<u>PFD</u>

- Com/Nav Radios
 - Active frequency inside, standby frequency outside
 - Swap active and standby by using "←→" key
 - Control with COM and NAV knobs
 - Push to toggle control between 1 and 2
 - Large knob for MHz, small knob for kHz
 - Available (for tuning) standby surrounded by light blue tuning box
 - NAV frequency in actual use?
 - Green arrow in HIS (vs. magenta for GPS)
 - Frequency numbers are green
 - Volume levels controlled by small VOL knob above COM/NAV knobs
 - Push and hold "←→" key (2 seconds) to make 121.5 (emergency) active
 - o Toggle (hold 3s) marker sound w/ MKR/MUTE key
- Set altitude reference using the ALT knobs
 - Large for thousands, small for hundreds
- Set altimeter using the BARO knob
 - Larger one of the CRS/BARO combination knob
- Set course (on HSI) using the CRS knob
 - Smaller one of the CRS/BARO combination knob
- Change the heading and move the heading bug (in the HSI) by turning the HDG knob
 - Push it to snap heading bug to present course
- Softkeys
 - General
 - Back key (second from the right) goes back in the menu
 - Timeout returns to main softkey menu after 45 seconds
 - Control with large and small FMS knob(s)

- Select things using ENT (enter) key
- Specific
 - INSET Activate/remove inset map
 - XPDR Controls transponder functions
 - IDENT
 - TMR/REF Controls timer (and airspeed reference values)
 - NRST Brings up list of nearest airports
 - To select an airport, NRST, scroll with large FMS knob to choice, push "direct-to" key, then ENT twice
 - OBS Suspend/unsuspend functionality
 - CDI Select CDI choice (toggle among GPS, NAV1, NAV2)
 - PFD Several useful functions
 - Second pointer on HIS
 - BRG1 Single-width cyan pointer using NAV1 or GPS
 - Push to cycle NAV1 bearing data, GPS bearing data, BRG1 off
 - BRG2 Double-width cyan pointer using NAV2 or GPS
 - Push to cycle NAV2 bearing data, GPS bearing data, BRG2 off
 - WIND to get outside wind display
 - o OPTN1 single vector
 - OPTN2 x-y vectors

<u>MFD</u>

- Organization
 - Names are "chapters" (top levels) and "pages" (sublevels)
 - Navigate with the FMS knob(s)
 - Large knob, chapters; small knob, pages
 - Lost? Press and hold the CLR key (2s)
 - Back to MAP chapter, first page
 - Enter data using FMS knobs
 - Use large knob to select a field
 - Use small knob to select within a field
 - Push to toggle cursor on/off (character entry)
 - Use small knob to select a character
 - Use large knob to move to next character position
 - Error? Push knob to clear field, start over
 - Push ENT (Enter) key to enter what you loaded
- MAP chapter pages
 - Navigation map page
 - MAP softkey → TRAFFIC, TOPO, TERRAIN softkeys
 - Also in here fuel range ring, wind vector, map orientation
 - Traffic map page
 - o Stormscope map page
 - Weather data link map page
 - Terrain proximity map page
 - Terrain awareness and warning system (TAWS) page
- WPT (Waypoint) chapter pages
 - Airport information page
 - o Intersection information page

- NDB information page
- VOR information page
- User waypoint information page
- AUX chapter pages
 - Trip planning page
 - Utility page
 - Timer is in here too
 - GPS status page
 - System setup page
 - Pilot profiles are in here
 - XM information page
 - System status page
- NRST chapter pages
 - Nearest airports page
 - Nearest intersections page
 - Nearest NDB page
 - Nearest VOR page
 - Nearest user wpts page
 - Nearest frequencies page
 - Nearest airspaces page
- Leaning the mixture
 - ENGINE softkey → LEAN softkey
 - Option of using ASSIST softkey
 - Leaves a hollow bar marker at peak temperature reached
 - Displays "∆Peak" to allow calibrated leaning below peak

