



Week 45 FLAMINGO's Mode Control Panel

NOVEMBER

313 - 52 THURSDAY 9

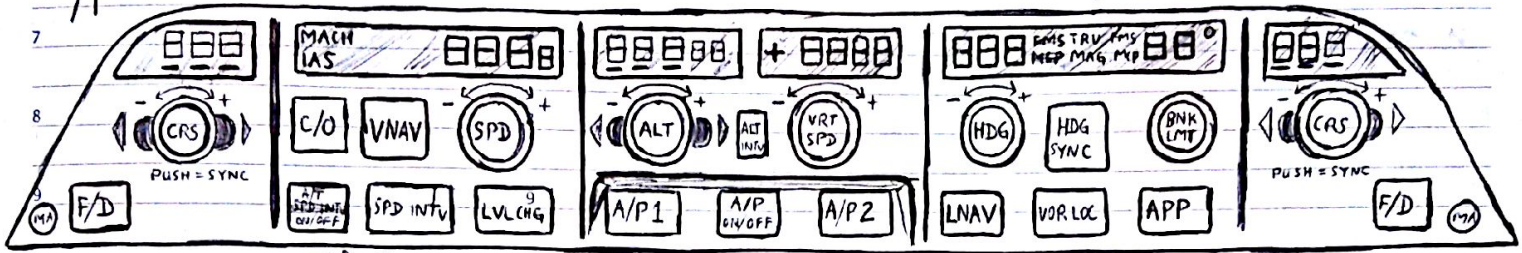
314 - 51 FRIDAY 10

315 - 50 SATURDAY 11

Typ 1:

Change: two displays to one display

INDICATORS
TRU MAG
FMS MCP



swap positions

Move LNAV between knobs for prominence?

Swap positions of HDG SYNC and LNAV

The British Legion held the first Poppy Day 1921

Parameters

316 - 49 SUNDAY 12

Remembrance Sunday

- Knobs/buttons labelled in dull white.
- Knobs/buttons backlit in dim white when "unselected".
- Knobs/buttons backlit in bright green when "selected".
- Knobs/buttons backlit in amber when faulty system.
- Dial knobs of CRS and ALT slide sideways to select digit in display to edit; Edit selected by rotating knob clockwise-to-increase, anti-clockwise-to-decrease.
- Press knobs/buttons to "select/enable", press again to "unselect/disable".
- In display above CRS and ALT knobs, a bright dash beneath digit indicates which digit is currently selected for editing (by knob rotation).
- Knobs are stalks with rotating bezels crowning their fixed stubs.

N1 should be a knob and adjustable value when speed is to be based on engine output rather than measured speed.

Port Harcourt → Dubai (DNPO → 0M DB) Route:

- IKROP
- OBUDU
- TAKUM
- INASU
- SONGU

V X Y Mstr

Dylan Thomas, Welsh poet, died aged 39, 1953

Bulldozers began demolishing the Berlin Wall 1989

Pop chart No. 1 is 'Pretty Woman' by Roy Orbison 1964



FLAMINGO'S Overhead Panel

NOVEMBER

FRAGMENT VIEW

320 - 45

THURSDAY

16

321 - 44

FRIDAY

17

322 - 43

SATURDAY

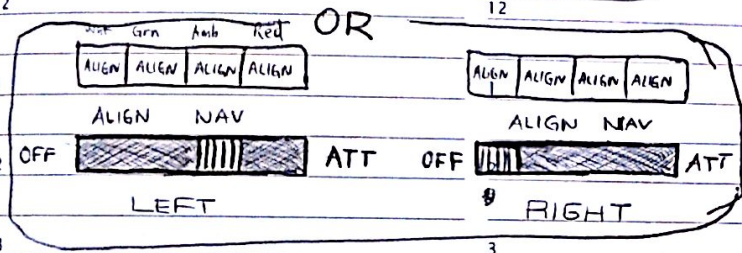
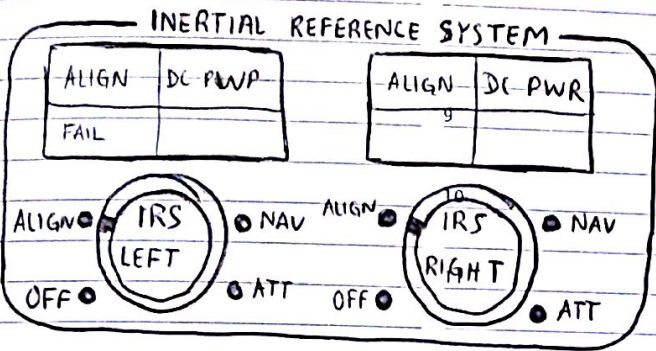
18

Space-saving switch design:

INDICATIONS:

- White colored ALIGN = Aligning
- Amber " ALIGN = Disparity
- Green " ALIGN = Aligned
- Red " ALIGN = System fault

When turned ON, a DC-Power test is done by system to look for faults. Lamps (all colors) also flash once for one second to test for faulty lamp/LED.



