



ADF/NDB

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Non-directional Beacon

- ⦿ General Information
 - Frequencies
- ⦿ Uses of the NDB
 - Airways
 - Fixes
 - NDB Approaches
 - Instrument Landing System
- ⦿ Adverse affects

General Information

Antenna



Low or medium

Continuous

190 to 535 kHz

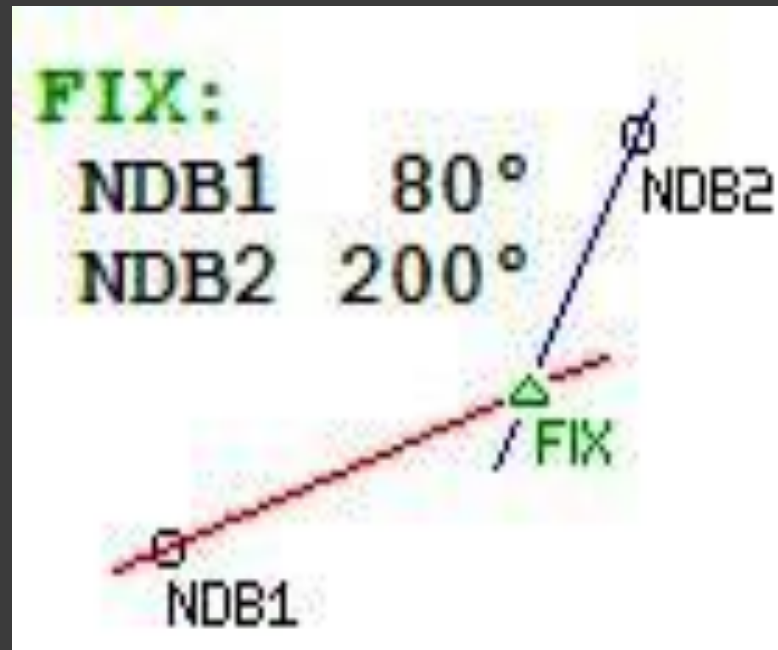
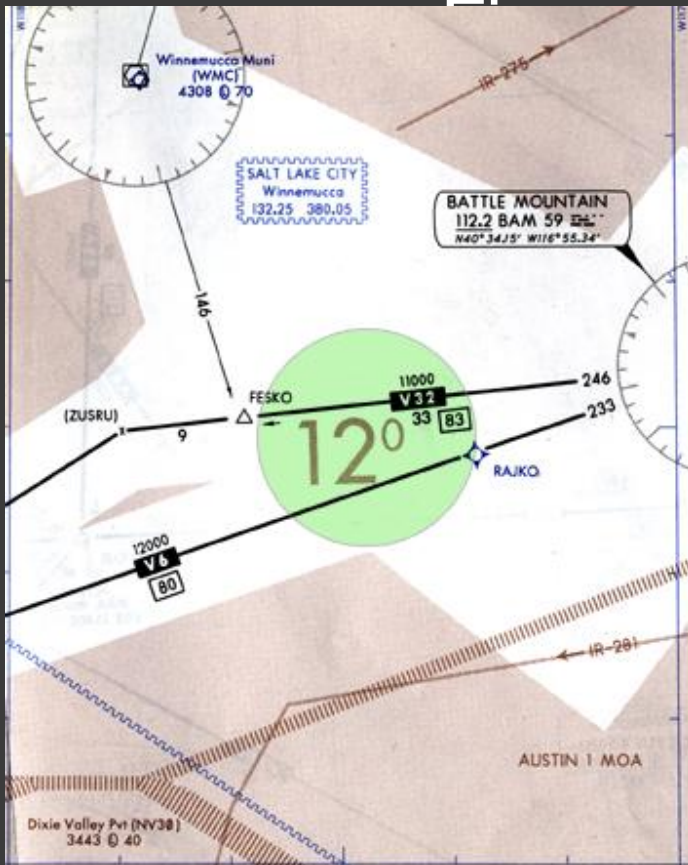
Tune/Ident

