Checklists for the Super 80 Professional

The checklists provided in this document are as complete as possible. They are based on a number of sources:

- The checklists provided in Section 3 of the Aircraft Operating Manual (available for free download on the Coolsky web site – www.coolsky.no).
- The checklists that are built into the Super 80 Professional software.
- Official airline checklists for the MD-80 series.

Only steps that may actually be performed will be included in these checklists. Items such as "Adjust harness" or "Check logbook" do not lead to any actual work in the Super 80 Pro aircraft and have been omitted here. Limited or nonfunctioning systems are noted.

For the most part, you may set up your aircraft as you like. None of the Options that are available in the **Super 80 Center** are absolutely necessary for these checklists, although there are a couple that you might consider.

1. The **IRS Fast Start & Realign** option is saves time during startup. The normal IRS alignment time is 10 minutes. Using this option makes the alignment almost instantaneous.
2. Some people find the **Show FL in FMA Arm Window** option useful since it gives more information. The difference between the settings is shown in the following two diagrams, both of which were taken during takeoff with 22000 set in the ALT window. The option is not enabled in the diagram on the left, while it *is* enabled in the diagram on the right…

All of the other Options may be selected as you wish without affecting the checklists in any way.

Throughout the checklists, 3 symbols are used for the desired position of toggle switches:

⬆ - for the up position
⦿ - for the center position (if applicable)
⬇ - for the down position

Where possible, the actual label of the switch position is also given in **boldface type**. All references are to the 2D cockpit. If you use the VC, there may be a few situations in which an instruction does not work.

There are two complete Preflight checklists in this document.

- The ***Expanded Preflight Checklist*** (pp. 4 – 22) is as complete as possible. The pages also have a pink background to emphasize that it is the Expanded checklist. Almost all of the working features of the Super 80 Professional are included. Despite the limited functionality of some features due to FSX limitations and other considerations, you can still learn about most of the switches, gauges, and controls. Several screenshots are included to help you identify all of them.
- The ***Normal Preflight Checklist*** (pp. 23 – 28) is more realistic for simulated flights. It focuses on the systems that are fully modeled in the Super 80 Pro. No illustrations are included, but you may refer to the Expanded Preflight Checklist if necessary. As you gain experience, you will eventually be able to use an abbreviated preflight checklist, such as the one included in the Aircraft Operating Manual or written into the Super 80 Pro software.

After the two Preflight sections, the checklists continue at the same level of detail as the Normal Preflight Checklist. Again, some detail is included, but not as much as there could be. And again, it is assumed that after a few times with these checklists, you will be able to use the much shorter checklists in the AOM or in the Super 80. Screenshots of the actual cockpit are included where appropriate.

For both startup checklists, it is assumed the cockpit is in a "Cold and Dark" state, meaning no power is provided to the cockpit at all. Imagine an aircraft sitting on a ramp overnight, waiting for the first flight out in the morning. At the completion of the Parking/Shutdown checklist, the aircraft is left in this state. To save time, you may also use the **Super 80 Center**. From within the Super 80 Center, select **Training** > **Automatic Aircraft Configuration** > **`COLD COCKPIT – ALL SYSTEMS OFF`**.

FLIGHT PREPARATION

FLIGHT PLAN.....CREATED / FILED / ACTIVATED

1. There are a number of ways to prepare a flight plan…
   - the built-in FSX Flight Planner
   - free add-on software or web sites (*e.g.* RouteFinder, FltPlan, SimRoutes)
   - paid software (*e.g.* FS Build, FS Commander, FS Navigator)
   - online flight utilities (*e.g.* VATSIM, IVAO)

   If you use anything other than FSX to plan your flight, it is important that you create the flight plan file in the correct format. Look for something such as FSX, FSX XML, or something similar. And make sure the file has a **.pln** extension.

2. If you intend to use the default ATC service within FSX, the flight plan must be loaded into Flight Planner. This simulates "filing" your flight plan in the real world. By loading your flight plan, the computer knows what route you would like to fly, as well as the altitude that you are requesting.

   Other ATC programs (Radar Contact, SquawkBox, etc.) may require different procedures. However, it is very likely that Flight Planner will be used in some way. Refer to your documentation for the details.

3. If you are using Air Traffic Control, whether it is the default FSX version or something else, you must go through the procedure of activating your flight plan. When you are given your initial clearance, note the key values assigned by ATC — initial altitude, transponder squawk code, clearance expiration time if departing from an uncontrolled airport, etc.

   Also, if flying in an area where Transition Altitudes vary, outside the continental U.S., look up the Transition Levels for the climb and for the descent on navigation charts for those areas.

FSX ..... START / SET CONDITIONS

4. Start FSX in "Free Flight" with a simple default aircraft, such as a Cessna 172 or Air Creation Ultralight.

5. Place the default aircraft in the desired starting location (usually a gate or parking space if you're going to perform detailed startup checklists. Also specify the season, date, and time within FSX.

6. Set the Weather Preferences. If using a weather-replacement program (*e.g.* ASA, REX), follow those recommended procedures.

7. Set the units to be used. In this document, U.S. units are used — feet, pounds, inches of mercury, and °F. These are set in the General tab of FSX. In the Super 80 Pro, most temperature gauges will adjust to either °F or °C, depending on this setting. A few gauges, however, always read in the same unit.

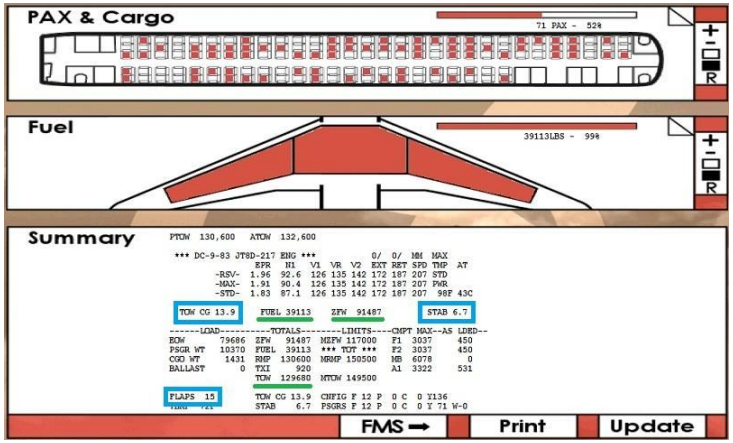
8. Once everything is set, load the desired Super 80 Pro aircraft. If you don't see the sepia brown splash screen during startup, go to Instruments > View > Splash. Click on the splash screen to initialize the Super 80 Pro.

PASSENGER, CARGO, AND FUEL LOADS.....SET IN THE DISPATCH REPORT

9. Unlike other aircraft that use the FSX menu to set the fuel and passenger/cargo loads, the Super 80 Pro has a built-in utility to perform those chores. It provides information similar to what an airline Dispatch Office would supply in a preflight briefing. Open the **Super 80 Professional Center**, then click on the **Dispatch** button. A typical screenshot is provided on the next page. At the top of the **Super 80 Pro Dispatch report**, there are two sections that require your input.

- The **PAX & Cargo** window allows you to input the number of passengers and the cargo. Use the Increase (✚), Decrease (–), Empty (□), Full (■), and Random (**R**) buttons to set the passenger/cargo load. The weight of cargo/baggage is proportional to the number of passengers. You may also click on the folded page symbol in the upper right corner to see a more detailed view of the passenger/cargo load. In this detailed view you can specify the number of male/female/child passengers, as well as the cargo load. Click the various plus and minus buttons to set the cargo.

- The **Fuel** window allows you to set the fuel load. Again, use the Increase (✚), Decrease (–), Empty (□), Full (■), and Random (**R**) buttons to set the fuel load. The two main (wing) tanks must be completely full before any fuel is added to the center tank; this requirement is taken care of automatically for you. Click on the folded page symbol in the upper right corner to access a more detailed view of each fuel tank. Click the various plus and minus buttons to set the fuel load.



