

DC-3 Airways

R4D VERSION 4 for FS2000

And

VERSION 3.5 for FS98

PANEL DIAGRAMS

by Bill Rambow

The following diagrams and text are excerpted from the Mid Atlantic Air Museum Donation-ware CD, second edition. The second edition was issued when Jan Visser released the Visual Model Upgrade for the R4D to include it, along with the CFS package. I took the opportunity to revamp the v4 manual while I was producing the new CD to incorporate some new features, make some corrections (not too many;-), and replace the exterior screen captures with a wonderful array of new ones by Jan. You will have to buy the new CD to see it all, but I thought freeware users, and especially owners of the first version of the CD should get the benefit of these diagrams and instructions. The Quadrant diagram is not new, but is included here since the Main Panel diagram refers to it.

Figure 1, attached, shows the Composite Diagram of Captain's and First Officer's Panels.

Figure 2, attached, shows the Power Quadrant.

PHOTO-REAL OVERHEAD ELECTRICAL PANELS

Versions 4 and 3.5 feature completely new Overhead Electrical Panels, taken from the actual aircraft. The radios have been moved up where they belong, eliminating the need for the pop-up radio stack in the previous versions. You no longer have to sacrifice the Sperry when tuning radios. The NAV 1 and NAV 2 radios are located on the same side as their respective OBI's, too. The modern auto-pilot is located in the center section, so it appears in both the Captain's and First Officer's O.E.P.s, and the same is true of the Ignition and Starting Switches. Users should note the exact mouse points shown in the attached diagrams.

See Figure 3 for a diagram of the Captain's Overhead Electrical Panel.

NOTES ON OPERATION OF CAPTAIN'S O.E.P.

COCKPIT SPOT LIGHTS - FS98 does not support these or the white gauge lights. The familiar, if rather ghastly red or "pink" night lighting will appear in the FS98 panel.

LANDING LIGHTS - The switches operate as one. FS2000 does not support landing lights. The Visual Model Upgrade does feature landing light lamps which light in response to the switches, but they don't cast any light. Maybe in FS2002?

BATTERY SWITCH - The Cart position is inoperable. The switch must be on in order to start the engines or use the radios.

GENERATOR - Both switches operate as one in FS2000. Always run the generators to keep your batteries charged in flight.

IGNITION - MAGNETO LEVERS - Mouse points for the Magneto Levers are not on the labels and letters, as you might suppose, but outboard and below the switch hubs. Clicking once moves the lever one position at a time toward that point.

PRIME / START / VIB SWITCHES - These three position switches are not self-centering. You must move them back to their center positions after engaging either Right or Left.

See Figure 4 for a diagram of the First Officer's Overhead Electrical Panel.

NOTES ON OPERATION OF FIRST OFFICER'S O.E.P.

