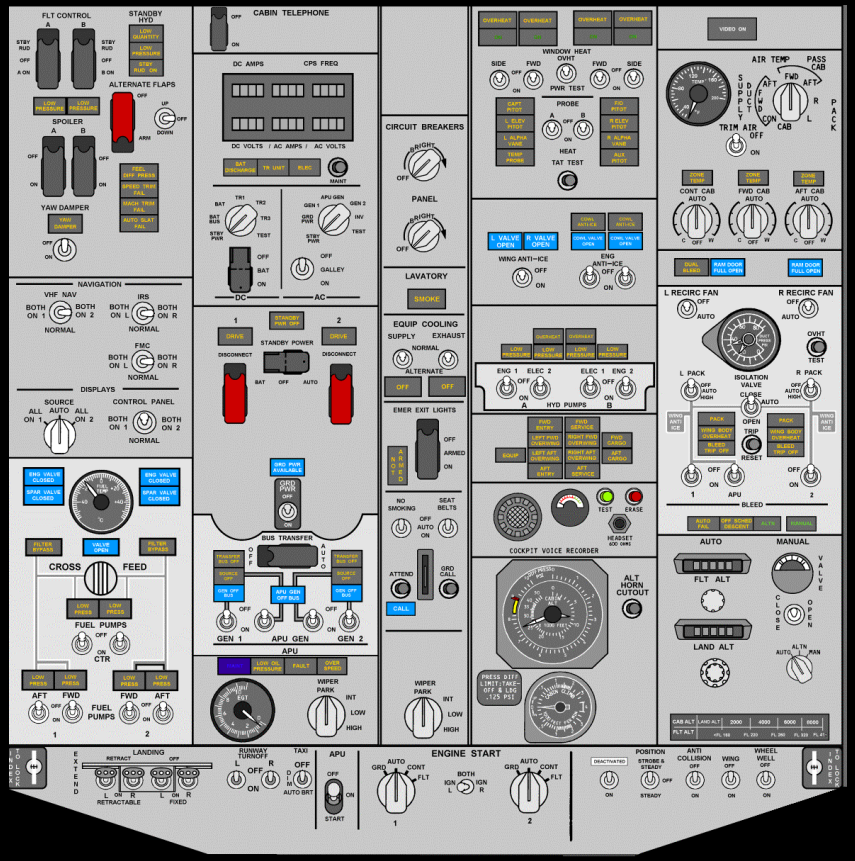
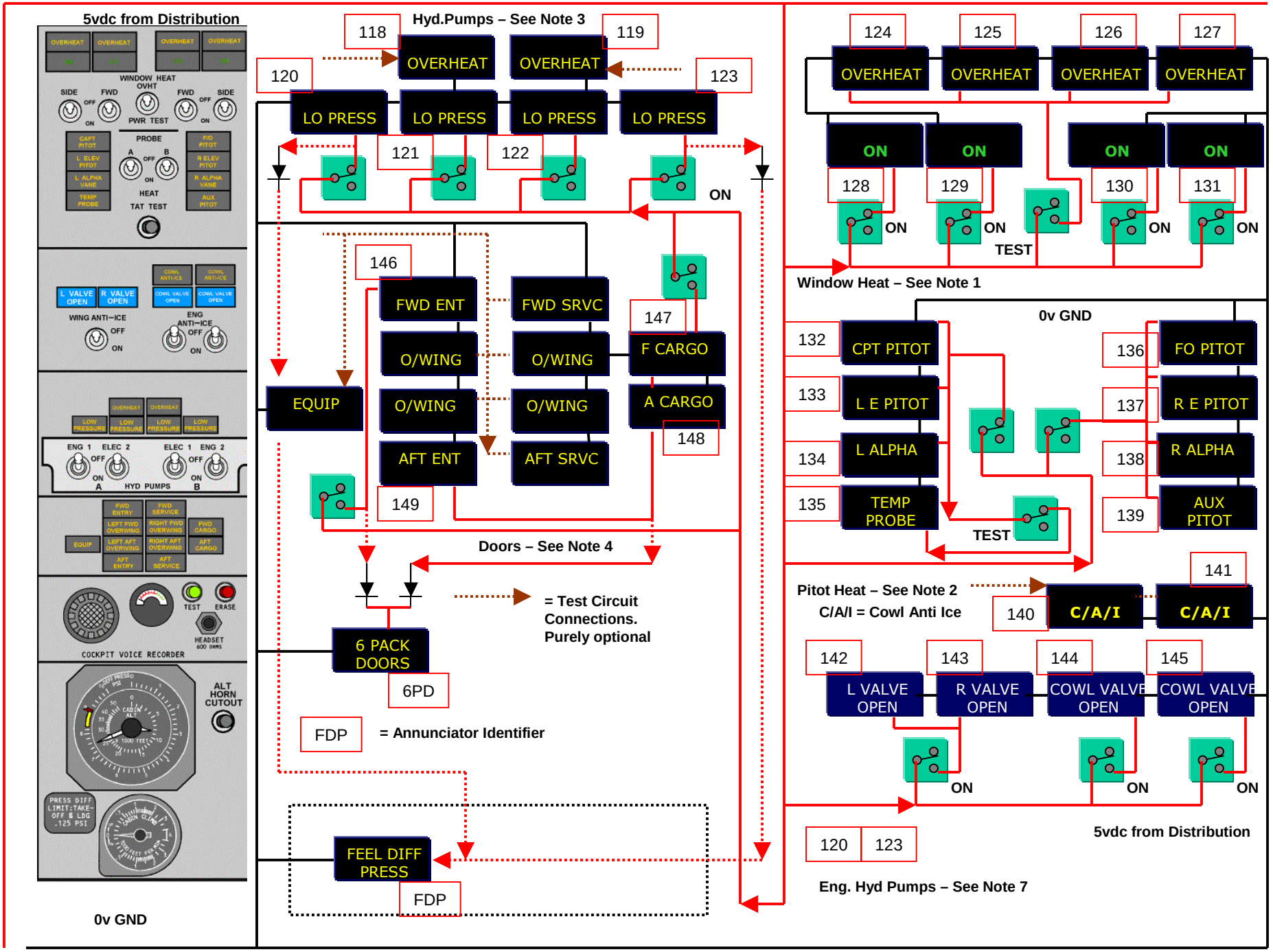