Once the Passenger/Cargo and Fuel loads have been set, press the **Update** button to actually load the aircraft. If you look carefully out the windshield, you can see the aircraft "settle" a bit under the additional weight. The **Summary** section displays the details, including the weight and balance values. A few values are needed for your flight preparation:

- The values indicated by the **blue** boxes will be needed when you set the Longitudinal Trim on the pedestal, so you should write them down somewhere. The **TOW CG** (Takeoff Weight Center-of Gravity) and the takeoff **FLAPS** setting are entered into the Takeoff Condition Computer. The **STAB** (stabilizer) value is useful to double-check the trim setting.

- The 3 values that are underlined in **green** are weights. They are needed to set the cockpit instruments. They will also be needed to program the FMS, although they will be transferred automatically by using the **FMS➡** button.

Note: The **Dispatch** report provides a number of additional details, including the bug speeds for a Flaps 15 takeoff. For a hard copy of the report, click on the **Print** button. See the **Dispatch** section of the User Manual for a full explanation of these reports.

For the Expanded Preflight Checklist, continue to the next page.
For the Normal Preflight Checklist, continue on Page 23.

EXPANDED PREFLIGHT: Establish External Power

Although the aircraft's APU can provide electrical power on the ground, it burns fuel and creates pollution. That is why ground-supplied power — called *External Power* in the MD-80 — is used as often as possible, and will be used here. The APU is not started until its bleed air is needed to start the two main engines. Most of these steps are on the Lower Overhead Panel, shown here (the numbers refer to the related checklist steps) …

PARKING BRAKE ..... SET

1. Set the Parking Brake. You may use the MSFS shortcut (CTRL + .), or click on the **PARK BRAKE** button in the center of the steering tiller on the Captain's Side Panel. The brake is ON when the button is raised.

BATTERY ..... ON

2. On the Lower Overhead Panel, move the **BATT** switch to the ON (⬇) position.
3. You should be able to hear the sound of the cockpit ventilation fan. Also, a number of messages will appear on the EOAP, and a number of lights on the Main Panel will be illuminated.

EXTERNAL POWER ..... CHECK, then CONNECT

4. Click on the **EXT POWER AVAIL** button; it will illuminate to indicate power is available. This simulates the ground crew plugging in an External Power source.
5. Move the ammeter/voltmeter selector to the EXT PWR position.

6. On the meters above the selector, verify that the ground-supplied power has the correct voltage and frequency.
   - The reading on the AC VOLTS meter should be in the 112 V – 118 V range, although an AC Voltage between 107 V and 123 V is acceptable. The meter's display shows values between 0 V and 150 V.
   - The reading on the FREQUENCY meter should be in the 396 CPS – 404 CPS range, although a Frequency between 380 CPS and 420 CPS is acceptable. The meter's display shows values between 380 CPS and 420 CPS. (*Note:* "CPS" means Cycles Per Second; another name for this frequency unit is Hertz.)
7. Once you have confirmed that the External Power has the correct voltage and frequency, move the **EXT PWR L BUS** and **EXT PWR R BUS** switches on either side of the illuminated button to the ON (⬇) position. This actually connects the External Power to the aircraft systems. The blue power-in-use lights next to the switches will also illuminate. It is normal for the lights and gauges to flicker when the first switch is thrown. All aircraft electrical systems are now fully powered from the ground.

OVERHEAD CONSOLE LIGHTS ..... ON

8. On the **OVHD CONSOLE LTS** panel, turn on the **PANEL** and the **FLOOD** light switches.

   Note: Occasionally, one or more of the gauges may go blank. Cycling the appropriate **PANEL** light switch (turning it off and back on again) will reset those gauges. As you will see, there are 3 different **PANEL** switches, each with its own group of instruments, so make sure you cycle the correct one.

LOCAL BAROMETRIC PRESSURE ..... SET

9. Use the BARO knob to enter the local pressure, or simply use the B shortcut. On the Lower Overhead Panel, you can see the local pressure in the LDG BARO window on the Pressurization panel. Verify that the correct value is shown on the secondary altimeter on the Main Panel. (The primary altimeter is still dark.)

POSITION (NAVIGATION) LIGHTS ..... ON

10. Open the First Officer's Panel and move the **POS/STROBE** switch to the BOTH (⬇) position. This turns on the position lights immediately, and the strobe lights illuminate whenever the aircraft is airborne.
11. The **LOGO LT** switch may be turned on as desired. These tail-mounted lights are effective in low-light situations, or when free advertising is desired.

CABIN ..... PREPARE FOR FLIGHT ATTENDANTS AND PASSENGERS

12. On the Lower Overhead Panel, move the **GALLEY** power switch to the ON (⬇) position. (The FA's can start making the coffee.)
13. Move both **AIR CONDITIONING SUPPLY** switches to the AUTO (⬇) position. Verify that the CABIN TEMP gauge drops to a reasonable temperature.

EXPANDED PREFLIGHT: Left Section of Lower Overhead Panel

As you go through the checklist, you will work your way from top to bottom.

FD CMD ..... **NORMAL**

14. Move the **FD CMD** switch to the BOTH ON 1 position. Go to the Main Panel and confirm that the yellow **FD** light is illuminated (as shown on the right).
15. Repeat with the BOTH ON 2 switch position.
16. Move the **FD** switch to the NORM position. Confirm that the yellow **FD** light is extinguished.

CADC ..... **NORMAL**

17. Move the **CADC** switch to the BOTH ON 1 position. Go to the Main Panel and confirm that the yellow **CADC** light is illuminated (as shown).
18. Repeat with the BOTH ON 2 switch position.
19. Move the **CADC** switch to the NORM position. Confirm that the yellow **CADC** light is extinguished.

Note: There is an identical pair of **FD** and **CADC** lights on the right side of the Main Panel for the First Officer's use. If you open the First Officer's Instrument Panel, which contains the switches for the external lights and the hydraulic system controls, you will see them to the left of the TAT panel. However, these two switches are nonfunctioning, so neither will illuminate during the above tests.

VERT GYRO ..... **NORMAL**

20. Confirm that the **VERT GYRO** switch is in the NORM position.

COCKPIT VOICE RECORDER..... **TEST**

21. Press and release the **COCKPIT VOICE RECORDER TEST** button.
22. Verify that the needle in the meter next to the Cockpit Voice Recorder controls remains in the green band for a few seconds.

ELECTRICAL POWER SYSTEM ..... **CHECK / SET**

23. Verify that both **CSD** switches are guarded. (The white tab will be next to the CSD label.)
24. Press the **CSD TEMP** button and confirm that the needles in both gauges move to the RISE gauge mark while the button is held.
25. Move the **L GEN** and **R GEN** switches upward to RESET, and then back downward to ON.
26. Move the **APU GEN** switch upward to RESET and release it. The spring-loaded switch will return to NORM.
27. Verify that the **APU PWR AVAIL** indicator is unlit, and the **APU L BUS** and **APU R BUS** switches are in the OFF (⬆) position. (This assumes that External Power is being supplied from the ground.)
28. Verify that the **EXT PWR AVAIL** indicator is illuminated.
29. Verify that the **EXT PWR L BUS** and **EXT PWR R BUS** switches are in the ON (⬇) position, and the blue power-in-use lights next to those switches are illuminated.
30. Move the ammeter/voltmeter selector completely clockwise to the BATT AMP position.
31. Verify that the ammeter gauge next to the selector reads 0 AMPS (needle straight up). The needle may jump periodically as the battery is charging from the External Power.
    Note: Unless there is a need to measure another electrical quantity, the selector should remain in the BATT AMP position to monitor the state of the aircraft battery.
32. Verify that the **GALLEY** Power switch is in the ON (⬇) position.
33. Move the **AC BUS X TIE** switch to the OPEN (⬆) position.
34. Confirm that the message `AC CROSSTIE LOCKOUT` appears on the EOAP.
35. Return the **AC BUS X TIE** switch to the AUTO (⬇) position. Confirm that the EOAP message extinguishes.
36. Verify that the **DC BUS X TIE** switch is in the OPEN (⬇) position.

