

**The Automatic Direction Finder (ADF) is one of the simplest nav aids in the cockpit.. but is capable of doing some quite clever stuff.**

There are various versions of the ADF, this sheet deals with the basic rotatable compass card version found in default Cessnas. This means that you can turn the compass using the knob at the bottom.

First rule to remember is that the needle ALWAYS points TO the beacon (an NDB). At its simplest you can simply fly directly towards the beacon (homing).



Flying direct to the NDB a.k.a. "Homing"

Flying directly away from the NDB

NDB is 60 degrees left of current heading

You know when you've reached it since the needle swings round from "To" to "From" the NDB. All these examples are still valid even if you don't adjust the gauge to read current heading, the needle still points the same way.



Juan Sheet is all you need!

**NOTE: Headings given by the ADF do not cater for wind so it will drift left or right as you're blown off course. Keep an eye on it and adjust heading to cater for the wind. There is a techie way of working out the wind correction but that's for another lesson!**

# "How to" The Gauges

## 1. The ADF

Version 1 updated 18/07/2010

To calculate your rough distance from the NDB



1. Fly a constant heading at a constant speed (110kts here)
2. Note the bearing TO the NDB (320 above left), start stopwatch.
3. When the needle has swung 10 degrees to 330 above right, stop stopwatch.
4. Formula is:  
Minutes flown x Airspeed divided by Degree of change.
5. In this example it is: 1.25 mins x 110kts divided by 10 degrees = approx 13.75 miles from my current position to the NDB.