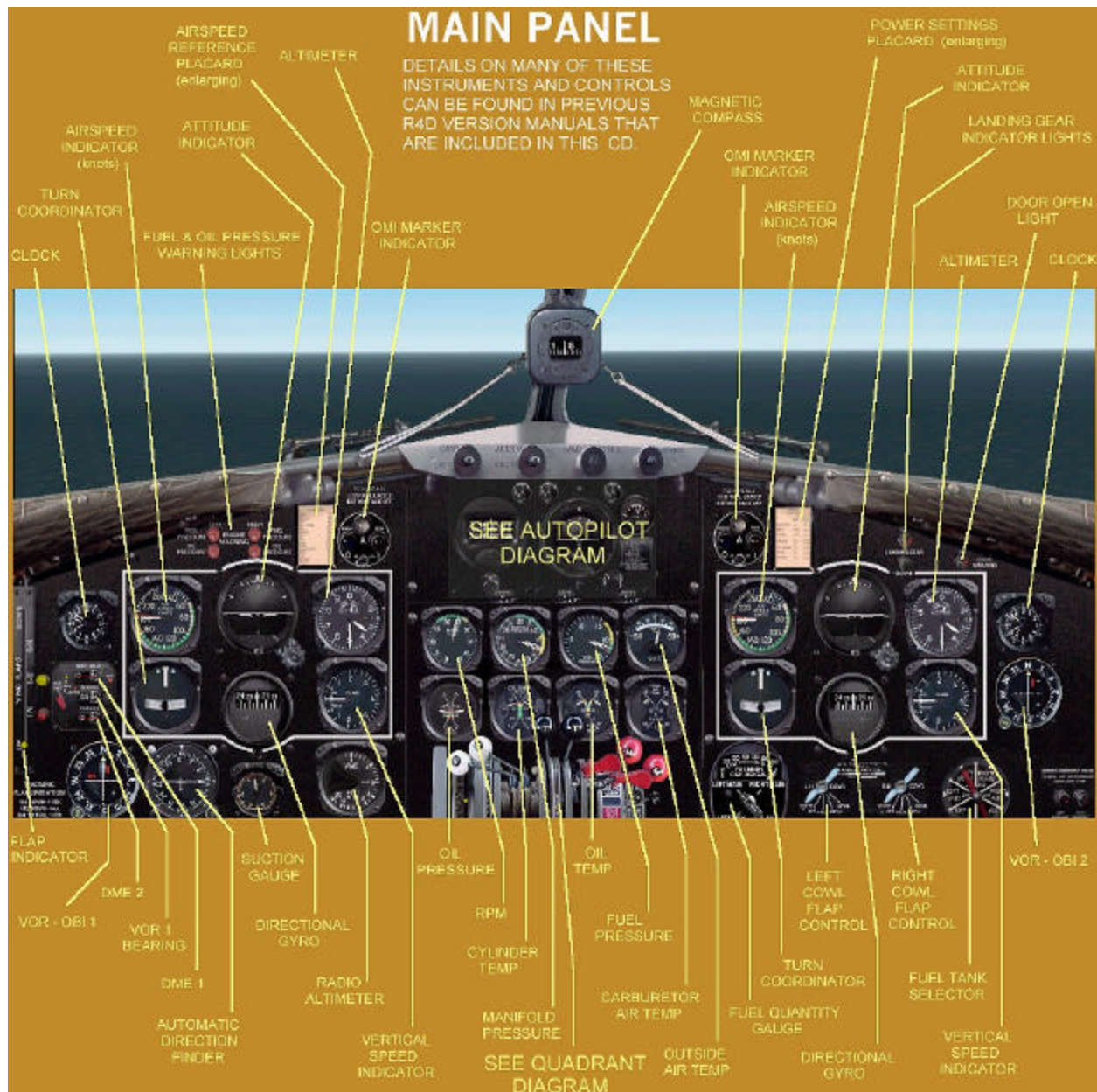
SUPERCHARGER SWITCHES - The switches are dummies, but for realism's sake should be turned to HI at altitudes over 10,000 feet.

OIL DILUTION SWITCHES - These are used in cold weather starting, but FS does not support the actual function.

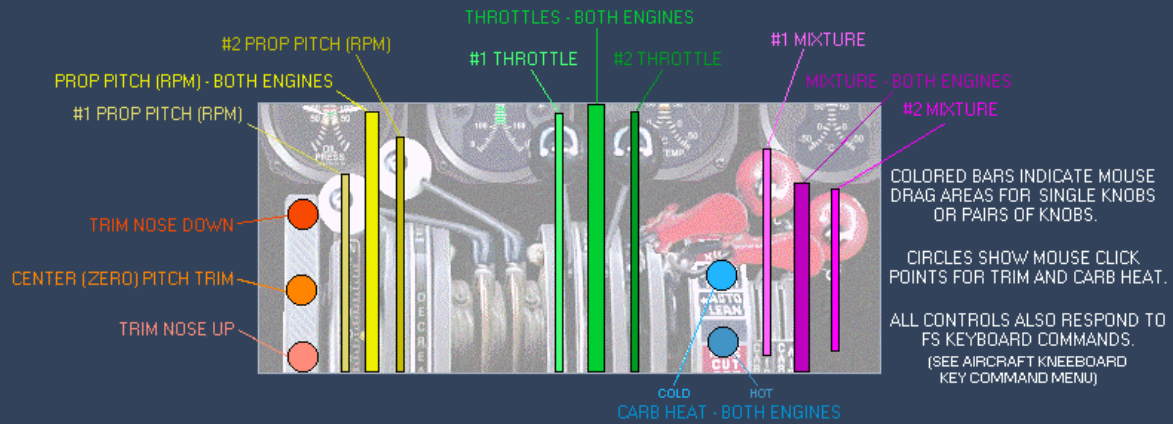
RADIO MASTER SWITCH - This switch will control power to the radios on the Captain's O.E.P., only.