APU SYSTEM ..... **CHECK**

37. Verify that both **FIRE AGENT NO 1** and **FIRE AGENT NO 2** switches are in the OFF (⬆) position.
38. Verify that the **FIRE CONT** switch is in the OFF (⬆) position.
39. Verify that the **AIR** switch is in the OFF (⬆) position.
40. Verify that the **MASTER** switch is in the OFF (⬆) position.
41. Verify that the **DOORS** switch is in the AUTO (guarded) position.

BACKUP ELECTRICAL SOURCES ..... **CHECK**

42. Rotate the **EMER PWR** selector clockwise to the **ON** position.
43. Verify that the white **EMER PWR IN USE** indicator illuminates.
44. Return the **EMER PWR** selector to the **OFF** position.
45. Move the **BATT** switch to the OFF (⬆) position, and confirm that the indicator light turns off.
46. Verify that the `BATTERY OFF` message appears on the EOAP.
47. Return the **BATT** switch to the ON (⬇) position, and confirm that the EOAP message disappears.

IGNITION AND FUEL SYSTEMS ..... **CHECK**

48. Confirm that the ENG **START PUMP** switch is in the OFF (⬆) position.
49. Confirm that the ENG **IGN** switch is in the OFF (⊙) position.
50. Confirm that both **FUEL HEAT** switches are in the OFF (⬆) position.
51. Confirm that both **ENG START** switches are in the OFF (⊙) position, and the guards are in place.

WING TANK FUEL PUMPS ..... **TEST, then OFF**

52. Move all 4 **LEFT** and **RIGHT FUEL PUMP** switches to the OFF (⬆) position.
    Note: If a pump is being used with the APU, turn on the **START PUMP** switch before turning the fuel pump off. This is not needed here since you are on External Power, but you might use the APU on another flight.
53. Locate the `L&R FUEL PRESS LOW` message on the EOAP – it should change during the upcoming tests.

    Test the Left Aft Fuel Boost Pump…
54. Move the switch for the **LEFT AFT PUMP** to the ON (⬇) position. Verify that the message on the EOAP changes to `R FUEL PRESS LOW` when the pump is on.
55. On the Upper Pedestal, move the **FUEL X-FEED** lever to the ON position. Verify that the `R FUEL PRESS LOW` warning on the EOAP disappears. Return the **FUEL X-FEED** lever to the OFF position.
56. Return the switch for the **LEFT AFT PUMP** to the OFF (⬆) position.

    Test the Left Forward Fuel Boost Pump…
57. Move the switch for the **LEFT FWD PUMP** to the ON (⬇) position. Verify that the message on the EOAP again changes to `R FUEL PRESS LOW` when the pump is on.
58. Move the **FUEL X-FEED** lever to the ON position. Verify that the `R FUEL PRESS LOW` warning on the EOAP disappears again. Return the **FUEL X-FEED** lever to the OFF position.
59. Return the **LEFT FWD PUMP** switch to the OFF (⬆) position.

    Test the Right Aft Fuel Boost Pump…
60. Move the switch for the **RIGHT AFT PUMP** to the ON (⬇) position. Verify that the message on the EOAP changes to `L FUEL PRESS LOW` when the pump is on.
61. Move the **FUEL X-FEED** lever to the ON position. Verify that the `L FUEL PRESS LOW` warning on the EOAP disappears. Return the **FUEL X-FEED** lever to the OFF position.
62. Return the **RIGHT AFT PUMP** switch to the OFF (⬆) position.

    Test the Right Forward Fuel Boost Pump…
63. Move the switch for the **RIGHT FWD PUMP** to the ON (⬇) position. Verify that the EOAP message changes to `L FUEL PRESS LOW` when the pump is on.
64. Move the **FUEL X-FEED** lever to the ON position. Verify that the `L FUEL PRESS LOW` warning on the EOAP disappears. Return the **FUEL X-FEED** lever to the OFF position.
65. Return the **RIGHT FWD PUMP** switch to the OFF (⬆) position.

66. If a pump had been in use for APU operation before the test, turn it on again and turn off the START PUMP.

CENTER TANK FUEL PUMPS..... **TEST, then OFF**

67. Move both **CENTER AFT** and **CENTER FWD FUEL PUMP** switches to the OFF (⬆) position.
68. Move the switch for the **CENTER AFT PUMP** to the ON (⬇) position. Verify that the EOAP message `L&R FUEL PRESS LOW` appears when the pump is on.
69. Return the **CENTER AFT PUMP** switch to the OFF (⬆) position, and verify the EOAP message disappears.
70. Repeat the test for the **CENTER FWD PUMP** switch, then turn that switch OFF again.

CABIN LIGHTS AND SIGNS ..... **ON**

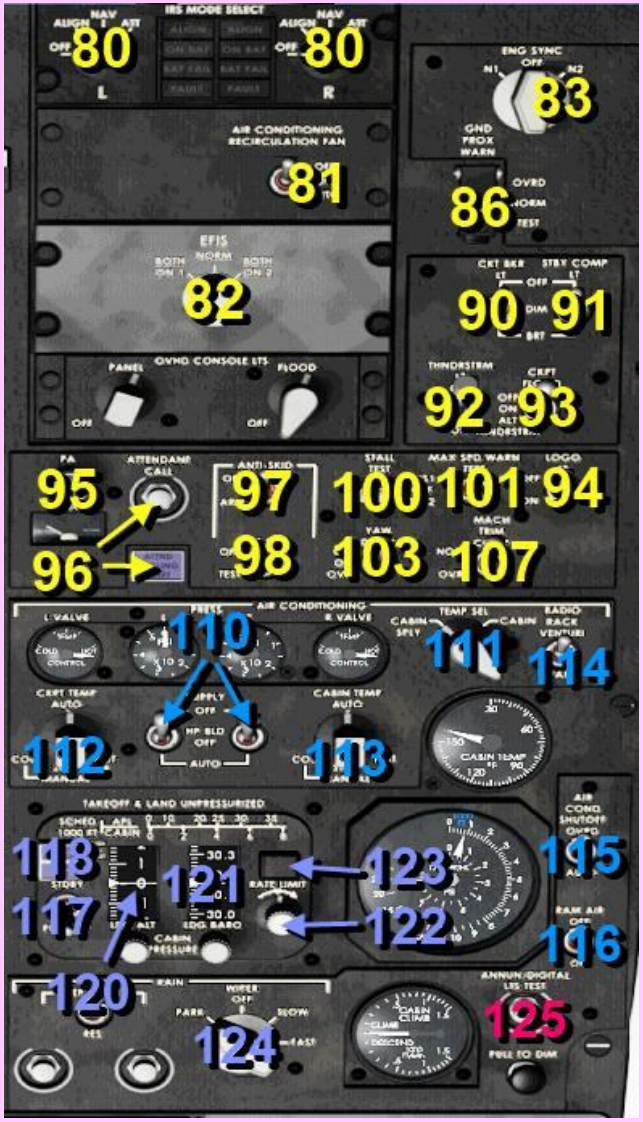
71. Verify that the **EMER LTS** switch is in the OFF (⬇) position, and confirm that the `EMER LIGHT NOT ARMED` message is shown on the EOAP. Move the switch to the ARM (⊙) position, and verify that the EOAP message extinguishes.
72. Move the **NO SMOK** switch to the ON (⊙) position. Verify that the notification chime is heard when the switch is moved.
    Note: Many airlines have locked this switch so that it is always in the ON position.
73. Move the **SEAT BELT** switch to the ON (⊙) position. Verify that the notification chime is heard when the switch is moved.

