6. NDB tracking, holds and procedures



b. Tracking to an NDB

Aim

 To learn to use the ADF and RMI for both tracking and position fixing

Airmanship

 Current charts, Instrument ground checks, FREDA, S-I-D

Performance

 To learn to track within 5° & +/- 5kts, +/- 100'

339 BIA

Air Exercise (ii): Intercepting and holding a specified track to a beacon

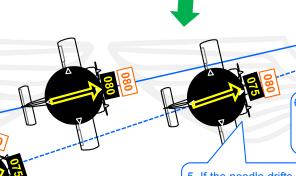
QDM --- 075

4. As the needle approaches the required QDM, allow enough lead-in to turn the aircraft onto the required track.

Use the 1-in-60 rule; for example, at 10nm a 5° lead-in is a distance of ~0.5nm, about right for a 60° rate 1 turn at 120kts

Required track QDM 080

- 1. Tune and identify the NDB (SID)
- 2. The needle will indicate QDM to the beacon (065) regardless of the heading of the aircraft
- 3. Determine the direction to turn and the intercept angle (in this example a right turn for a 60 degree intercept, so a heading of 020)

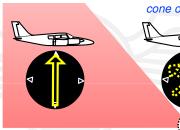


Wind 010/20

6. ...turn the aircraft <u>left</u> by 2x the QDM error (eg. in this example, error is 5°, so turn left from 080 to 070) to re-intercept the QDM and then establish a drift-assessed heading

5. If the needle drifts <u>left</u> (eg. QDM now 075 and heading 080)

- Within 40 degrees of the vertical from the NDB, transmissions are weak and the RMI needle will not indicate correctly – this is called the "cone of confusion"
- At 3000', this cone is ~0.4nm in radius, and ~0.8nm at 6000'. Within the "cone", you must hold a constant driftassessed heading, and not chase the RMI needle





QDM, 065