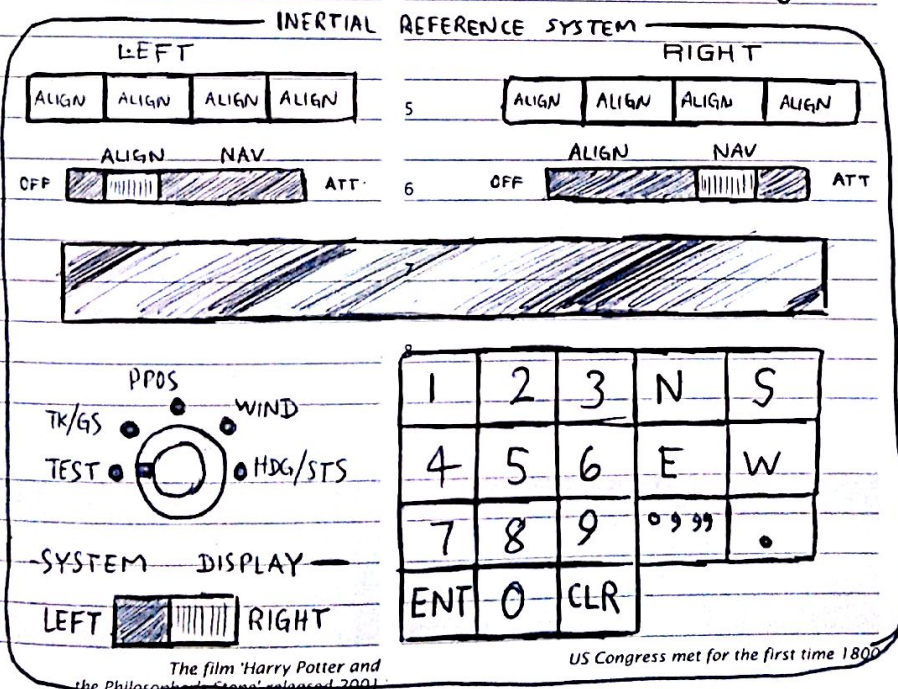
A fire at King's Cross Underground station killed 30 people 1987



323 - 42

SUNDAY

19



COLOR SEQUENCE

- ALL/TEST: White, Green, Amber, Red
- NORMAL: White → Green
- NON-NORMAL: Amber
- FULL FAILURE: Red



The film 'Harry Potter and the Philosopher's Stone' released 2001

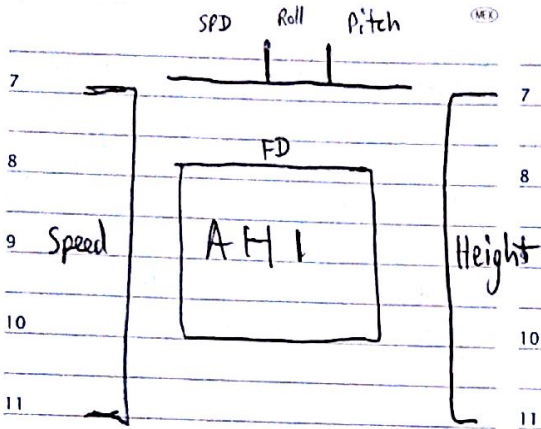
US Congress met for the first time 1800

Alfred Tennyson appointed Poet Laureate 1850

20 324-41 MONDAY

21 325-40 TUESDAY

22 326-39 WEDNESDAY



Speed field:

- ▣ MCP SPD
- ▣ FMS SPD (VNAV)
- ▣ ARM

Roll field:

- ▣ MCP HDG
- ▣ FMS HDG (LNAV)

Pitch field:

- ▣ MCP ALT
- ▣ FMS ALT (VNAV)

Command field:

- ▣ FD
- ▣ AP 1
- or
- ▣ AP 2
- ▣ AP 1+2 = AUTO LAND

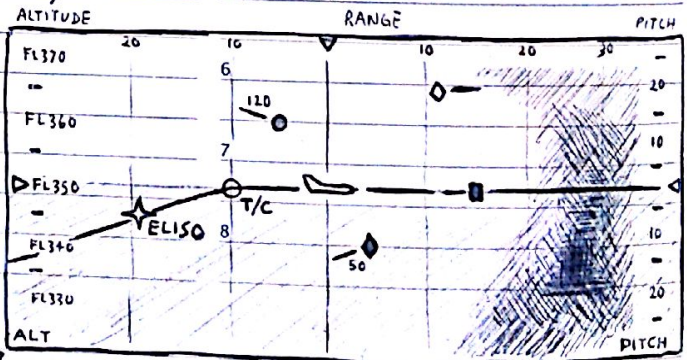
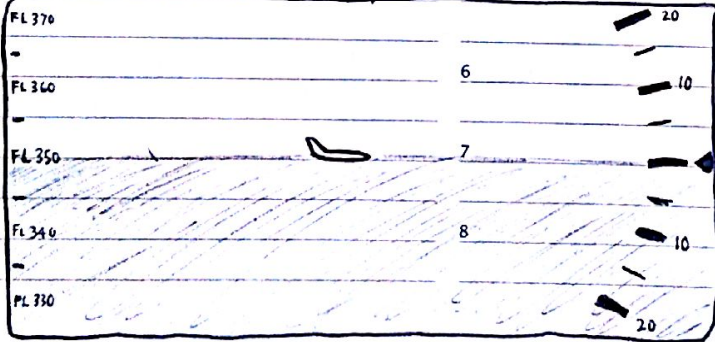
↑
This is dual-channel mode and appears in green. Plane will land itself and come to stop with brakes.

- ▣ AP 1+2 = AUTO-ILS

↑
This is single-channel mode meaning AUTO LAND is not engaged but normal ILS mode is and will guide down near TD point where crew must disengage and manually land. It appears in amber.

Vertical Situation Display - Full mode

(WEATHER ALTITUDE TCAS - TA/RA/RE VNAV)



- ▣ Full VSD
- ▣ Partial (forward) VSD

Delete pitch scale, no need for it (AHII).

Bring ALT to PITCH's side (right).