Basic Flight Management

- "Direct-to" navigation
 - Use "D"-with-arrow-through-it key
 - Cursor will be automatically active
 - Use small FMS knob for characters, large knob to move cursor – load, then press ENT
 - o N.b. Easier to use NRST softkey on PFD
- Flight plan navigation
 - Use "FPL" key
 - Gets you to active flight plan page
 - Enter flight plan here
 - Turn small FMS knob one click to bring up waypoint window
 - If turned a second time, automatically fills in a "K"
 - Use large knob to move cursor, small knob to enter characters
 - Press ENT to enter that point in the flight plan
 - Use FMS knobs in the same way to enter remaining points
 - Editing an extant flight plan
 - Insert new waypoint
 - Press FPL key
 - Press FMS knob to get cursor (if needed)
 - Scroll down with large FMS knob to point *after* new entry
 - Turn small FMS knob two clicks to get data entry situation
 - Enter waypoint characters and press ENT to enter

- Delete a waypoint
 - Highlight waypoint as described above
 - Press CLR key
 - Press ENT to delete the waypoint
 - Press enter again in answer to question to delete
 - Error? Turn FMS to highlight "Cancel" and then ENT
- Skip down in plan to fly direct to a later-listed waypoint
 - Press FPL key
 - Push FMS knob
 - Turn large FMS knob to highlight target waypoint
 - Press "Direct-to" key
 - Press ENT twice
- Delete a flight plan (or a loaded procedure)
 - Press FPL key
 - Press MENU key
 - (N.b. This gets you to a page with more options)
 - Scroll with either FMS knob to "Delete Flight Plan"
 - Press ENT to delete flight plan
 - Press enter again in answer to question to delete
 - Error? Turn FMS to highlight cancel and then ENT

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Instrument Flying

- Quick way to select airport (if it's relatively near)
 - o NRST (on PFD)
 - Scroll with large FMS knob to the right one
 - Press "direct-to" key, then press ENT twice
- Select an approach
 - Press PROC key
 - Scroll using large FMS knob to "Select Approach"
 - Press ENT
 - If not the right airport, either go back and use the "trick" above – or, here, make sure airport ID is highlighted, turn small FMS knob to start the change, use large FMS knob to scroll, small FMS knob to select characters, press ENT when finished
 - Scroll with either FMS knob to select an approach from the list, then press ENT
 - (If just accepting any defaults in what follows, can just scroll with large FMS knob rather than press ENT – ENT only required when entering or changing information)
 - Can choose a particular fix (scroll) or generalized "Vectors" (default), then press ENT
 - To set minimums (voice warning), scroll with small FMS knob to get BARO, large FMS knob to get field for minimum, small FMS knob to set number, ENT
 - Question: Load or Activate?
 - Default is load just press ENT
 - To activate, scroll cursor there and press ENT
 - N.b. Can also load an approach from active flight plan page
 - To get there if you're not, press FPL key
 - From there, softkey for "LD APR" and other similar things

- OR press MENU key, then scroll to "Load Approach"
- Can also select an approach from the airport information page
 - APR softkey
- Can also select an approach from the nearest airports page
- Activate an approach that was already loaded
 - Press PROC key
 - Scroll with large FMS knob to "Activate Approach"
 - Press ENT
- Continuing approach after procedure turn or hold
 - Once inbound, PROC, scroll with large FMS knob to "Activate Vectors to Final." ENT
- Select a departure procedure or arrival procedure
 - Press PROC key
 - Scroll with large FMS knob to item
 - o Press ENT
- Delete a previously-loaded procedure (or a flight plan)
 - o Press FPL key
 - Press MENU key
 - Scroll with FMS knob to category/item to be deleted
 - Press ENT
 - Press enter again in answer to question to delete
 - Error? Turn FMS to highlight cancel and then ENT
- Flying a missed approach
 - When an approach is loaded/activated, the missed approach procedure will be loaded as well however, it will be GPS-based (magenta lines)
 - To use (or also use) the missed approach as per the published guidelines that involve ground-based nav aids, load and use those frequencies as appropriate and set the CDI in the HSI as appropriate.