AIRSHOW SMOKE SWITCH - This controls the FS smoke (I key function) - and yes, #819 does indeed have this switch and function.

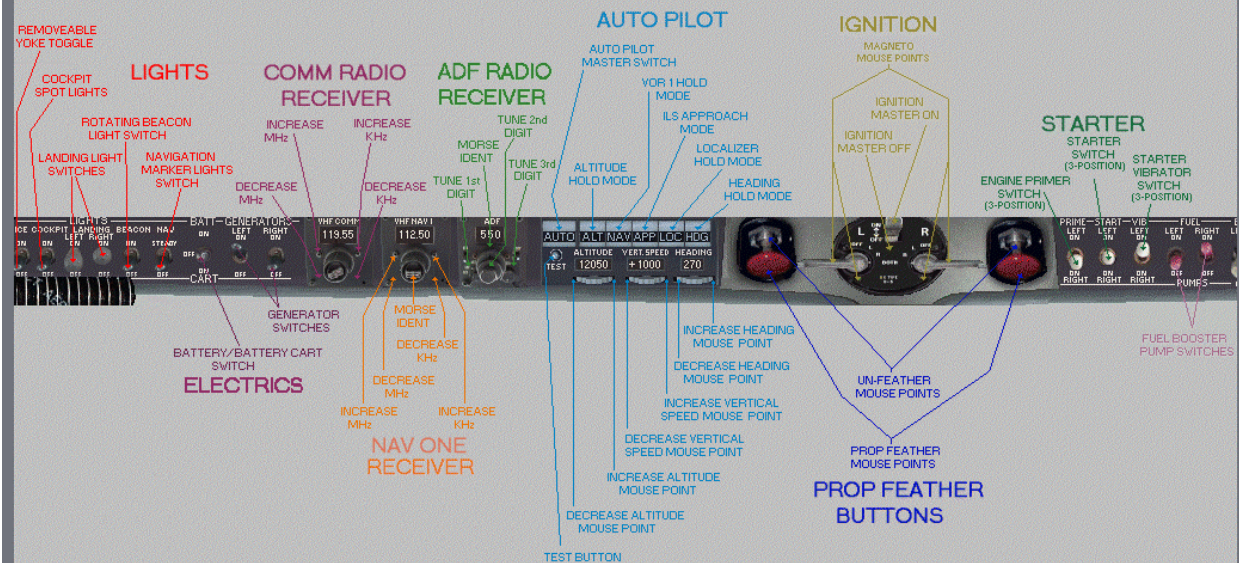
See the appropriate section of the version 4 manual for operating instructions on features and items not covered by these notes. Additional information on individual gauges and controls can be found in the manuals for versions 1 through 3, available on the Donation-Ware CD (both editions). Also on it are three, complete, genuine operating manuals for the DC-3 (C-47) from the World War II era, one British and two U.S.. All proceeds from sale of the MAAM CD go to buy a P&W 1830-94 engine needed to get R4D #819 back in the air.