The first coelacanth caught off South Africa 1938

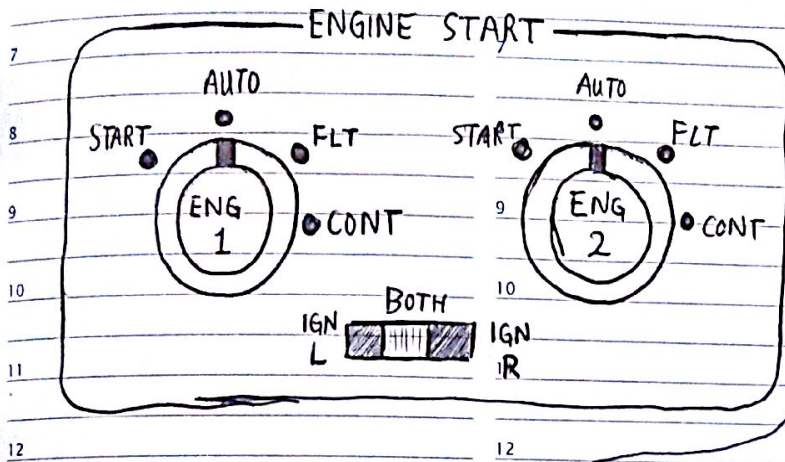
Include .TAWS/EGPWS

Edwin Powell Hubble, US astronomer, born 1899

First human flight in a hot-air balloon, Bois de Boulogne 1783

JANUARY							FEBRUARY							MARCH							APRIL							MAY							JUNE															
W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S									
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(USA)



SEQUENCE: NORMAL

Because of FADEC, the start lever or "fuel ~~lever~~" HAS to be moved from the "CUTOFF" position up to the "RUN" position. The fuel valves don't immediately open, rather they "arm" and wait for turn-knob to be set to START for the crank-up to turn the engine up to start speed. At start speed FADEC's monitoring determines automatically when best to let fuel in and initiate ignition. Hot and Wet starts are therefore impossible to be encountered.

First quiz programme broadcast - a spelling competition 1937

The whole engine start process is thus automatic and self-monitoring. This also means that if FADEC detects a start-up fault that can lead to unsafe start, it will abort or shutdown the affected engine automatically while informing crew with an EICAS report in parameter-inclusive detail (for printing purposes if desired).

Note: FADEC always uses a constant 15-second period for engine start (from START to ignition). If ignition does not occur in 15-second air-cranking window, it will abort by disengaging starter (starter cutout). The knob will spring to AUTO. FADEC via EICAS will start a re-start countdown of 60secs (for cooling) before it tells crew to try another start. At this point, crew should try steps for Alternate Start instead of another Normal Start attempt.

including oil flow, temp, quantity, pressure, eng. vibration, etc.

SEQUENCE: ALTERNATE

To start engine, turn knob to START (after selecting either left or right ignitors), this will initiate bleed air-powered engine crank by auto-suspending airpack operation to ensure 30psi diversion of bleed air to engine. When air cranks engine N2 to FADEC's satisfaction (HOT/WET start protection), FADEC will tell you via EICAS to "move fuel lever to RUN position". FADEC then completes engine start with managed & monitored ignition, spool-to-idle.

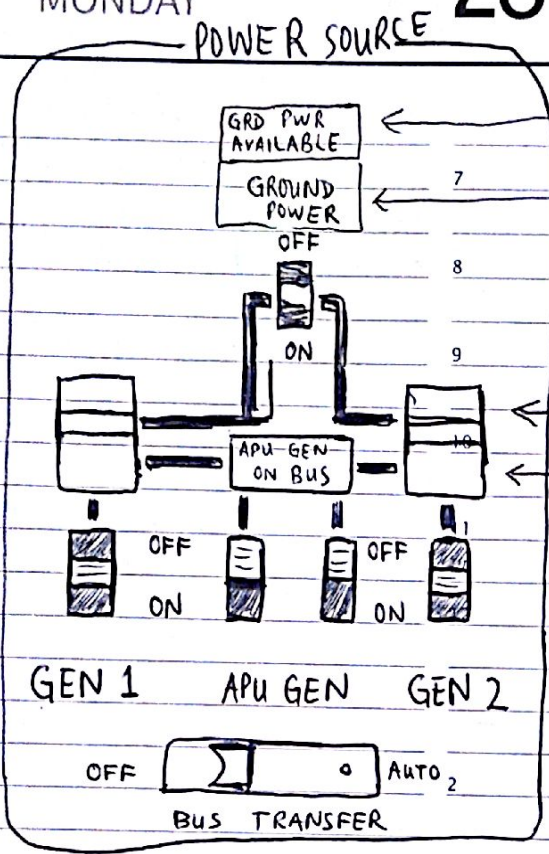
start-up fault that can lead to unsafe start, it will abort or shutdown the affected engine automatically while informing crew with an EICAS report in parameter-inclusive detail (for printing purposes if desired).

Starter disengagement is automatic with starter turn-knob turning itself back to AUTO. If it doesn't, EICAS advisory message will remind crew to turn knob to AUTO.

27 MONDAY 331-34

28 TUESDAY 332-33

29 WEDNESDAY 333-32

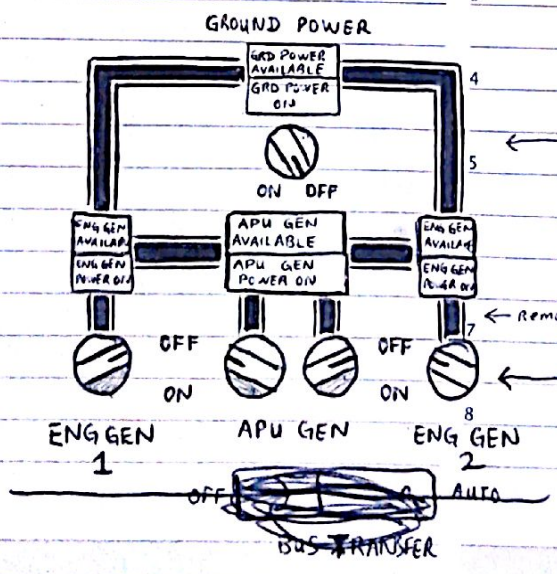


GRD PWR AVAILABLE
 7
 8
 9
 10
 11
 12
 ← switches are spring-loaded to return/stay between ON and OFF position at all times.