Morse Code



Uses of NDB

Airways and

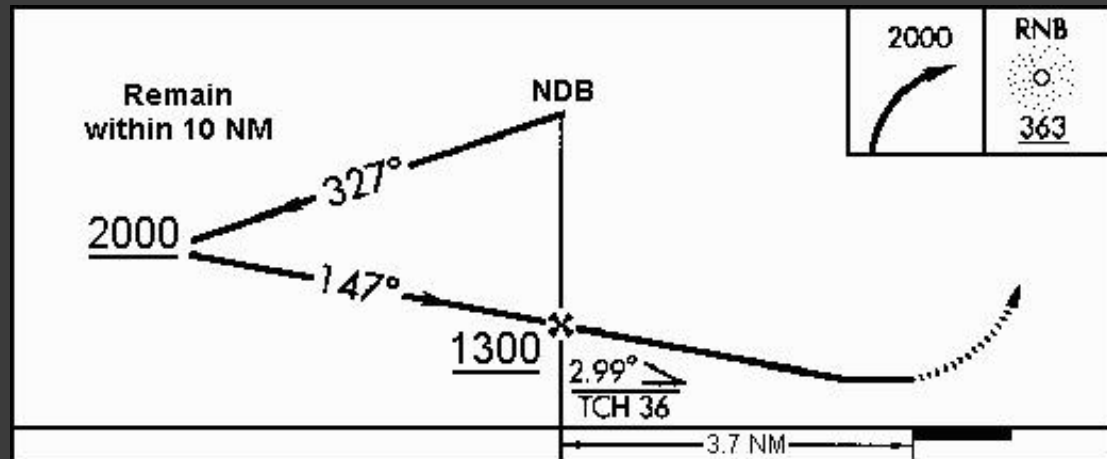
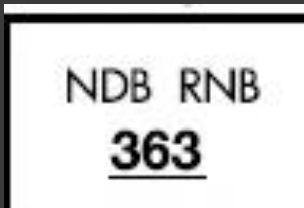


Uses of NDB

NDB Approaches

Instrument Landing System (ILS)
IAF-FAF

Locator, Outer Marker



MISSED APPROACH: Climbing right turn to 2000 direct RNB NDB and hold, continue climb-in-hold to 2000.

Adverse Affects

Night Effect

Terrain Effect

Electrical Effect

Shoreline Effect

Bank Effect



Automatic Direction Finder (ADF)

⦿ ADF Indicators

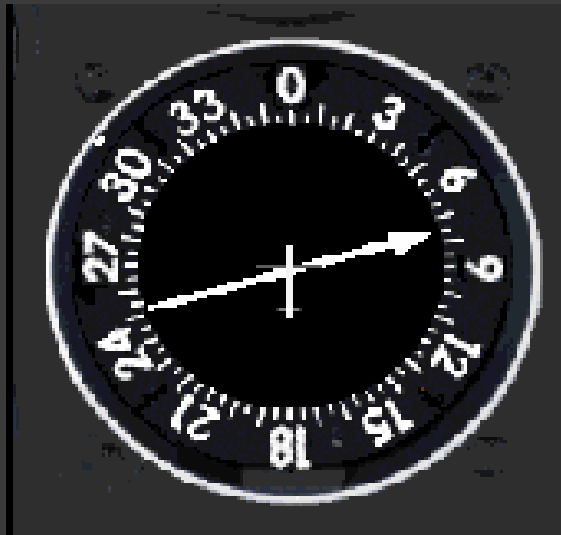
- Fixed Compass Card
- Rotating Compass Card
- Single-needle Radio Magnetic Indicator
- Dual-needle Radio Magnetic Indicator