ICE PROTECTION SYSTEM ..... **CHECK, then SET**

74. Rotate the **METER SEL & HEAT** selector switch to each position. In every position (except RAT PROBE), check for a current reading on the **HEATER CUR** gauge to the left of the selector. Also confirm that the `PITOT/STALL HEAT OFF` message on the EOAP remains off in each selector position except OFF.
75. After the test, move the selector switch to the CAPT position. In this position, all pitot tubes are heated.
76. Confirm that the **AIR FOIL** Anti-Ice switch is in the OFF (⬆) position.
77. Confirm that the **WINDSHIELD ANTI-FOG** switch is in the OFF (⬆) position.
    Note: In rainy or humid weather, this switch would be turned ON; the anti-fog system is much better at preventing windshield fogging than clearing it. However, since windshield fogging is not simulated in FSX this switch has no effect. You may position it as you like.
78. Move the **WINDSHIELD ANTI-ICE** switch to the ON (⬇) position.
79. Confirm both **L ENG** and **R ENG** Anti-Ice switches are in the OFF (⬆) position.

EXPANDED PREFLIGHT: Right Section of Lower Overhead Panel

Again, as you go through the checklist, you will work your way from top to bottom.



IRS / FMS ..... **INITIALIZE**

80. Rotate both **IRS MODE SELECT** switches to NAV. This begins the process of aligning the Inertial Reference System gyroscopes, which takes 10 minutes. During the time that the white **ALIGN** indicator is illuminated, whether steady or flashing, the aircraft must not be moved. Once the aircraft's initial position has been entered, the **ALIGN** indicator is extinguished and the aircraft may be moved.
    Note: To shorten the alignment time, select **IRS Fast Start & Realign** in the **Options** section of the **Super 80 Center**. Using this option makes the alignment almost instantaneous.

AIR CONDITIONING FAN ..... **AUTO**

81. Move the **AIR CONDITIONING RECIRCULATION FAN** switch to the AUTO (⬇) position.

ELECTRONIC FLIGHT INSTRUMENTATION SYSTEM ..... **SET**

82. Confirm that the **EFIS** selector is in the NORM (⬆) position.
    Note: The EFIS will be tested later.

ENGINE SYNC ..... **TEST, then OFF**

83. Move the **ENG SYNC** switch to the N1 position. Verify that the EOAP message `ENG SYNC ON` appears.
84. Move the **ENG SYNC** switch to the N2 position. Verify that the EOAP message `ENG SYNC ON` appears.
85. Move the **ENG SYNC** switch to the OFF (⬆) position. Verify that the EOAP message disappears.

GROUND PROXIMITY WARNING SYSTEM ..... **TEST, then NORM**

86. Unguard the **GND PROX WARN** switch and move it downward to TEST. When released, the spring-loaded switch returns to NORM.
87. Verify that the aural alerts are heard — ***Whoop Whoop*** followed by ***Pull up*** and ***Glideslope***.
88. Confirm that the `GPWS FAIL` message on the EOAP also appears during this test.
89. Reguard the switch.

LIGHTS ..... **OFF**

90. Confirm that the **CKT BKR LT** switch is in the OFF (⬆) position.
91. Confirm that the **STBY COMP LT** switch is in the OFF (⬆) position.
92. Confirm that the **THNDRSTRM LT** switch is in the OFF (⬆) position.
93. Confirm that the **CKPT FLOOD** switch is in the OFF (⬆) position.
94. Position the **LOGO LT** switch is set as desired. It provides additional safety in low light situations.

PUBLIC ADDRESS SYSTEM ..... **TEST**

95. Press and hold the **PA** button, and confirm that it remains illuminated while being pressed.
96. Press the **ATTENDANT CALL** button. Confirm that the chime is heard, and that the blue **ATTEND CALLING RESET** button illuminates. Cancel the call by pressing the illuminated button.

ANTI-SKID ..... **TEST, then OFF**

97. Move the **ANTI-SKID** switch to the ARM (⬇) position. Confirm that the EOAP messages `L&R OUTBD ANTI-SKID` and `L&R INBD ANTI-SKID` disappear.
98. Move the **ANTI-SKID TEST CHK** switch downward to the TEST position. Verify that the messages `L&R OUTBD ANTI-SKID` and `L&R INBD ANTI-SKID` reappear on the EOAP while the switch is held downward.
99. Return the **ANTI-SKID** switch back to the OFF (⬆) position. The EOAP messages should reappear.

STALL WARNING ..... **TEST**

100. To test Stall Warning System #1, move the **STALL TEST** switch upward to SYS 1 momentarily, then release. Confirm that the aural warning is heard – 3 buzzes, followed by the spoken alert ***Stall***.
101. Repeat the test and quickly open the Main Panel. Confirm that the flashing red **STALL** warning light on the glareshield illuminates, together with the steady yellow **STICK PUSHER - PUSH TO INHIBIT** light. Both lights extinguish after 3 seconds.
102. Repeat for Stall Warning System #2 by moving the **STALL TEST** switch downward and releasing.

MAX SPEED WARNING ..... **TEST**

103. Move the **MAX SPD WARN TEST** switch upward to SYS 1 momentarily, then release. Verify that the audio clacker sounds, followed by the verbal warning ***Overspeed***.
104. Repeat for Overspeed Warning System #2 by moving the switch downward and releasing.

YAW DAMPER ..... **ON**

105. Locate the `YAW DAMP OFF` message on the EOAP, then move the **YAW DAMP** switch to the ON (⦿) position.
106. Verify that the EOAP message disappears.

MACH TRIM COMPENSATION ..... **TEST, then NORM**

107. Move the **MACH TRIM COMP** switch to the OVRD (⬇) position.
108. Verify that the `MACH TRIM INOP` message appears on the EOAP.
109. Return the switch to the NORM (⬆) position. Confirm that the EOAP message disappears.

AIR CONDITIONING ..... **SET**

110. Move both **AIR CONDITIONING SUPPLY** switches to the AUTO (⬇) position.
111. Using the **TEMP SELECT** selector switch, check the cabin and the cockpit temperatures on the **CABIN TEMP** gauge.
112. Move the **CKPT TEMP** selector to the AUTO (⬆) position, or select COOL or HOT as necessary to correct the cockpit temperature.
113. Move the **CABIN TEMP** selector to the AUTO (⬆) position, or select COOL or HOT as necessary to correct the cabin temperature.
114. Move the **RADIO RACK** switch to the FAN (⬇) position.
115. Move the **AIR COND SHUTOFF** switch to the AUTO (⬇) position.
116. Confirm that the **RAM AIR** switch is in the OFF (⬆) position.

CABIN PRESSURIZATION SYSTEM ..... **TEST, then SET**

117. Move the Pressurization selector switch to the STDBY (⬆) position.
118. Verify that the blue **TRANSFER LOCKOUT** and **STDBY ON** lights illuminate.
119. Return the selector switch to the PRIMARY (⬇) position. Verify that the lights extinguish.
120. Adjust the value in the **LDG ALT** window to match the departure field elevation. If the current barometric pressure is set, then the altimeters on the Main Panel should read the field elevation.
121. Set the **LDG BARO** to Current Altimeter Setting (or use the [B] shortcut).
122. Rotate the **RATE LIMIT** knob so that the white index mark is directed straight up.
123. Push the **FLOW** button and confirm that **FLOW** appears on the button.