GRD PWR → GRD PWR ON
 7
 8 APU GEN ON BUS → ~~APU GEN POWER SUPPLY~~ APU GEN POWER ON
 9 ENG GEN ON BUS → ENG GEN POWER ON
 10
 11 READY TO LOAD → ENG GEN AVAILABLE

APU Panel

- 2 OFF-ON-START
- 3 EGT gauge
- 4 RPM gauge



← remove these marks or keep and remove upper
 ← Replace turn-knobs with slide-switches shown above

in's first police woman went on duty, Grantham 1914

The Royal Society chartered in London 1660

Order of Merit bestowed on 87 year old Florence Nightingale 1907

XFER

JANUARY							FEBRUARY							MARCH							APRIL							MAY							JUNE																				
S	S	F	T	W	T	S	S	S	F	T	W	T	S	S	S	F	T	W	T	S	S	S	F	T	W	T	S	S	S	F	T	W	T	S	S	S	F	T	W	T	S														
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FLAMINGO'S Air (Bleed) Source Selector

NOV / DEC

334 - 31

THURSDAY

30

DUAL BLEED

RAM DOOR FULL OPEN

RAM...

335 - 30

FRIDAY

1

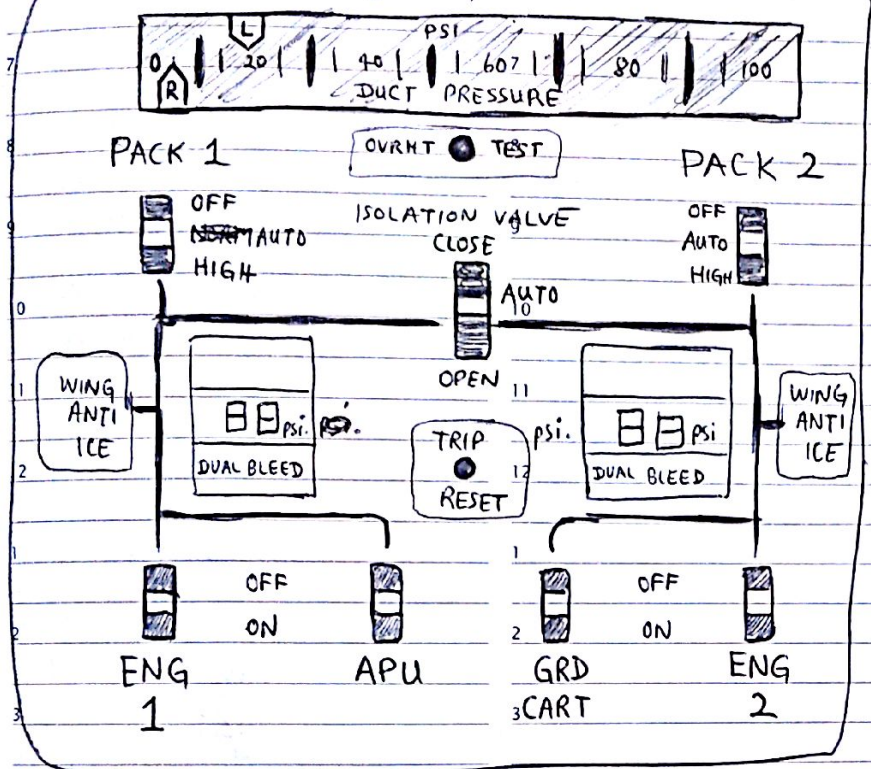
336 - 29

SATURDAY

2

St Andrew's Day (Scotland)

AIR (BLEED) SOURCE



Replace switches with magneto-spring-loaded turn-knobs that get tripped when opposing turn-knobs are turned on... just like with the power source ~~switches~~.

~~Replace AUTO with TEST~~

British Imperial Airways and British Airways merged to form BOAC 1939

337 - 28

SUNDAY

3

Keep both panels side-by-side?

- Power Source Selector (on left)
- Air (Bleed) Source Selector (on right)

Every panel has a lamp TEST button.

During pre-flight checks, panel-scans must involve the pressing of each sub-panel's TEST button with critical observation for any faulty/fail-to-light-up case of the following:

- knob/switch lamp
- display element (LED)
- indicator lamp
- backpanel indicator

Backpanel backlights have a separate switch and are excluded from TEST buttons. Faulty lamps not noticed by crew will keep TEST button lamp on in red, so that crew can "hunt" for missed fault visually. This feature is courtesy of voltage-auditing by TEST system. A voltage is sent for all lamps to consume by lighting up. Any lamp that fails leaves unused voltage returned to test, prompting TEST button to stay ON.

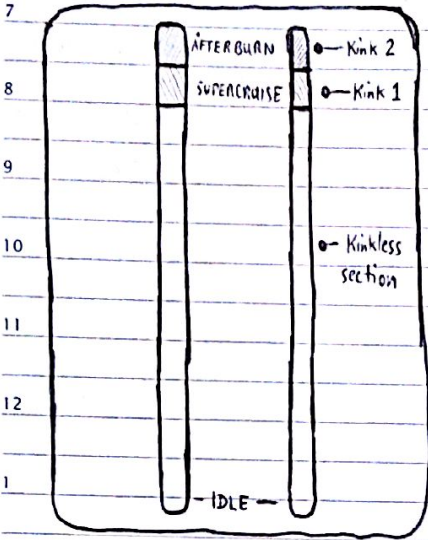
DECEMBER FLAMINGO's Throttle panel

4 338-27 MONDAY

5 339-26 TUESDAY

6 340-25 WEDNESDAY

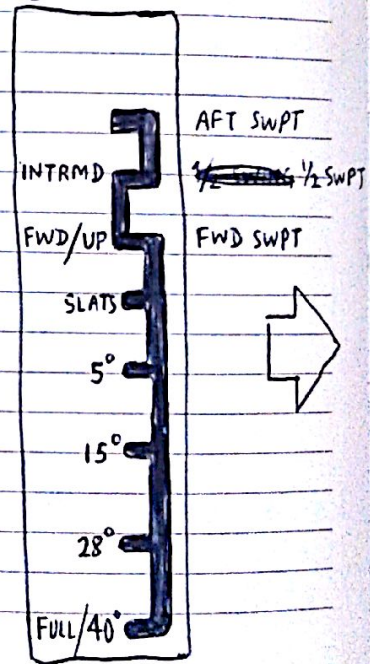
Throttle Levers:



Press up ventral release buttons to clear kink and slide lever into position; buttons click down/out. Press up again to clear next kink and slide lever into position. Sliding lever back does not require pressing-up of buttons as levers are free to slide back by hand or by FADEC's autothrottle.

