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# Instrument Approaches

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Ryan Roberts – CFI/CFII/MEI Ó 2004 Hal ozone.Com – Revision 1.3

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## 1 OVERVIEW

### Keep the Big Picture:

- Awareness – BIG Situational PICTURE – always know where you are.
- Anticipate – All heading changes, altitude changes, FAC, radio changes

### Any Emergency

- Handle the Emergency
- Report the Equipment failure or Emergency to ATC

### Control

- Control by setting **pitch**, bank and power (AI, TACH)
  - Pitch for altitude (VSI), Power for airspeed
- **Do not chase needles – set ‘target’ on the attitude indicator**

## 2 WITHIN 3 MINUTES OF THE INITIAL APPROACH FIX

1. **ATIS** – Check
2. **Approach Briefing** – Complete
3. **Approach Check** – Complete
4. **Airspeed**

## 3 INSTRUMENT APPROACH

### 3.1 Radar Vectored

#### 3.1.1 **Base Leg**

- Use Nav 2 and ADF for Situational Awareness and Distance to FAC
- **PRIORITY → Watch for final course (VOR radial / Localizer)**
- Set Flaps on the Base Leg
- Verify Inbound Course (Frontcourse / Backcourse? Reverse Sensing?)
- Anticipate Heading and Altitude values for Approach Clearance
- Anticipate and determine Wind Correction Angle (WCA) on Final

#### 3.1.2 **Cleared for the Approach**

- TURN to new intercept heading and DESCEND when appropriate
- Establish Wind Correction – make calculated adjustments
- Nav 2 - Step Down Fixes
- Back up Nav 1 with Nav 2

## **3.2 Full Approach**

### **3.2.1 Approaching IAF Base Leg**

- Outbound course from IAF to Approach Course Interception
- Timing – 1:30 or as needed based on wind and 10nm barrier

### **3.2.2 Passing IAF**

- Start Time
- Turn outbound on FAC

### **3.2.3 Outbound Procedure Turn**

- Verify Inbound Course Setting  
(Frontcourse? Backcourse? Reverse Sensing?)
- Anticipate Wind Correction angle on Final

### **3.2.4 Inbound Procedure Turn**

- Set Flaps 10 degrees
- **PRIORITY → Watch for Final Approach Course**
- Verbalize “*Course Alive*”
- Intercept Final Approach Course
- Establish Wind Correction – make calculated adjustments

## **3.3 After Established on Final**

### **3.3.1 Before Outer Marker / FAF**

- **PRIORITY →**
  - Maintain Localizer / Final Approach (HDG and WCA)
  - Watch for OM / DME / Glideslope / Descent Point

### **3.3.2 Final Approach Fix**

#### **3.3.2.1 ILS**

- Verbalize “*Glideslope Alive*”
- “*Gear – Power – Tower – Time (OM)*”

#### **3.3.2.2 BackCourse Localizer Approach**

- Verbalize “*Ignore Glideslope*”
- “*Time - Gear – Power – Tower*”
- “*Needle North – Go North*”, “*Needle East – Go East*”

#### **3.3.2.3 VOR Approach**

- “*Time – Gear - Power – Tower*”

#### 3.3.2.4 VOR Back Course Approach

- HSI or OBS – Set to Front Course
- “Time – Gear - Power – Tower”
- “Needle North – Go North”, “Needle East – Go East”

#### 3.3.2.5 NDB Approach

- Go toward the needle head – “Head Left of Course, Go Left”
- “Time – Gear - Power – Tower”

#### 3.3.2.6 No Final Approach Fix

- Descent Planning = Simulated FAF
- Go Down → “Gear - Power”

### 3.3.3 After Outer Marker / FAF

- PRIORITY →
  - Maintain Glideslope / Constant Descent Rate (Set Pitch for VSI)
  - Maintain Localizer / Final Approach (Set a specific heading with WCA)
  - Do Not Chase Needles → Set Pitch / HDG + Maintain
- Landing Check
- Final Check
- Missed Approach Nav Settings (when Nav 2 no longer used)
- “3 Green Over the Green, 1 in the mirror”

### 3.3.4 Missed Approach

- Mixture – Props – Throttle – Positive Rate of Climb – Gear / Flaps Up
- Report: “Vero Beach Tower, Seminole 123AB going missed”
- Through 500 Feet above DA:
  - Climb Check
- Contact Departure when advised
- Confirm Missed Approach Instructions

## **4 GPS APPROACH**

### **4.1 Before Starting the Approach**

- Verify RAIM
- Verify Database Currency
- Set Volume Level

### **4.2 Setup the Approach**

- Setup the GPS with the correct approach and entry point

### **4.3 Flying the Approach**

- Turn to new Heading:
  - Start the turn
  - Twist HSI needle to new course
  - Twist heading bug to new wind correction angle

### **4.4 Over the Final Approach Fix**

- *“Time – Gear – Power – Tower”*

## **5 HOLDS**

### **5.1 Entering a Hold**

- Holding Airspeed within 3 minutes of Holding Fix
- Entry Type Determination
  - Track Direct Towards the Hold Fix
  - Set the CDI tail on the instructions
  - Determine Entry – Visualize
    - Right – up 20 degrees Right side
    - Left – up 20 degrees on Left Side
- Heading after Hold Fix Entry
- Timer set 1:00 (Below 14,000ft)

### **5.2 Passing the Hold Entry Fix**

- Turn to Predetermined Heading
- Timer –Start
- Twist Heading Bug to entry heading
- Throttle and Lean Mixtures
- Report Entering the Hold to ATC