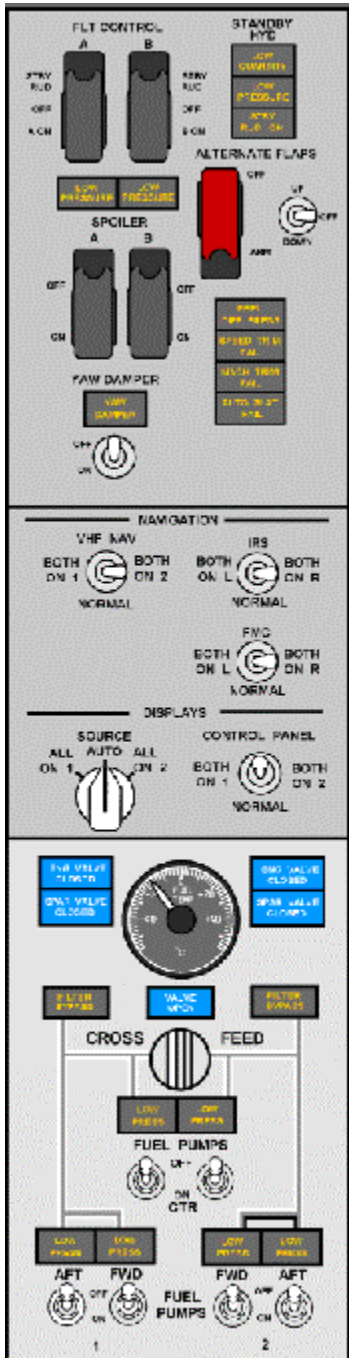