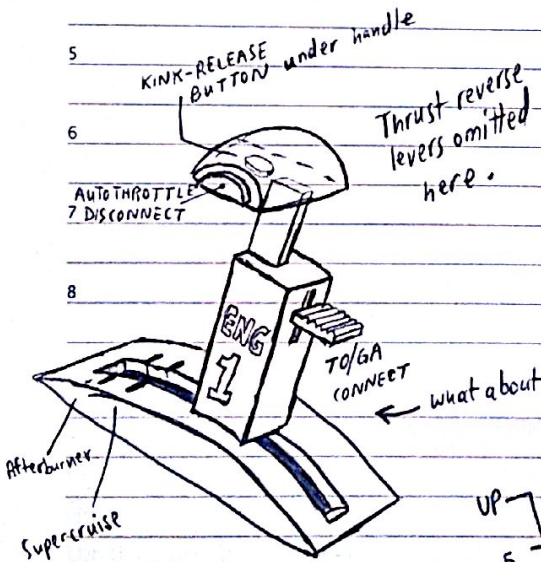
In case of MCP (N1 knob) or FMS (VNAV) being in control and commanding use of SUPERCRUISE and/or ~~the~~ AFTERBURN (VNAV or stall protection), FADEC can/will retract any/both kinks to allow it to shift throttles forward or backward as required.

Wing Lever:



The Detentless Lever System (Boeing style): Levers slide from idle to ~~max~~ maximum end

The Kinked Upper Gates (AeroScience style): Kink at maximum end prevents accidental shift of levers into "SUPERCRUISE" and "AFTERBURN" end. To enter range, both center/middle fingers of hand must press and hold ventral release buttons (one for each throttle lever handle) to cause retraction of shift gate kinks so that levers can slide through to SUPERCRUISE and/or AFTERBURN steps of gate.



FLEX CONNECT?

'Les Miserables' opened at the Palace Theatre, London 1985

The Marie Celeste left New York 1871

Mussolini introduced a tax on bachelors 1926

JANUARY							FEBRUARY							MARCH							APRIL							MAY							JUNE																				
W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S														
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UP 8
15
28
FULL/40

UP 8
15
28
FULL
Learjet

UP 10
15
20
25
30
39
Gulfstream

737



Because of the "Speed & Flight Envelope Protection" system which is constantly monitoring for a "Control Intervention" scenario, the system examines

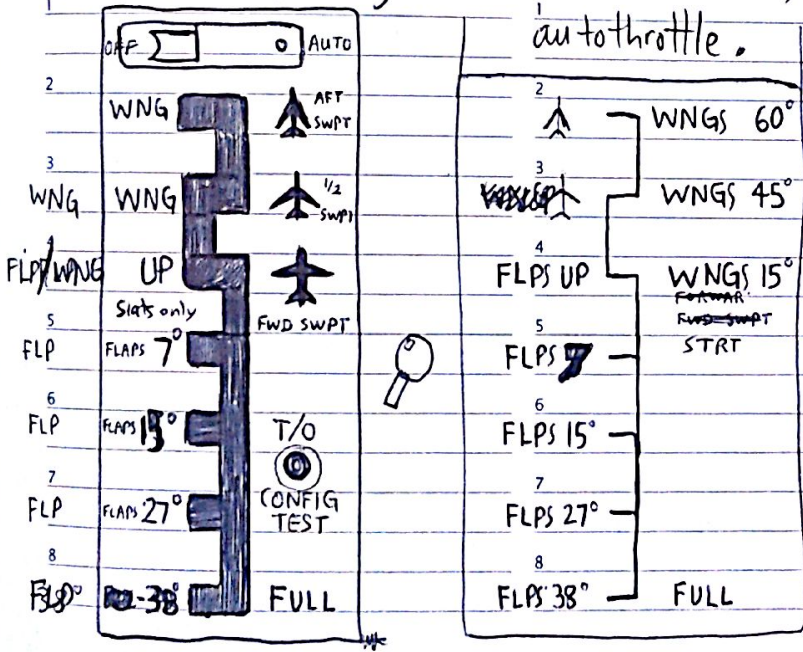
Whenever the flaps are set to 38° (r FULL), the "Speed & Flight Envelope Protection" system examines the aircraft's speeds (IAS, TAS, GS) and altitude/vertical speed to determine speed, landing gear position and strut condition (i.e. WOW). From these parameters it is able to know whether the aircraft is on ground, ^{about} ~~waiting~~ to takeoff, waiting to



Slats only	—	265 kts
FLPS 5	—	250 kts
FLPS 15	—	210 kts
FLPS 27	—	180 kts
FLPS 38	—	150 kts

Remove "stepped gates" for ease-of-shift by autothrottle.

Wing Lever looks like throttle lever; has shift-lock release button on both sides of handle. ²⁵⁰ ²⁰⁰ ¹⁵⁰ 344-21 SUNDAY 10
Test Crew presses any to shift.