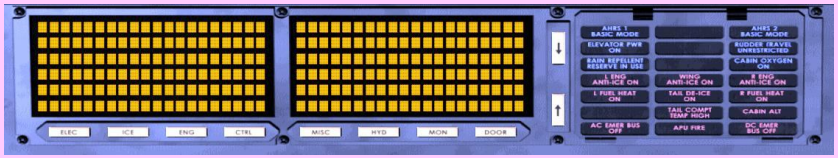
WINDSHIELD WIPER AND REPELLENT ..... **PARKED, then OFF**

124. Move the **WIPER** switch to PARK (to make sure the wiper is properly parked), and then back to OFF.

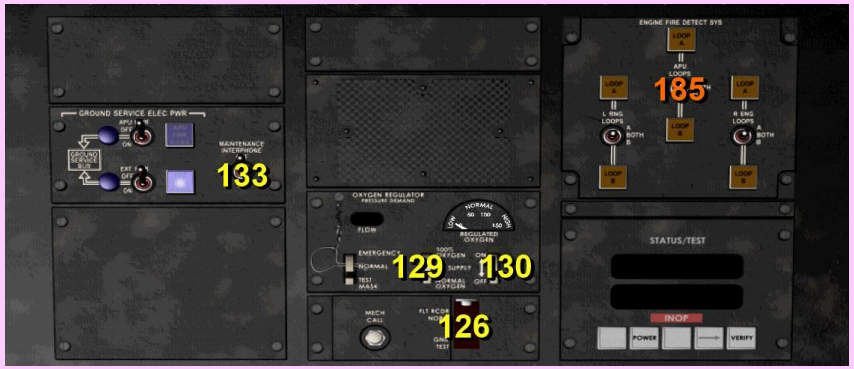
    Note: Due to environmental and health concerns, the use of liquid rain repellent is either forbidden or strictly controlled in most countries. Therefore, the **REPELLENT** switch and the 2 buttons below it (located just to the left of the WIPER control) would be disabled. While research continues to replace the original chemicals, some airlines now use a wax-like coating on the windscreen to repel rain at low speeds. Others just rely on the action of the airflow to clear rain from the windscreen.

ANNUNCIATOR/DIGITAL LIGHTS ..... **TEST**

125. Push the **ANNUN/DIGITAL LTS TEST** button to test all annunciator and digital lights in the cockpit. Repeat a few times to confirm that all lights and indicators on the Upper (Aft) Overhead Panel and the Main Panel illuminate properly. This is what the EOAP and adjacent light panel should look like during the 3 second test…



EXPANDED PREFLIGHT: Upper Overhead Panel



FLIGHT RECORDER .....TEST, then NORM

126. Unguard the **FLT RCDR** switch. With the guard open, move the switch inside downward to **GND TEST**.
127. Verify that the `FLIGHT RECORDER OFF` message on the EOAP disappears.
128. Move the flight recorder **GND TEST** switch back upward to NORM and put the guard back in place. Confirm that the EOAP message reappears.

    Note: Except during this test, the Flight Recorder message will illuminate when the Parking Brake is on, and extinguish when the brake is off.

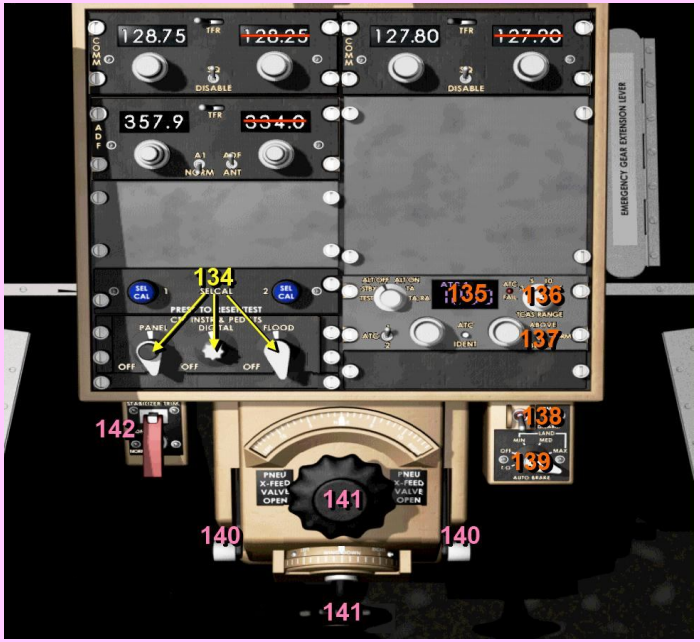
O_2 PANELS / O_2 PRESSURE.....CHECKED, then SET

129. Move the **DILUTER DEMAND CONTROL** switch to the NORMAL OXYGEN (⬇) position.
130. Move the **OXYGEN SUPPLY** switch to the ON (⬆) position.
131. Confirm that the pressure on the oxygen pressure gauge is in the NORMAL range.
132. Move the **OXYGEN SUPPLY** switch to the OFF (⬇) position.

MAINTENANCE INTERPHONE ..... OFF

133. Confirm that the **MAINTENANCE INTERPHONE** switch is in the OFF (⬆) position.

EXPANDED PREFLIGHT: Lower Pedestal



CENTRAL INSTRUMENT AND PEDESTAL LIGHTS.....ON

134. On the **CTR INSTR & PED LTS** panel, move the **PANEL** and **DIGITAL** Lights selectors to the ON position. (The **FLOOD** Light selector should already be on.)

TRANSPONDER..... SET

135. Enter the ATC-assigned Squawk Code.
136. Set the **TCAS RANGE** selector to the desired value for departure.
137. Move the TCAS Vertical Mode Switch to **ABOVE**.

AUTO BRAKE.....DISARM / OFF

138. Confirm that the **AUTO BRAKE** arming switch is in the DISARM (⬇) position.
139. Confirm that the **AUTO BRAKE** selector is in the OFF position.

PNEUMATICS..... SET

140. Move both Pneumatic X-Feed handles to the OPEN (⬆) position. When they are in the open position, the white handles will be adjacent to the PNEU X-FEED VALVE OPEN labels. (The diagram above shows them in the closed position.)

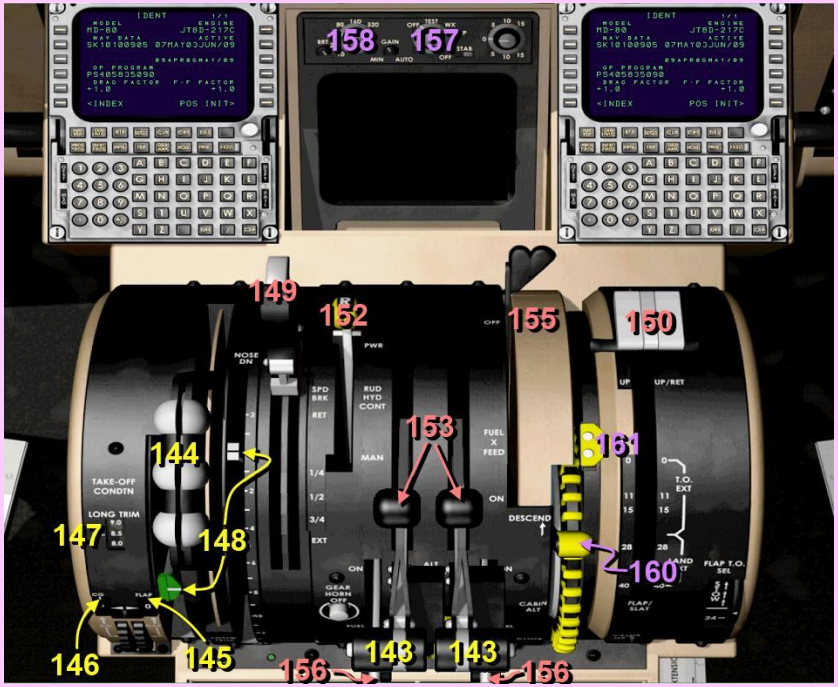
AILERON AND RUDDER TRIM .....CHECK, then SET

141. Check for travel for both aileron and rudder trim in each direction. Then reset both to 0 (each white indicator should be centered in its scale).

STABILIZER TRIM CUTOFF SWITCH .....CHECK

142. Confirm that the **STABILIZER TRIM** cutoff switch is in the OFF (guarded) position.

EXPANDED PREFLIGHT: Upper Pedestal



TAKEOFF CONFIGURATION WARNING SYSTEM ..... TEST

143. Advance both throttles, checking for freedom of movement. Verify that the Takeoff Configuration Warning system is working. Various verbal warnings (***Stabilizer***, ***Slats***, ***Ful-llaps***, and ***Brakes***) are heard, each separated by two beeps. Then close the throttles completely.
Note: The F3 and F2 shortcuts may be used to increase and decrease the throttles, respectively.

