Limited Panel

Objectives

To maintain straight and level flight by sole reference to a limited flight instrument panel.

To carry out rate one level turns onto compass headings.

1. Considerations

Turn Coordinator

- Electrically driven
- Failure shown by warning flag
- Estimate angle of bank from AI – 15°
- Balance indicator OK
- Checked during taxi and SADIE checks

VSI and Altimeter

- Rely on static pressure
- If fails need to use AI and RPM
- Inspect static vent during preflight

Airspeed Indicator

- Requires pitot and static pressure
- Most common blockage by ice over pitot head
- Will indicate wrong airspeed, or zero
- If fails need to use AI and RPM
- Inspect pitot head and static vents during preflight

Heading Indicator

- DI, DG, HSI
- Gyro stabilized, powered by engine-driven vacuum pump
- If fails will slowly run down, card will spin
- If fails will need to use magnetic compass
- Checked during taxi and SADIE checks

Attitude Indicator

- AH
- Driven by engine-driven pump
- May have failure flag
- If fails will have to use indirect information from performance instruments
- Checked during taxi and SADIE checks

2. Airmanship

- Instrument check during taxi very important
- SADIE

3. Aeroplane Management

- Electrical system failure may affect other instruments
- Static system often has backup system
- Pitot head heated
- Vacuum gauge checked regularly
- Regularly checking DI is aligned to compass

4. Human Factors

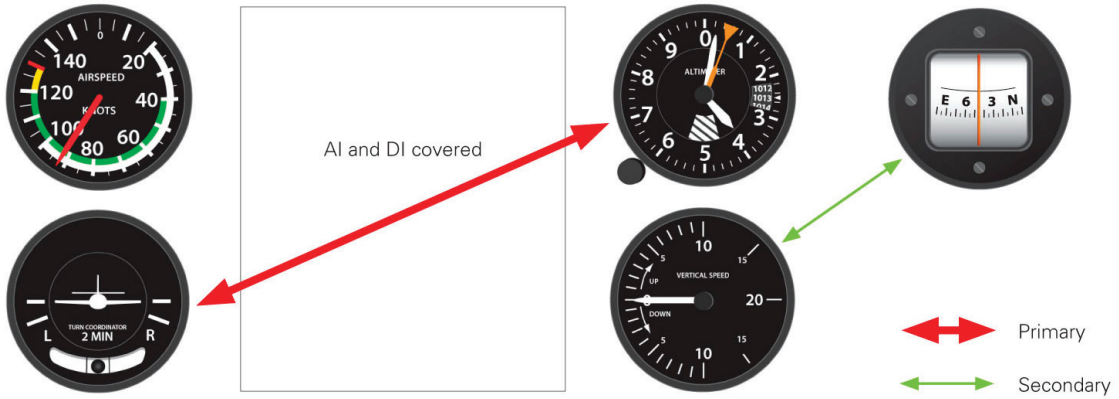
- Develop systematic instrument scan
- Trust the instruments
- Will cover failed instruments

5. Air Exercise

- Simulate vacuum system failure
- AI and DI unserviceable

Pitch	ASI, ALT, VSI, RPM
Bank	TC, Compass
Yaw	Balance

Selective Radial Scan



- Airspeed will require only a small amount of attention so long as attitude and power are set correctly
- During turns the compass' importance will increase as approach heading