

VOR Information

- $\pm 1^\circ$ Accuracy
- Frequency Range
 - 108.00 - 117.95
 - ILS Freq are Odd Decimals (i.e. 109.7)
- How it Works
 - Reference Phase
 - All Directions constantly
 - Variable Phase
 - Spins or "Lighthouse"
- VOR Classes
 - Terminal
 - 25 nm Range
 - 1000 - 12,000 ft
 - Low
 - 40 nm range
 - 1000 - 18,000 ft
 - High
 - 40 nm Range
 - 1000 - 14,500 ft
 - 100 nm Range
 - 14,500 - 18,000 ft
 - 45,000 - 60,000 ft
 - 130 nm Range
 - 18,000 - 45,000 ft
- Errors
 - Line of Sight
 - RPM Effect
 - up to 6° error
 - Cone of Confusion
 - Needle Deflection
 - Ambiguity Error
 - To/From/Off Indicator
 - Oscillation
 - Scalping
 - Rapid
 - Bends
 - Slow
 - Reverse Sensing

- VOR Checks
 - VOT $\pm 4^\circ$
 - Ground Checkpoint $\pm 4^\circ$
 - Airborne Checkpoint $\pm 6^\circ$
 - Dual VOR $\pm 4^\circ$
 - Bench check by A&P Mechanic

ADF / NDB Information

- Classes
 - Compass Locator 15 nm
 - Medium Homing 25 nm
 - Homing 50 nm
 - High Homing 75 nm
- Frequency Range
 - ADF 190-1750 Khz
 - NDB 190-535 Khz
- MH + RB = MB to the station
- Angle of Deflection = Angle of Intercept
- Errors
 - Skip Zone or Night Effect
 - Ionosphere lifts
 - Dusk and Dawn
 - Coastal Effect
 - up to 30° error
 - Interference
 - Mountain Effect or Terrain Effect
 - Weather
 - Static Electricity
 - Precip
 - Thunderstorm Effect or Lightning

Other Information

- Time Distance Checks
 - Time
 - Sec for Change / Deg of Change
 - Distance
 - (Min for change * TAS) / Deg of change