STABILIZER TRIM ..... CHECK, then SET

144. Move the **LONG TRIM** handle in both directions. Verify that the white trim indicator moves in the same direction as the handle motion.
145. Enter the Takeoff Flap setting that you intend to use on the **FLAP** indicator.
146. Enter the Takeoff Center of Gravity (**TOW CG**) setting that you obtained from the Dispatch report in the **CG** indicator.
147. Confirm that the value shown in the **LONG TRIM** indicator window matches the **STAB** setting that was given in the Dispatch report, to within ±0.5 unit.
148. When the FLAP and CG values were entered, the green Trim Takeoff Position Indicator moved so that it indicates the correct position trim position. Use the **LONG TRIM** handle to align the white Trim Indicator with the green marker.

Note: There is a pair of yellow Alternate Longitudinal Trim levers beneath the throttle levers. However, they are not functional in the Super 80 Pro.

SPOILER LEVER ..... RET

149. Confirm that the spoiler **SPD BRK** lever is in the RET (fully up) position. If you're not sure, cycle the spoilers by hitting the 7 shortcut key twice.

FLAP HANDLE/INDICATOR ..... UP/RET

150. Confirm that the Flaps/Slats handle is in the UP/RET position.
151. Verify that flaps indicator on the Main Panel agrees with the Flaps handle position.

RUDDER HYDRAULIC CONTROL ..... PWR

152. Confirm that the **RUD HYD CONT** lever (yellow handle with white "R") is in the PWR (fully up) position.

REVERSE THRUST LEVERS THROTTLES ..... TEST, then DOWN

153. Activate the Reverse Thrust Levers (the black handles on top of the throttles). Switch to the main panel view, and confirm that the red **REVERSE UNLOCKED** lights and the blue **REVERSE THRUST** lights are illuminated above the two columns of engine gauges, as shown.

Note: If your throttle does not have a reversing feature, you may use the MSFS F2 shortcut. Press F2 once to set idle reverse thrust, which causes both red **REVERSE UNLOCKED** lights to illuminate. Hold down F2 to increase the reverse thrust and eventually both blue **REVERSE THRUST** lights illuminate.

154. Close the Reverse Thrust Levers completely, or use the F1 shortcut to cancel reverse thrust. Confirm that all 4 lights extinguish.

FUEL CROSSFEED SYSTEM ..... OFF

155. Confirm that the black **FUEL X-FEED** lever is in the OFF (up) position.
156. Verify that both Fuel Levers (located under the throttle handles) are in the OFF (fully down) position.

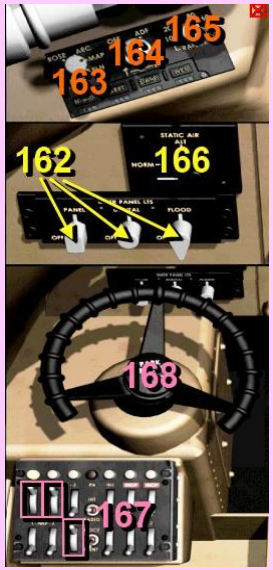
WEATHER RADAR ..... TEST, then OFF

157. Move the Radar Mode Selector to TEST. The radar screen should display a test pattern of concentric green, yellow, and red bands.
158. Move the Range Selector to each value, and confirm that the value appears in the upper left corner of the radar display.
159. Return the Radar Mode Selector to OFF.

CABIN ALT CONTROL LEVER / POSITION INDICATOR ..... AUTO / VALVE OPEN

160. Verify that the **CABIN ALT** control lever is in the AUTO (⬆) position, which is just below the **DESCEND** label. (The lever is the yellow handle, not the yellow-and-black wheel behind it.)
161. Verify that the yellow triangular Outflow Valve Indicator is in the VALVE OPEN (fully aft) position. A fully forward (downward) position indicates the valve is closed. *Note:* A partially open valve is OK.

EXPANDED PREFLIGHT: Cockpit – Captain's Side Panel



INSTRUMENT PANEL LIGHTS.....ON

162. On the **INSTR PANEL LTS** panel, move the **PANEL** and **DIGITAL** light selectors to the ON position. Also verify that the **FLOOD** lights selector is in the ON position.

NAVIGATIONAL DISPLAY CONTROLS..... SET

163. Move the ND **MODE** selector to the MAP position.
164. Verify that the ADF selector is in the OFF position.
165. Move the ND **RANGE** selector to a distance that is suitable for the expected departure. If you are not sure, this can be set after the FMS is programmed.

STATIC AIR SELECTOR.....NORM

166. On the captain's left panel, verify that the **STATIC AIR** selector switch is in the NORM position (to the left).

COMMUNICATIONS PANEL ..... SET

167. Confirm that the switches for both communications radios — VHF 1 and VHF 2 — are in the ON (⬆) position. Also, the MKR switch should be in the ON (⬆) position so that marker passage can be heard during an ILS approach. No other switches need to be on at this point.

PARKING BRAKE..... SET

168. Confirm that the parking brake is on (in the up position).
169. Verify that the message `PARKING BRAKE ON` appears in the EOAP.

170. Verify that the needles in the **BRAKE PRESS** gauge on the Main Panel are in the red arc (see diagram to right). Since they are sometimes directly above each other, it may be difficult to identify two separate needles.

EXPANDED PREFLIGHT: Cockpit – Main Panel

FGCP LIGHTS AND INSTRUMENT BRIGHTNESS CONTROLS.....ON

171. Turn on both FGCP light switches by clicking on the white tabs just above the right fire handle.
172. Turn the knob on the EFIS Dimmer panel clockwise to increase the PFD brightness to the desired level.
173. Turn the knob on the EFIS Dimmer panel clockwise to increase the ND brightness to the desired level. At this point, before the FMS is initialized, the error message **MAP FAIL** is displayed on the ND.
174. Turn the knob on the TCAS display clockwise to increase its brightness to the desired level.
175. On the main instrument panel, verify that all no red flags or error messages are visible on any of the flight instruments (other than the ND).

TRANSPONDER.....TEST, the STBY

176. On the Lower Pedestal, move the Transponder Function Selector to TEST, then release. On the Main Panel, confirm that the TCAS shows the multicolored test pattern, as shown on the right. The test lasts approximately 10 seconds. After that time, confirm that the audio message ***TCAS System Test OK*** is heard.
177. Following the test, confirm that the Function selector is set to the STBY position.

ELECTRONIC FLIGHT INSTRUMENTATION SYSTEM ..... TEST

178. Press and hold the EFIS **TEST** button. Confirm that both the PFD and ND display red FAIL warnings.
179. On the right side of the Lower Overhead Console, move the EFIS selector to BOTH ON 1. On the Main Panel, verify that an amber EFI 1 message appears on the PFD. If the initial position has not been entered into the FMS, a number of red FAIL messages also appear.
180. Move the EFIS selector to BOTH ON 2. Verify that the PFD displays an amber EFI 2 message (and the red FAIL messages if appropriate).
181. Return the EFIS selector to NORM, and verify that all warnings have disappeared.

MAGNETIC COMPASS ..... SET

182. Press the magnetic compass selector and verify the correct setting is shown on the ND. Then set **MAG/TRUE** switch as desired. (North of 73° N latitude or south of 60° S latitude, use **TRUE**. Otherwise, use **MAG**.)

ENGINE FIRE WARNING SYSTEM ..... TEST

183. Press and hold the **LOOPS & TEST** button between the fire handles on the Main Panel to test the Engine Fire Warning system. Verify that the fire bell sounds, followed by the verbal warnings ***Fire right engine*** and ***Fire left engine***. Release the button.
184. Repeat the test, verifying that both **ENG FIRE** handles, both yellow AGENT LOW lights, and both **MASTER CAUTION** and **MASTER WARNING** lights all illuminate.
185. Open the Aft Overhead Panel and confirm that all 3 switches are in the BOTH position. Then repeat the Engine Fire Warning system test and verify that all 6 yellow fire detector **LOOP** lights on the **ENGINE FIRE DETECT SYS** panel illuminate during the test.