Boeing 737NG Overhead Part Two

THE BUS

Right, now the Distribution has been sorted, it's time to move onto the BUS and all the supplementary systems. Please remember this is used with the PMDG737, so you may have to be 'artistic' with your wiring to get it to follow the behaviour of your particular aircraft.


5vdc from Distribution
WINDOW HEAT
OVHT
PWR TEST
PROBE
HEAT
TAT TEST
WING ANTI-ICE
ENG ANTI-ICE
HYD PUMPS
COCKPIT VOICE RECORDER
ALT HORN CUTOUT
0v GND
Hyd.Pumps – See Note 3
118
119
120
123
OVERHEAT
LO PRESS
121
122
ON
146
147
148
149
FWD ENT
FWD SRVC
O/WING
F CARGO
EQUIP
A CARGO
AFT ENT
AFT SRVC
Doors – See Note 4
= Test Circuit Connections. Purely optional
6 PACK DOORS
6PD
FDP
= Annunciator Identifier
FEEL DIFF PRESS
FDP
124
125
126
127
128
129
130
131
TEST
Window Heat – See Note 1
0v GND
132
133
134
135
136
137
138
139
CPT PITOT
L E PITOT
L ALPHA
TEMP PROBE
FO PITOT
R E PITOT
R ALPHA
AUX PITOT
TEST
Pitot Heat – See Note 2
C/A/I = Cowl Anti Ice
140
141
C/A/I
142
143
144
145
L VALVE OPEN
R VALVE OPEN
COWL VALVE OPEN
5vdc from Distribution
120
123
Eng. Hyd Pumps – See Note 7



Ov GND

2 Ways to Light These See Note 8

160

ENG VALVE CLOSED

159

SPAR VALVE CLOSED

162

ENG VALVE CLOSED

161

SPAR VALVE CLOSED

VALVE OPEN

Optional

157

156

FILTER BYPASS

158

FILTER BYPASS

Optional

X Feed Switch

Spur In From LED64 See Note 6

Spur In From LED64

154

LOW PRESS

LOW PRESS

155

Fuel Pumps

150

151

LOW PRESS

LOW PRESS

152

LOW PRESS

LOW PRESS

153

5vdc from Distribution

Ongoing 18th March 2009

Note 1. Window Heat: Window Heat Led's remain On when they are switched On. Overheat Led's remain Off until the Overheat Test Switch is used which in turn illuminates them.

Note 2. Pitot Heat: Power to the Pitot Heat Switches comes from the BUS. Pitot Heat Annunciators are OFF when the heat is ON. There is a test switch routed in the feed to the lower left Temp Probe LED. When the left bank of annunciators is illuminated, using the test switch will extinguish the TEMP PROBE led.

Note 3. Hyd. Pumps: What I did here was this……when the Bus is powering up the Hyd Pumps from the eng gen supply, in the on position the LED's are off. But if an Eng.Hydraulic Pump is turned off, not only does it illuminate it's own annunciator, it also lights up the Feel Diff Press annunciator by way of a 'spur' thru a diode.

Note 4. Doors: The doors on the PMDG can be opened by sending a command in. I have two DPDT switches on the rear overhead which do this. One side is connected to a BU0836X to send in the command and the other side is routing power to the Door annunciators on the Overhead with a spur (thru a diode to the Doors led on the 6 pack). The PMDG responds to the Front Door command by simply opening the forward entry door. This switch merely lights that particular annunciator. The Rear Door command opens the Rear Entry and the Cargo Doors. So the second switch sends the command and also illuminates the three corresponding Annunciators. A Spur is taken down from the 'live' side of both switches through diodes to the 6 pack Doors led.

Note 5. Test Circuit This is purely optional. There are several LED's which cannot be directly controlled by actual occurrences within the sim. So I elected to connect these led's to a 'Test' switch discreetly disguised as something else. What this does is illuminate all the 'non operational' led's to 5v when I want to run a test routine.

Note 6. Centre Fuel Pump Low Press Annunciators. As well as the On/Off Switching, I discovered using FS2Phidgets and an LED64 Board, two of the outputs could be configured to read the fuel content of the centre tank. What happens in the 737 is that when the centre tank is empty, the Low Pressure annunciators light. So by setting the level at 1.5% in the FS2Phidgets configuration, when you only have 450lbs left in the centre tank, the Annunciators light.

Note 7. Eng Hyd Pump Annunciators Again as well as the standard switching, it is possible to read the Hyd Pressure from each engine in FS2Phigets. Two outputs on the LED64 board can be assigned to Eng 1 and Eng 2 Hyd pressure enabling these to light automatically.

Note 8. Eng and Spar Valve Annunciators. Two ways to light these. If you have fuel levers, micro switches actioned by the levers can be used to control these annunciators. Or if you have an Output Board, offset 3590 for eng 1 and 3594 for eng 2 control these. I use the Offset Byte Set option in FSUIPC setting the parameter 1 for on and 0 for off. FS2Phidgets also sees the lever On/Off so that can send an instruction to the LED64 board to turn on these annunciators.