عبرو سيلنس
AEROSCIENCE

Kink blocks wing section of shift gate to prevent accidental selection of WINGS 45 sweep or more when aircraft is flying in WINGS 15 speed envelope to avoid loss of lift and stall. Kink retracts when speed rises/enters WINGS 45 envelop. Speed scale shows dynamic caution/warning color shades during speed changes and corresponding Flaps/Wings configurations as part of SFEF system.

William Bligh, captain of HMS Bounty, died 1817 "Walking on the Moon" by Police is No. 1 hit record 1979 Rudyard Kipling received the Nobel prize for Literature 1907

عبرو سيلنس or عبرو سيلنس لنس

JULY							AUGUST							SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER												
W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S	W	M	T	W	T	F	S						
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31	31																				44	30	31																								

AEROSCIENCE عبرو سيلنس



DECEMBER

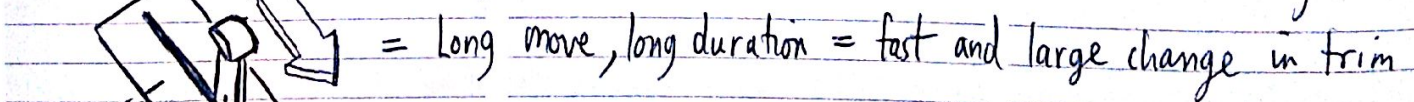
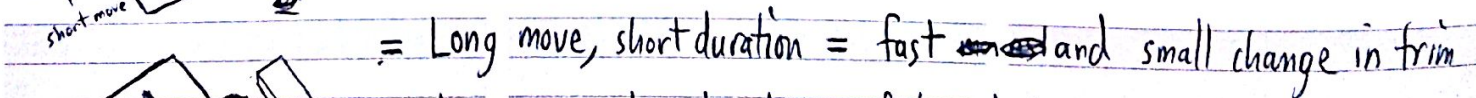
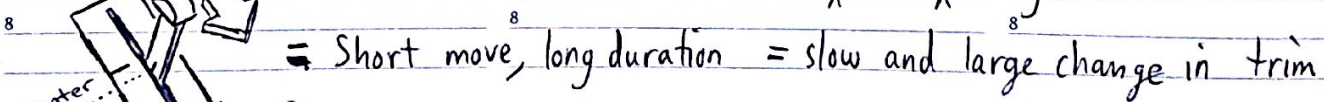
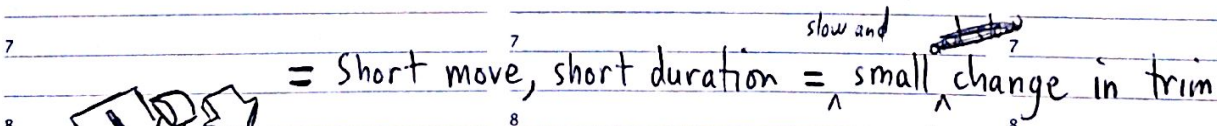
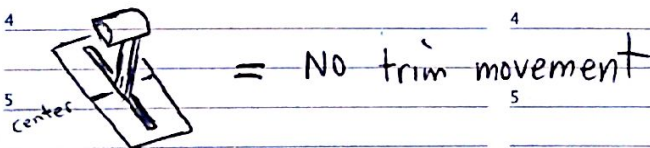
11 345 - 20 MONDAY

12 346 - 19 TUESDAY

13 347 - 18 WEDNESDAY

Pitch Trim Lever or Wheel?

- Lever with scale: How will auto-trim move lever when it acts on stabilizers? (B757, B747)
- Wheel with ~~scale~~ indicator on EICAS: Practical (Airbus), B737, etc
- Centered lever with forward/rearward-shift-and-return-to-center: Hybrid design. While in center, auto trim can act on stabilizers and show on EICAS. Crew nudges lever forward a short distance to achieve a slow decrease (nose-down) in angle. Holding it out of center position results in continuous trim movement; moving it great distance for short period and releasing it results in quick, large change in trim.



Nitrous Oxide or Laughing Gas first used for a tooth extraction 1844

World's first motel opened, San Luis Obispo 1925

Moulds for ice cream cones patented, New York 1903

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
W M T W T F S S	W M T W T F S S	W M T W T F S S	W M T W T F S S	W M T W T F S S	W M T W T F S S



DECEMBER DISPLAY ICONS OF "TILES" INTERFACE Week 51

18 352-13 MONDAY

19 353-12 TUESDAY

20 354-11 WEDNESDAY

EFIS group (switch/indicate/show):

- 7 ARPT - ~~show~~ show airports
- VOR - show VOR types
- 8 NDB - show NDB types
- INT - show intersections
- 9 DATA - info beside objects
- TRFC - show traffic/TCAS
- 10 TURB - show turbulence
- WXR - show weather
- 11 CNST - show constraints
- VWAY - show Victor airways
- 12 JWAY - show Jet airways
- RSTR - show restricted airspace
- 1 NTNL - show national borders
- ARSP - show airspace classes
- 2 COMS - show communications areas with names and frequencies
- 3 DCLT - Declutter the display
- TERR - show terrain
- ? 4 POS
- CHRT

NAV group (formats):

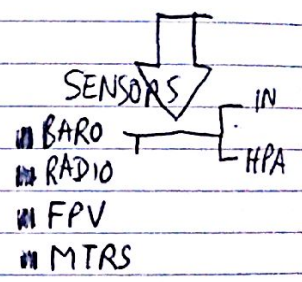
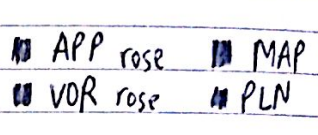
- 7 NRTH ↑ - North-up mode
- TRK ↑ - Track-up mode
- 8 HSI ↗ - Forward/partial rose
- HSI ⊙ - Omni/full rose
- 9 VSI (↖) - Forward vertical situation
- VSI (↗) - Omni/vertical situation
- 10 SYN-VSN - Synthetic Vision/birds eye
- NYT-VSN - Infra red vision
- 11 VOR 1 pointer ADF 1 pointer
- VOR 2 pointer ADF 2 pointer