QUADRANT MOUSE POINTS



CAPTAIN'S OVERHEAD ELECTRICAL PANEL



FIRST OFFICER'S OVERHEAD ELECTRICAL PANEL

The diagram illustrates the First Officer's Overhead Electrical Panel, showing various switches and their functions:

- AUTO PILOT:** Includes MASTER SWITCH, HOLD MODE (VOR I, ILS APPROACH, LOCALIZER), and HOLD MODE (ALTITUDE, VERT. SPEED HEADING).
- IGNITION:** Includes MAGNETO MOUSE POINTS, IGNITION MASTER ON/OFF, and ENGINE PRIMER SWITCH (3-POSITION).
- STARTER:** Includes STARTER SWITCH (3-POSITION) and STARTER VIBRATOR SWITCH (3-POSITION).
- NAV TWO RECEIVER:** Includes TUNE 1st DIGIT, TUNE 2nd DIGIT, TUNE 3rd DIGIT, TUNE 4th DIGIT, REPLY LIGHT, ATO TRANS, RADIO MASTER SWITCH, and TEST BUTTON.
- INSTRUMENT LIGHTS:** Includes COCKPIT SPOT LIGHTS, PANEL LIGHTS, and INSTRUMENT LIGHTS.
- Other Functions:** NO SMOKING SIGN SWITCH, SEATBELT SIGN SWITCH, AIRSHOW SMOKE SWITCH, FUEL BOOSTER PUMP SWITCHES, PITOT HEAT SWITCHES, OIL DILUTION SWITCHES, SUPERCHARGER SWITCHES, BLOWERS, PITOT HEAT, OIL DILUTE, MORSE IDENT, DECREASE MHz, INCREASE MHz, DECREASE KHz, INCREASE KHz, PROP FEATHER MOUSE POINTS, UN-FEATHER MOUSE POINTS, INCREASE ALTITUDE SPEED MOUSE POINT, DECREASE ALTITUDE SPEED MOUSE POINT, INCREASE ALTITUDE MOUSE POINT, DECREASE ALTITUDE MOUSE POINT, TEST BUTTON.

The diagram illustrates the Mode Control Panel (MCP) with the following modes and their interconnections:

- AUTO PILOT MASTER SWITCH** (top left)
- VOR 1 HOLD MODE** (top center)
- ILS APPROACH MODE** (top right)
- LOCALIZER HOLD MODE** (middle right)
- HEADING HOLD MODE** (bottom right)
- ALTITUDE HOLD MODE** (bottom left)

Interconnections are shown by lines:

- A line connects **AUTO PILOT MASTER SWITCH** to **ALTITUDE HOLD MODE**.
- A line connects **AUTO PILOT MASTER SWITCH** to **VOR 1 HOLD MODE**.
- A line connects **AUTO PILOT MASTER SWITCH** to **ILS APPROACH MODE**.
- A line connects **VOR 1 HOLD MODE** to **ILS APPROACH MODE**.
- A line connects **ILS APPROACH MODE** to **LOCALIZER HOLD MODE**.
- A line connects **LOCALIZER HOLD MODE** to **HEADING HOLD MODE**.
- A line connects **HEADING HOLD MODE** to **ALTITUDE HOLD MODE**.

MAGNETO
MOUSE POINTS

IGNITION
MASTER ON

IGNITION
MASTER OFF

ENGINE PRIM
SWITCH
(3-POSITION)

PROP FEATHER
MOUSE POINTS

PROP FEATHER
BUTTONS

NAV TWO
RECEIVER

PANEL
LIGHTS

AUTOPILOTS

MODERN AUTO PILOT



THE HEADING WHEEL ON THE MODERN AP, AND THE RUDDER KNOB ON THE SPERRY WILL WORK INTERCHANGEABLY AND TOGETHER. LIKEWISE, THE DIGITAL READOUT ON THE MODERN AP AND THE COURSE INDICATOR (UPPER BAND) OF THE SPERRY WILL BOTH INDICATE THE HEADING.

AN ILLUSTRATED HELP FILE CAN BE CALLED UP BY CLICKING ON THE SPERRY MK III LABEL

IMPORTANT !!

THE THREE SPERRY SPEED VALVE WHEELS MUST BE TURNED ALL THE WAY DOWN TO ZERO (BY CLICKING ON THE LEFT SIDE OF EACH WHEEL, REPEATEDLY) BEFORE USING THE MODERN AP. FAILURE TO DO SO WILL CAUSE ERRATIC AP OPERATION!

WW-II VINTAGE SPERRY MK III AUTO PILOT