⦿ Time/Distance to Station checks

⦿ Intercepting a bearing

- Homing
- Tracking- Bracketing

ADF Indicators – Fixed and Rotating Compass Card



Fixed



Rotating

$$MH + RB = MB$$

ADF Indicators – Single or Dual needle RMI

Radio Magnetic Indicator



Single



Dual

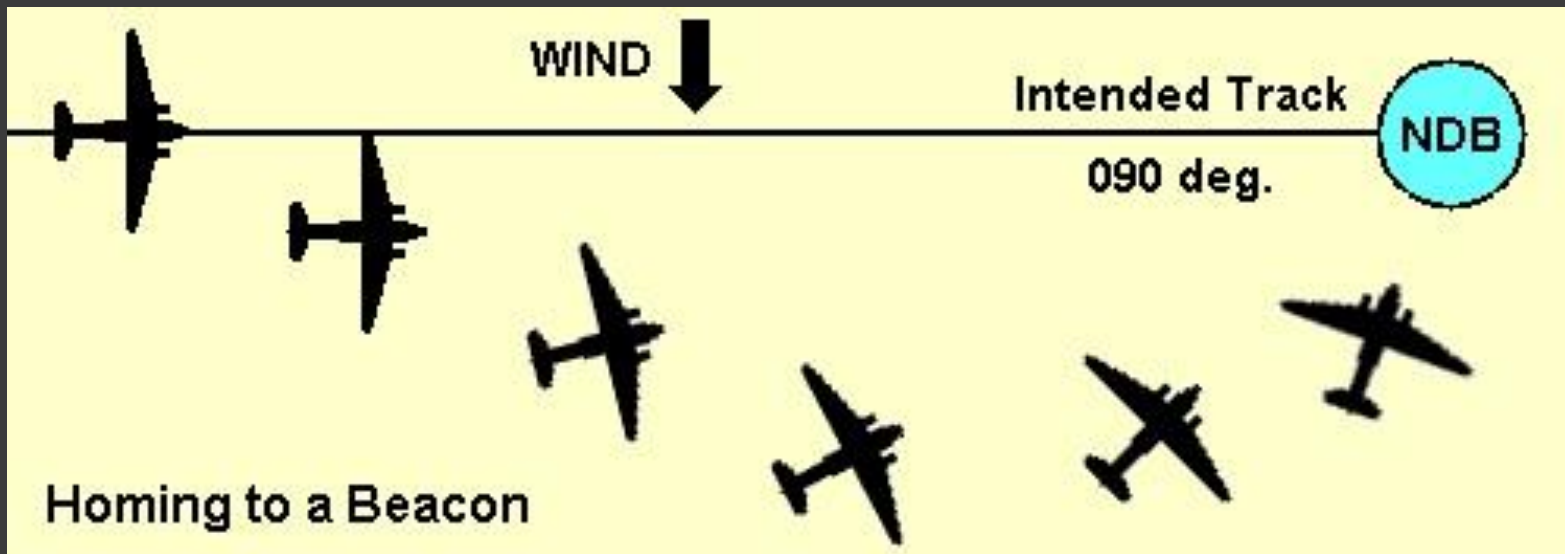
Time/Distance to Station

$$\text{Minutes to station (22)} = \frac{\text{Time in seconds (220)}}{\text{Degrees of bearing change (10)}}$$

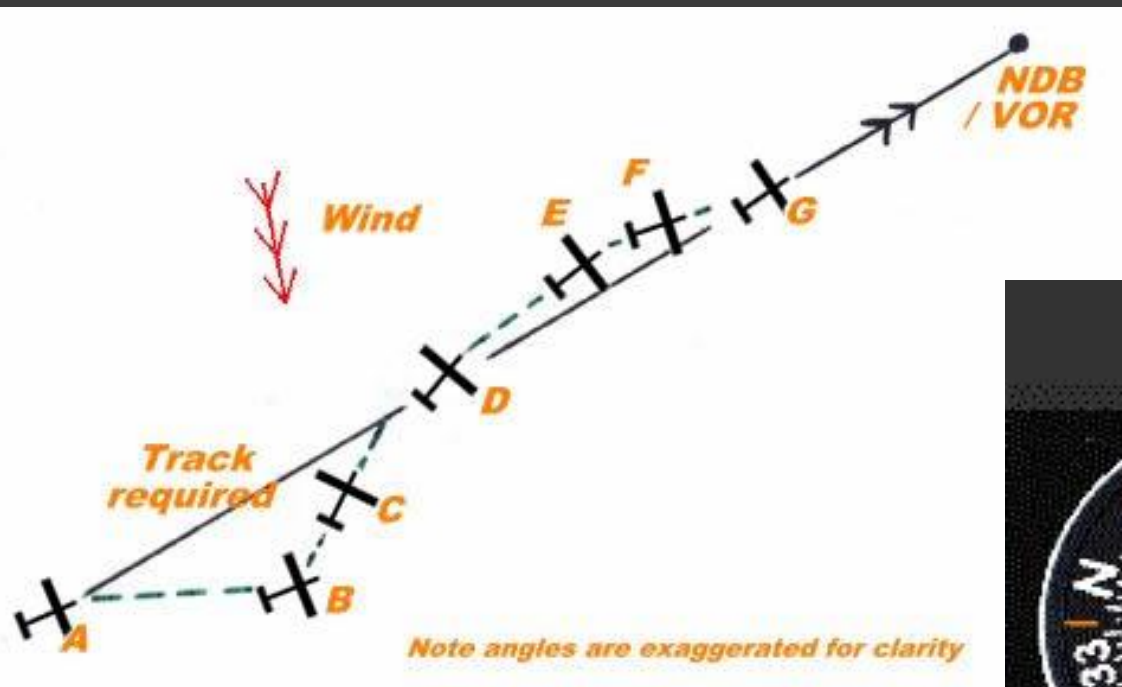
$$\text{Nautical Miles to station (40)} = \frac{\text{TAS (110) x Min. Flown (3 \frac{2}{3})}}{\text{Degrees of bearing change (10)}}$$



Intercepting a Bearing - Homing



Intercepting a Bearing



Tracking- Bracketing

Summary

NDB

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- ◉ Adverse affects

ADF

- ◉ ADF Indicators
 - Fixed Compass Card
 - Rotating Compass Card
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 - Dual-needle Radio Magnetic Indicator
- ◉ Time/Distance to Station checks
- ◉ Intercepting a bearing
 - Homing
 - Tracking

Work Cited

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