

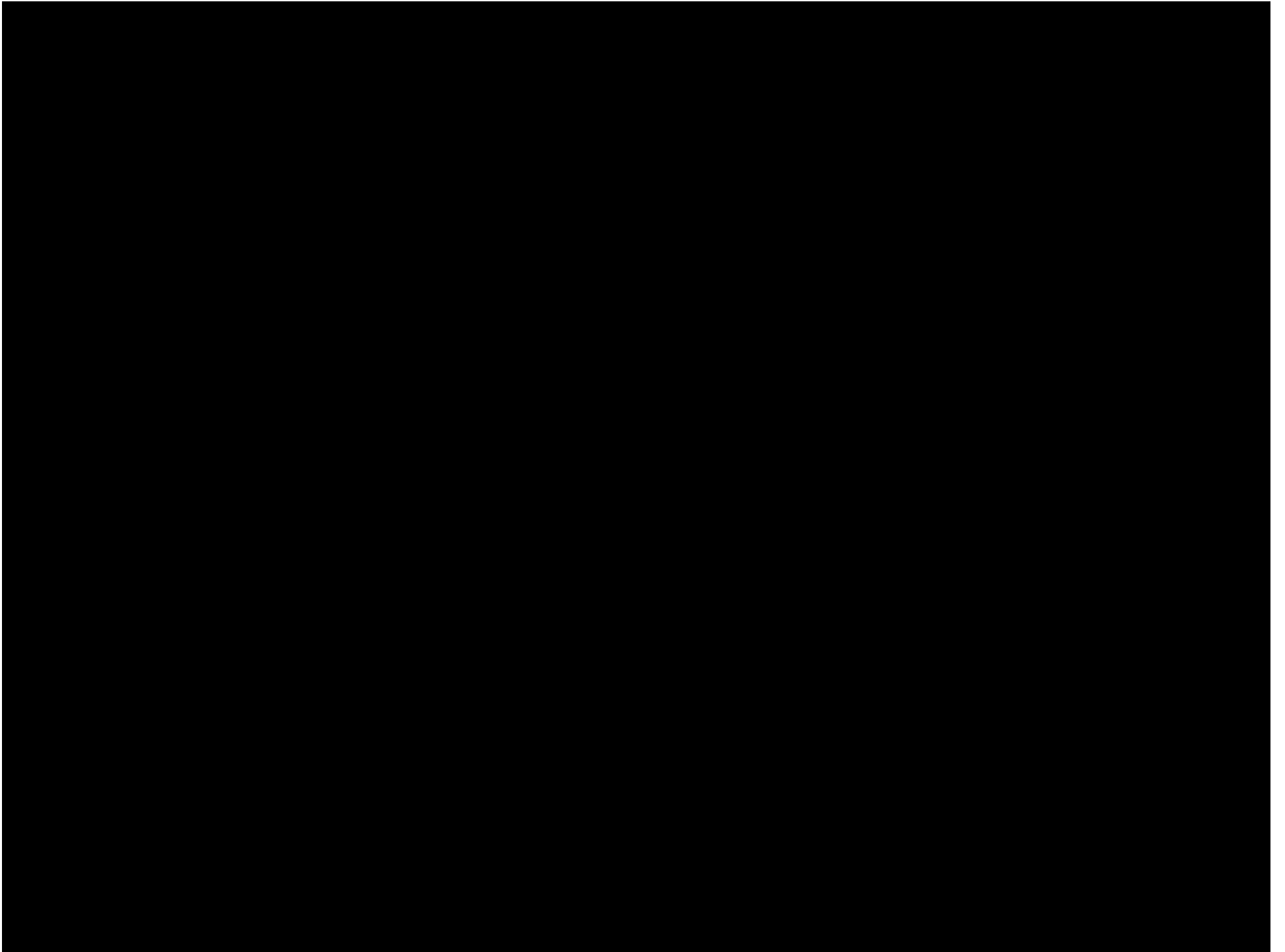
*The Use of Flight Recorders in
the RNZAF*

Wing Commander Jim RANKIN

Scope



- Introduction
- Some videos
- What do the videos tell us?
- Advantages and Disadvantages of HUDs
- The legal use of recordings
- Some more videos (time permitting)



RNZAF Recorders

- Recorders used in RNZAF:
 - Boeing 727 FDR and CVR (sometimes)
 - Orion Mission Data Recorder
 - Skyhawk and Macchi Head Up Display (HUD) video recorder

What do HUD videos show?

- Pilot's eye view (straight ahead)
- Aircraft performance (flightpath, attitude, airspeed, altitude, heading, some navigation and comms information)
- Communications

What HUD videos don't show

- Engine settings or performance
- Control inputs, switch settings (unless inferred)
- Ancillary services (Fuel, hydraulics, electrics, cabin altitude)

HUD Advantages



- Easy to use and interpret
- A picture is worth 1000 words !
- Makes it easier to know what pilot was seeing and thinking (sometimes)
- More useful in human factors investigations

HUD Disadvantages



- Not crashworthy
- Limited technical information
- Not particularly useful for tech related incidents

Legal Issues



“Sir, this is not a can of worms.....

....it is more like a drum of snakes!”

Major Steve Taylor

RNZAF Lawyer

Legal Issues

- Apart from Boeing 727, recorders are NOT primarily safety tools
- Intended use is training and mission analysis
- This changes the significance put on the sanctity of recordings
- We don't have a 'Union' to worry about

Legal Issues

‘In the case of an aircraft accident, the HUD video, cockpit voice, flight data, or similar recording are to be made available to the Court of Inquiry.’

NZAP 201

Manual of Air Force Safety

Legal Issues

'The AOC Air Command will determine whether these recordings may be released to any other individual, agency, or organisation, and in due course will determine whether they may be used as evidence in pursuance of any disciplinary proceedings'

Legal Issues

- A Court of Inquiry is convened for ALL aircraft accidents
- It can only make findings and recommendations relating to the Terms of Reference set by the Convening Authority
- It cannot apportion blame (although actions of a person CAN be listed as causes of an event)

Legal Issues

- The results of a Court of Inquiry **CANNOT** in any way be used in Disciplinary Proceedings (e.g. a Court Martial)
- Supposed to allow free and frank conduct of an Inquiry
- Can use Court of Inquiry proceedings where perjury is suspected

Legal Issues

‘Their use in disciplinary proceedings will normally be authorised only in cases of intentional violation of orders, gross negligence, or professional misconduct.’

Legal Problems

- Our current legislation does not fully address external requests for recordings
- NZAP 201 is well down the hierarchy of legislation - might be overridden by other statutes or orders
- The lawyers are looking at it now

Summary



- RNZAF recordings are NOT primarily used for safety
- HUD videos extensively used for training
- Some advantages in safety analysis, but lots of limitations
- Can be used in disciplinary proceedings
- Legal situation not well defined

More Videos ??

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