CAM group (camera views):

- 7 Nose gear from rear
- Main gears from front
- 8 Overhead from front of tail (showing fuselage)
- Rear from between main gears
- 9 Side from left wingtip
- Side from right wingtip

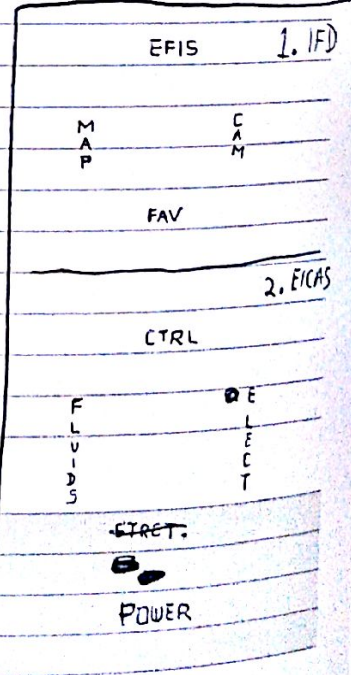
EICAS group:

- 1 WING/FLAP indicator (aircraft from above)
- GEAR, Reverser, flaps indicator (aircraft from rear)
- TRIM indicator (pitch)
- HYD - hydraulics
- 3 ELCT - electricals
- PNEU - pneumatics, aircon, cabin press, bleed
- FUEL - fuel Qty, flow, temp, tanks, xfer
- FLT-CTRL - flight control (aircraft from above)
- 5 GEAR - wheels, tires, temp, press, position
- DOOR - exits, baggage
- 6 ABRV - abbreviated of all above
- ? DIAG - diagnostics, synoptics (SYNOP)
- ? SENS - sensors, air, gps, antennae
- ~~FLTS~~
- ? LYTS - lights, lamps, cabin, panels
- ? WATR - potable water, sewage
- ENG - thrust, temp, speed, fluids, afterburners, etc.



Group renames:
~~EFIS data~~ / NAV data
 NAV data

Group renames:
 EFIS (Map data)
 MAP (Map format)
 CAM (EVS, side, ventral, dorsal views)



The Panama Canal Zone acquired by the US 'in perpetuity' 1903

'Always On My Mind' by Pet Shop Boys is chart No. 1 1987

Fred Astaire and Ginger Rogers 'Flying Down to Rio' first shown 1933



Week 51

FLAMINGO'S

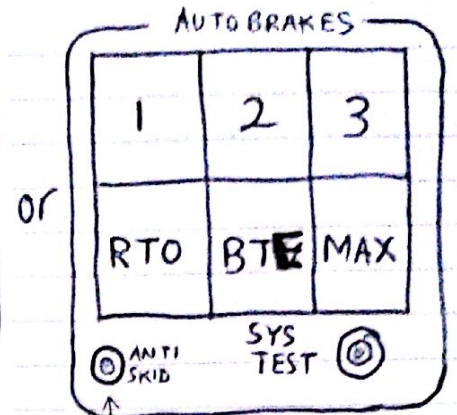
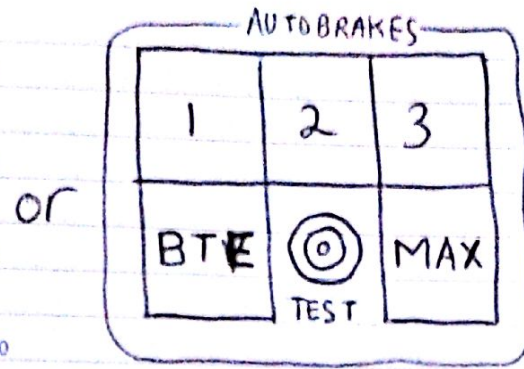
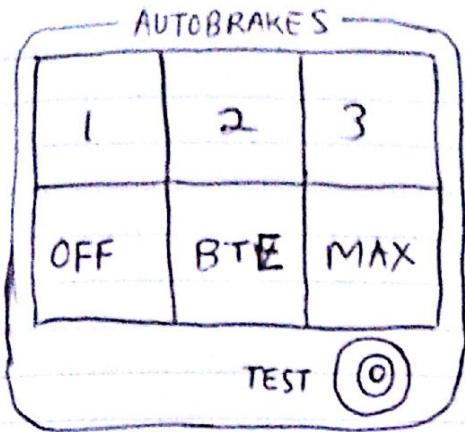
Autobrakes

DECEMBER

355 - 10
THURSDAY 21

356 - 9
FRIDAY 22

357 - 8
SATURDAY 23



optional

Vincent van Gogh cut off part of his earlobe

- 1 ■ Push-ON/Push-OFF
- 2 ■ 1 = low/empty weight braking/late exiting
- 3 ■ 2 = medium weight braking/normal exiting
- 4 ■ 3 = heavy weight braking/early exiting
- 5 ■ MAX = emergency braking
- 6 ■ RTO = rejected take off
- 7 ■ ~~BTV = Brake To Vacate (GPS/Map guided)~~
- 8 ■ BTE = Brake-to-Exit (GPS/Map driven)

358 - 7
SUNDAY 24

OEAH - KLAX = 14:42
 KLAX - VHHH = 12:53
 VHHH - OEAH = 7:11



Week 2 Grafix ANIMATION presents to AeroScience:

JANUARY

Psychographic projection of Primary & Secondary Flight Displays

11-354 THURSDAY 11

12-353 FRIDAY 12

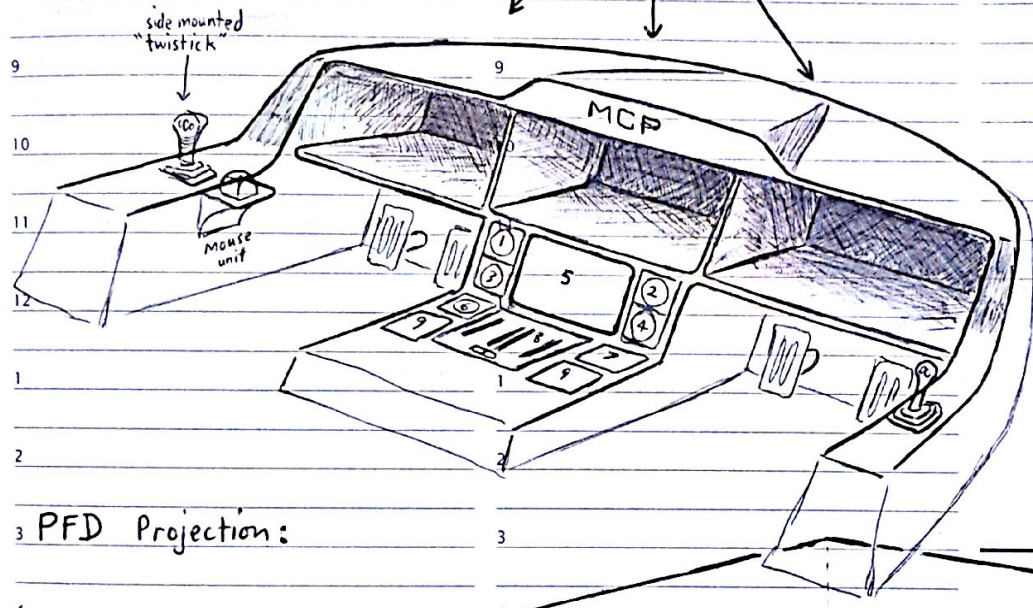
13-352 SATURDAY 13

PFD Pitch, Altitude, Speed, Vertical Speed, Roll, ILS
Navigation, Weather, Traffic, Terrain

SFD EICAS
Systems Display, Synoptics

Darkened cavities are psychographic projection fields

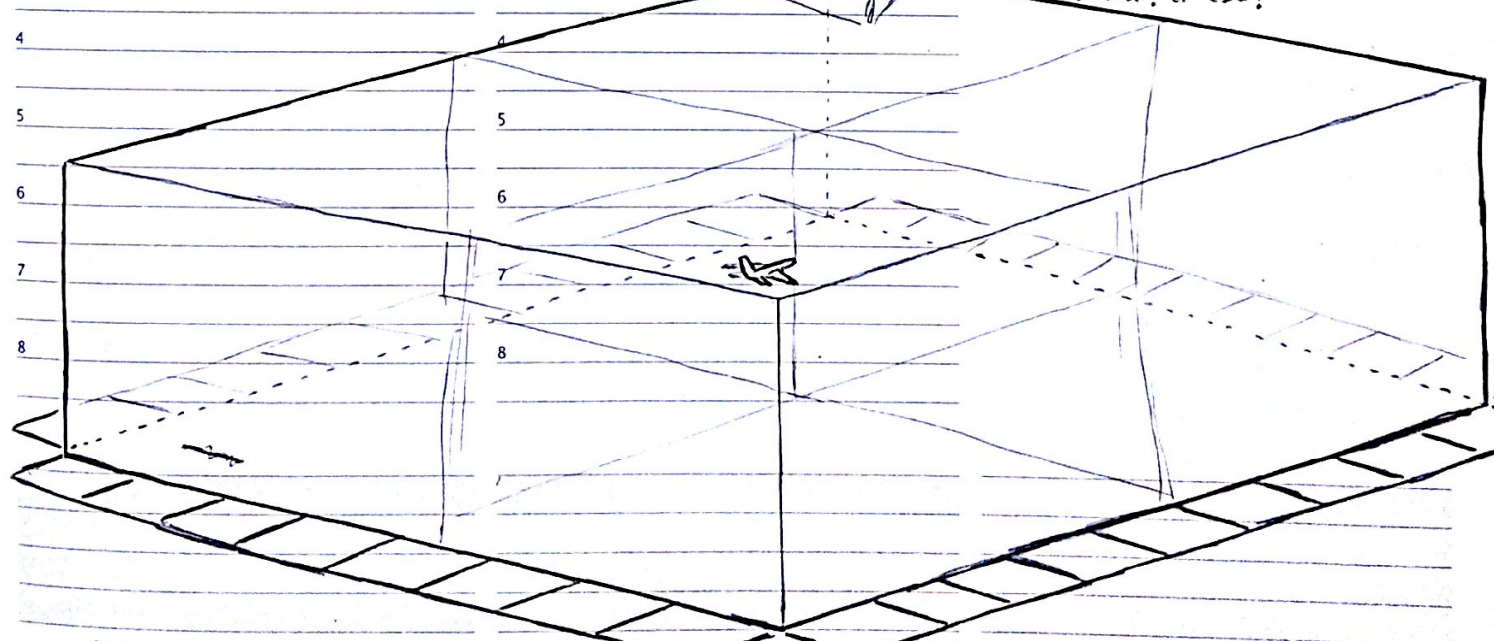
Psychogram:
Animated projection of hologram;
moving hologram; holographic video.



British Labour Party formed by Keir Hardie 1893

1. Standby Horizon Indicator
 2. Standby Altimeter
 3. Standby Airspeed Indicator
 4. Standby Vertical Speed Indicator
 5. System Control Display
 6. Standby Course Indicator
 7. Landing gear
 8. Trim/throttle/Flap-wing levers
2. Mouse? or CDU?

PFD Projection:



14

The Open University awards its first degrees 1973

Britain's first supermarket opened in 1948 - London Cooperative Society

President Roosevelt and Prime Minister Churchill meet in Casablanca 1943