Stratoware/Miltech Simulations Bo105

Switch Panel



1. **Voltmeter**: Displays the DC voltage output of the Main Bus during generator, battery, or external power operation. Normal indication is 27-29 V with generators online; below 24 V indicates a low battery condition.
2. **Ammeter**: Displays current flow in the electrical system. With the CURRENT IND switch in the BUS BAR position, shows total current consumption from the Starter Bus to the Main Bus. With either GEN 1 or GEN 2 selected, shows the output of that generator. Used to monitor generator load balance and detect abnormal current draws.
3. **Circuit Breakers**: Protect individual electrical circuits from overload. Most low-amperage circuits are fuse-protected on the instrument panel fuse panel; circuit breakers here cover the primary systems including fuel pumps, hydraulic controls (INOP), trim actuators (INOP), and emergency fuel valves
4. **↔ Instrument Lighting Switch**: Activates panel instrument lighting, powered from the Main Bus. Brightness is controlled separately by the Instrument Light Brightness Knob.
5. **↔ Low Fuel Test Switch**: Pressing this button tests the LOW FUEL warning circuit. The LOW FUEL warning light must illuminate on activation. The warning activates in normal operation when usable supply tank quantity drops below 60 kg.
6. **↔ Pitot Heating Switch**: Activates the electrically heated pitot tube to prevent ice formation. Must be on when ambient temperature is below +4 °C and visible moisture is present. System status is confirmed by the Pitot Heating Indicator on the instrument panel.
7. **↔ Engine Anti-Icing Switches**: Two switches (ENG 1 and ENG 2) controlling the hot compressor bleed air anti-icing valves for each engine inlet. Must be on when ambient temperature is below +4 °C and visible moisture is present, except during takeoff and landing.

8. ↔ **Wiper Switch**: Controls the windshield wiper system on variants with the wiper option installed. Three positions: PARK, OFF, and ON. PARK returns the wiper blade to its stowed position at the bottom of the windshield before switching off.
9. ↔ **CURRENT IND Switch**: Selects the ammeter display source. BUS BAR position shows total Main Bus consumption; GEN 1 and GEN 2 positions show individual generator output. Used during electrical checks and when monitoring generator load following a generator failure.
10. ↔ **Emergency Fuel Valve Switches**: Two guarded switches (EMERG FUEL VALVE 1 and 2) controlling the electrical fuel shutoff valves for each engine. Guards prevent accidental actuation. Closing a valve cuts fuel supply to that engine and is a mandatory step during engine emergency shutdown and fire procedures.
11. ↔ **Enging Anti-Icing Warning Switches**: Display the ANTI ICING 1 and ANTI ICING 2 caution lights, which illuminate when each engine's anti-icing valve is in the open position.
12. **EPU Warning Light**: Caution light that illuminates when an external power unit is connected and supplying power to the electrical system.
13. ↔ **Starter Switches:** Two switches (ENG 1 and ENG 2) each with VENT, OFF, and ON positions. ON energises both the starter and ignition to initiate a normal start sequence.
14. **Cabin Air Levers**: Control the flow of ventilation and heating air to the cabin.
15. ↔ **Generator Switches**: Two switches controlling the alternators for Engine 1 and Engine 2. When placed in the GEN ON position, allows the respective generator to come online and supply power to the electrical buses once engine speed is sufficient. Used during the post-start sequence to bring each generator online and restore normal electrical power generation.
16. ↔ **Battery Switch**: Controls the connection of the onboard 24 V nickel-cadmium battery to the Starter and Main Buses. In the BAT ON/EPU OFF position, connects the battery and enables generator charging. In the BAT OFF/EPU ON position, disconnects the battery and allows an external power unit to supply the system (toggleable via the EPU Warning Light).
17. ↔ **HYDR TEST Switch (INOP)**: In the real aircraft, this three-position guarded switch used to perform the hydraulic crossover functional check on the ground. Not functional in this simulation.
18. **Fire Extinguisher Panel (INOP)**: In the real aircraft, this panel controls the engine fire extinguishing system, allowing the crew to discharge extinguishing agent into either engine compartment. Not functional in this simulation.