

# “How to” The Gauges 3.

## AI Plus Other Gauges

### Version 1 updated 12/10/2010

In Part 1 of The Attitude Indicator we highlighted what it can't tell you. This one will fill in some of the gaps to confirm why you need more than just the AI to know what your plane is doing. Note: again this is grossly simplified for FS use only!

I've used the basic ADI out of the C172 but the principles are the same with most types

The aircraft has an attitude of c.18 degs left bank and zero pitch, but what is it actually doing?



On the Turn Coordinator the left wing tip is on the left hash mark. This indicates that you're in roughly a Standard Rate or 2 Minute Turn.



With the black ball in-between the markings your turn is also “Co-ordinated”



A look at the VSI and Altimeter will confirm that you are just about maintaining altitude. Remember, the VSI is historical information (measures a rate of change)

Almost a perfect left hand co-ordinated standard rate turn!

If the ball is to the right or left of the centre then you're uncoordinated and either 'skidding' or 'side slipping', you're in a mess. To correct it use the phrase **STEP ON THE BALL** i.e. If the ball is left, use left rudder to centre it again.

There are various ways other than STEP ON THE BALL to get coordinated. Knowing that but then practising with changing bank-angle and pitch will soon illustrate how to achieve or lose co-ordination. **ALWAYS SCAN YOUR OTHER INSTRUMENTS!**



Compare the eenstruments.com. **Simples!**

When the AI alone would be misleading! Side-Slips. I had trouble getting the 172 to side-slip so I've used the Real Air SF260 for this example.

Here the ADI says left bank and about zero pitch. Looks OK doesn't it?



The Turn Coordinator says I'm in a Left Hand Standard-ish turn. OK so far. **BUT** the inclinometer (the ball) says I'm side-slipping in an uncoordinated turn.....



.... And that means I'm sharply losing altitude despite what the AI says!