THRUST RATING INDICATOR SYSTEM ..... TEST, then SET

186. Push and hold the test button on the TRI. While you hold the button, confirm that the following occurs:
    a. None of the Mode Selector lights are illuminated.
    b. The green RAT displays **12**.
    c. The amber EPR LIM displays **2.04**.
187. Release the test button. When you do, confirm that the following occurs:
    a. The amber NO MODE light at the bottom of the TRI panel illuminates, and all other mode selector lights are extinguished.
    b. The green RAT displays the ambient temperature.
    c. The amber EPR LIM displays –.––.
188. Press the **TO** button. Confirm that it illuminates.

FUEL QUANTITY ..... SET, then CHECK

189. Press the **FUEL USED RESET** button (below the Engine #2 gauges) to reset the fuel used counters.
190. Rotate the **SET ZFW KNOB** to enter the aircraft's Zero Fuel Weight from the Dispatch report.
191. Push the Fuel Quantity Test button to test the Fuel Quantity Indication System. Verify that the 3 individual tank quantity indicators display **3000**, the total fuel quantity displays **9000**, and the Zero Fuel Weight displays a value equal to ZFW+9000.

TAKEOFF SPEEDS / SPEED BUGS ..... SET

192. Click on the Airspeed Indicator to open the Speed Card. Select Takeoff Mode, then click on the weight value to increase/decrease it until the aircraft's Gross Weight is shown (rounded up). Click on the tab at the bottom that corresponds to the flap setting you will be using. It must agree with the flap setting that you entered earlier into the Takeoff Condition Computer on the pedestal. The Speed Card will display the important speeds for takeoff and climbout. The corresponding bugs on the Airspeed Indicator are also set.
193. Verify that the correct bug speeds for the takeoff have been set. The 4 bugged speeds are …
    - V_1 – decision speed
      The aircraft can no longer stop in the remaining runway length following a rejected takeoff.
    - V_2 – takeoff safety speed
      The minimum climb speed with one engine functioning.
    - Flap retraction speed
      The speed at which all flaps are retracted (slats remain extended).
    - Slat retraction speed
      The speed at which the slats are retracted.

    Note: The Speed Card allows you to set a Flaps 11 or Flaps 15 takeoff. However, the Dispatch report only provides the CG setting for a Flaps 15 takeoff, so <u>you</u> must determine the proper CG value for a Flaps 11 takeoff.

AUTOMATIC RESERVE THRUST SYSTEM ..... CHECK

194. Confirm that the **ART** switch is guarded. When guarded, the switch automatically moves to the AUTO position.

GEAR ..... TEST, then DOWN / 3 GREEN LIGHTS

195. Confirm that the gear handle is down, and that all the 3 green landing gear lights are illuminated.
196. Activate the gear, either by pulling out on the gear handle (clicking on it with the mouse) or by using the MSFS G shortcut.
197. Confirm that the warning horn sounds, followed by the verbal warning ***Landing Gear***.
198. Return the gear to its original down position.

ENGINE INSTRUMENTS ..... CHECK

199. Verify that all engine instruments readings are appropriate.

OIL / HYDRAULIC FLUID QUANTITIES ..... CHECK

200. The **OIL QTY** on the Engine Display Panel should be approx. **16** quarts on both sides. The **HYD QTY** should be approx. **18** quarts on both sides.

EXTERNAL LIGHTS ..... OFF

201. Verify that the **WING LDG LTS** (Wing Landing Lights) switches are in the RET (⬆) position.
202. Verify that the **NOSE LTS** (Nosegear Lights) switch is in the OFF (⬆) position.

IRS / FMS ..... PREFLIGHT INITIALIZATION and PROGRAMMING

203. By now, the IRS should be aligned. Initialize the system by entering the current position, either by entering the departure airport or by using the latitude/longitude. Once the initial position has been entered, the **MAP FAIL** indication on the ND when it is map mode disappears. The **ALIGN** lights on the Right Overhead Panel will also extinguish. Enter the route and remove all discontinuities. Then use the ND (in PLN mode) to check that the route is correct. If possible, you should use current charts to verify that the FMS entries for departure and arrival procedures, especially if they contain speed/altitude constraints. There are many free sources for these charts on the Internet. After the route has been checked, return the ND to MAP mode.
204. Open the **Dispatch** page in the **Super 80 Center**. Earlier, you should have set the **PAX & Cargo** load and the **Fuel** load, and pressed the **Update** button to actually load the aircraft. (If you have not done this yet, then do it now.) Click on the **FMS➡** button at the bottom of the Dispatch report to send the **GROSS WT**, **FUEL**, and **ZFW** values to the **PERF INIT** page of the FMS.
205. After the three weights have been transferred, then enter then **RESERVE** fuel amount, the **COST INDEX**, and the **CRZ ALT**. While on that page, make sure the **TRANS ALT** is correct for the departure airport. The other values on that page are optional.

FUEL QUANTITY ..... CHECK

206. Check that the Fuel Display shows the correct amount in each tank, and that amount of fuel in the left main tank does not differ significantly from the right main tank.

EXPANDED PREFLIGHT: Cockpit – FGCP

FLIGHT DIRECTOR ..... **ON**

207. Move the **FD** switch to the ON (⬆) position. Confirm that the small blue FD on the FMA is illuminated, and that boxes 3 and 4 of the FMA display `TRK OFF`.

AUTOLAND ..... **TEST**

208. Set both VHF radios (NAV1 and NAV2) to the same frequency — *any* frequency will work.
209. Set both course readouts to the same course — *any* course will work.
210. Press and release the **AUTO LAND** button on the FGCP.
211. Verify that the small yellow **NO AUTOLAND** light on the FMA flashes for 10 seconds, and `AUTO LAND PRE FLT TEST` fills the 4 boxes of the FMA. If the **NO AUTOLAND** light goes off, the test has completed successfully. If it remains lit, the test has failed.

AUTOTHROTTLE ..... **OFF**

212. Verify that the **AUTO THROT** switch is in the OFF (⬇) position.

AUTO-PILOT ..... **OFF / SET**

213. Verify that the **AP** switch is in the OFF (⬇) position.
214. Move the Autopilot selector to the side of the Pilot Flying. If the Captain will be the PF, move it to the **1** position. If the First Officer will be the PF, move it to the **2** position. Confirm that the small blue light on the right side of the FMA matches the choice that you made by showing either AP1 or AP2.

FLIGHT GUIDANCE CONTROL PANEL ..... **SET**

215. If manual VOR flying will be performed immediately following takeoff, enter the appropriate frequencies and courses in the **VHF NAV1** and **NAV2** radios.
216. Enter **250** in the **SPD SEL** window. If a lower speed is expected following takeoff (possibly due to ATC restrictions or a departure procedure), then enter that value.
217. Enter the heading of the most likely departure runway in the **HDG** window.
218. Enter the initial altitude that was assigned by ATC in the **ALT** window.
219. Arm the altitude capture function by "pulling" the **ALT** knob (*i.e.* left-clicking on it with the mouse). Depending on the option that you have selected, the 2nd FMA window should now show either `ALT` or the actual altitude that is entered, without the last 2 zeros.

EXPANDED PREFLIGHT: Cockpit – First Officer's Panel

EXTERNAL LIGHTS ..... **AS NEEDED**

220. None of the external flood lights, wing leading edge lights, or engine nacelle inspection lights is modeled in the Super 80. Therefore, the positions of the **FLOOD LTS** and **WING/NACL FLOOD LTS** switches positions don't matter. To simulate reality, confirm that all 3 switches are in the OFF (⬆) position.
221. Confirm that the **ANTI-COLLISION** light switch is in the OFF (⬆) position.
222. Confirm that the **POS/STROBE** light switch is in the BOTH (⬇) position. *Note:* The strobe lights will only function when a pressure switch in the nose gear senses no weight on the gear.

TAT BUTTON ..... **TEST**

223. Press and hold the Test button. Confirm that the SAT displays the ambient temperature (in °F). It should agree with the RAT value displayed on the Main Panel.

