each segment

Missed approach procedure

T's (as before)

Alternate Approach Briefing (TRACTOR):

Type of approach

Radios

Altitudes

Course

Time

Overshoot

Review

B. Descent below MDA(H) or DA(H) and landing requirements:

Final confirmation of gear down and locked

Visibility as published

Normal rate of descent using normal maneuvers

If the approach lighting system is in sight:

You may descend within 100' of the touchdown elevation

Further descent (below 100') requires the "runway environment" in sight:

Red side row bars or red terminating bar on approach lights (ALFS-I & II)

Threshold

Threshold marking

Threshold lights

Runway end identifier lights

Visual approach slope indicator

Touchdown zone or touchdown zone markings

Touchdown zone lights

Runway or runway markings

Runway lights

C. Missed approach

Cram (throttle, carb heat, prop forward)

Climb

Clean (flaps, gear)

Communicate

Fly the missed approach as assigned or published

D. Intentions after the missed approach

1) Proceed to the hold?

2) Fly the approach again?

3) Proceed to the alternate?

4) Proceed elsewhere?

Emergency Functions

A. Order of Priorities:

Aviate – fly the plane

Navigate – maintain situational awareness

Communicate

B. Procedures for VFR flight into IMC

Cross-check

Climb

Communicate

Confess

Comply

Conserve

C. In Case of Two Way Radio Communications Failure during any phase of an IFR Flight

1. If VFR, continue VFR and land as soon as practical (notify ATC) while continuing radio calls.

2. If IFR

Route (in this order) (AVE F)

Last Assigned by ATC clearance

If Vectored, proceed directly to fix, route, or airway being vectored to

Route to Expect (in expect further clearance...)

Route Filed

Altitude (highest of the following) (MEA)

Minimum IFR altitude (MEA or MOCA)

Altitude to Expect

Last Assigned

If Holding

Depart the holding fix at EFC time then begin the approach

If no EFC, then:

Proceed to and hold (if necessary) at the holding pattern depicted for the approach procedure. If none is depicted, at the fix at which the approach begins (IAF.)

Descent for the approach

Begin the descent for approach at the fix at which the approach begins, but not before the ETA on the flight plan.