HYDRAULIC SYSTEM ..... **TEST**

224. Move both **ENG** pump switches to the OFF (⬇) position.
225. Move the **TRANS** pump switch to the OFF (⬇) position.
226. Move the **AUX** pump switch to the OFF (⊙) position.
227. Move the **AUX** Hydraulic Pump switch to the OVRD (⬇) position. Confirm the following 3 indications…
   - The right **HYDRAULIC PRESS** digital readout on the Main Panel rises to **29** (2900 psi).
   - One needle in the BRAKE PRESS gauge moves into the green arc, just short of the "3" (again, signifying 2900 psi).
   - The "`L&R HYD PRESS LOW`" message on the EOAP changes to "`L HYD PRESS LOW`" (*i.e.* the "`&R`" indication disappears).
228. Move the **AUX** switch back to the OFF (⊙) position. Confirm that the digital hydraulic pressure value drops back to 0 or 1, the needle in the BRAKE PRESS gauge returns to the red arc, and the EOAP message returns to "`L&R HYD PRESS LOW`".
229. Move the **AUX** switch up to the ON (⬆) position and confirm the same behavior as in step 227.
230. With the **AUX** switch still ON, move the **TRANS** Pump switch to the ON (⬆) position. Verify that the Hydraulic pressure rise again, but this time on the *left* side, and the "`L HYD PRESS LOW`" **EOAP** message disappears.

HYDRAULIC SYSTEM ..... **SET**

231. Verify that both **ENG** Pump switches are in the OFF (⬇) position.
232. Move the **TRANS** Pump switch to the OFF (⬇) position.
233. Move the **AUX** Pump switch to the OFF (⊙) position.

BRAKE TEMPERATURE ..... **TEST**

234. Rotate the Brake Selector to the ALL (central) position. In this position, the temperature shown is for the hottest of the brakes.
235. Press and hold the Brake Temperature Test button. Confirm that the **BRAKE TEMP** Gauge settles between 425° and 475°, and that the yellow Overheat light also illuminates.
236. Release the Test button. Confirm that the Gauge returns to its original reading and that the Overheat light extinguishes.

This concludes the Expanded Preflight Checklist.
Continue with the APU Start Checklist on Page 29.

NORMAL PREFLIGHT

For flights other than the first origination flight of the day for the aircraft, only the Normal Preflight needs to be accomplished. The minimum number of required tests is less than the Full Preflight. For switch locations, refer to the diagrams provided in the Expanded Preflight Checklists.

ESTABLISH EXTERNAL POWER & TURN ON THE LIGHTS

PARKING BRAKE ..... SET

Set the Parking Brake. You may use the MSFS shortcut (CTRL + .), or click on the **PARK BRAKE** button in the center of the steering tiller on the Captain's Side Panel. The brake is ON when the button is raised.

BATTERY ..... ON

2. On the Lower Overhead Panel, move the **BATT** switch to the ON (⬇) position.
3. Verify that the sound of the cockpit ventilation fan is heard. Also, a number of messages will appear on the EOAP, and a number of lights on the Main Panel will be illuminated.

EXTERIOR POWER ..... CONNECT

4. Click on the **EXT POWER AVAIL** button; it will illuminate to indicate that power is available. This simulates the ground crew connecting an External Power source to the aircraft.
5. Move the **EXT PWR L BUS** and **EXT PWR R BUS** switches on either side of the illuminated button to the ON (⬇) position. The blue power-in-use lights next to the switches will also illuminate. It is normal for the lights and gauges to flicker initially. All aircraft electrical systems are now fully powered from the ground.

COCKPIT LIGHTS ..... AS REQUIRED

6. On the **OVHD CONSOLE LTS** panel, turn on the **PANEL** light switch and the **FLOOD** light switch.
7. Open the Captain's Side Panel to access the **INSTR PANEL LTS** controls, then turn on the **PANEL** light switch and the **DIGITAL** light switch.
   Note: Since all 3 **FLOOD** light switches are interconnected, the **FLOOD** switch is already on.
8. Open the Lower Pedestal. On the **CTR INSTR & PED LTS** panel, turn on the **PANEL** and **DIGITAL** switches. Again, the **FLOOD** switch should already be on.
9. On the Main Panel, click on the two switches (the white tabs above the right fire handle) to turn on the FGCP lights.

EXTERIOR LIGHTS ..... CHECK

10. Open the First Officer's Panel and move the **POS/STROBE** switch to the BOTH (⬇) position. This turns on the position lights immediately, and the strobe lights illuminate whenever the aircraft is airborne. Also turn on other exterior lights (logo light, wing light, etc.) as appropriate to the conditions and time of day.

LOCAL BAROMETRIC PRESSURE ..... SET ON ALTIMETERS

11. Use the BARO knob to enter the local pressure, or use the B shortcut.

LOWER OVERHEAD PANEL

ELECTRICAL SYSTEM ..... CHECK and SET

12. Verify that the **CADEC**, **FD CMD**, and **VERT GYRO** switches are in the NORMAL position.
13. Move the **L GEN** and **R GEN** switches upward to RESET, and then back downward to ON.
14. Move the **APU GEN** switch upward to RESET and release it. The spring-loaded switch will return to NORM.
15. Verify that the **APU PWR AVAIL** indicator is unlit, and the **APU L BUS** and **APU R BUS** switches are in the OFF (⬆) position. (This assumes that power is being supplied from the ground.)
16. Verify that the **EXT PWR AVAIL** indicator is illuminated.
17. Verify that the **EXT PWR L BUS** and **EXT PWR R BUS** switches are in the ON (⬇) position.
18. Move the **GALLEY** Power switch to the ON (⬇) position.
19. Verify that the **AC BUS X TIE** switch is in the AUTO (⬇) position.
20. Verify that the **DC BUS X TIE** switch is in the OPEN (⬇) position.

APU SYSTEM ..... CHECK

21. Verify that the **APU AIR** switch is in the OFF (⬆) position.
22. Verify that the **APU MASTER** switch is in the OFF (⬆) position.
23. Verify that the **APU DOORS** switch is in the AUTO (guarded) position.

BACKUP ELECTRICAL ..... CHECK

24. Rotate the **EMER PWR** selector to the ON position.
25. Verify that the white **EMER PWR IN USE** indicator illuminates.
26. Return the **EMER PWR** selector to the OFF position.
27. Verify that the **BATT** switch is in the ON (⬇) position.

ENGINE IGNITION SYSTEM ..... CHECK

28. Confirm that the ENG **START PUMP** switch is in the OFF (⬆) position.
29. Confirm that the ENG **IGN** switch is in the OFF (⊙) position.
30. Confirm that both **FUEL HEAT** switches are in the OFF (⬆) position.
31. Confirm that both ENG **START** switches are in the OFF (⬇) position, and the guards are in place.
32. Confirm that all 6 **FUEL PUMP** Boost switches are in the OFF (⬆) position.

PASSENGER SIGNS ..... SET

33. Move the **EMER LTS** switch to the ARM (⬇) position. Confirm that the `EMER LIGHT NOT ARMED` message on the EOAP extinguishes.
34. Move the **NO SMOK** switch to the ON (⬇) position. Verify that the notification chime is heard when the switch is moved.
35. Move the **SEAT BELT** switch to the ON (⬇) position. Verify that the notification chime is heard when the switch is moved.

ICE PROTECTION SYSTEM ..... CHECK then SET

36. Rotate the **METER SEL & HEAT** selector switch to each position. In every position (except RAT PROBE), check for a reading on the **HEATER CUR** gauge. Also confirm that the `PITOT/STALL HEAT OFF` message on the EOAP remains off in each selector position.
37. After the test, move the selector switch to CAPT. In this position, all pitot tubes are heated.
38. Confirm that the **AIR FOIL** Anti-Ice switch is in the OFF (⬆) position.
39. Confirm that the **WINDSHIELD ANTI-FOG** switch is in the OFF (⬆) position.
    Note: In rainy or humid weather, this switch should be turned ON; the anti-fog system is much better at preventing windshield fogging than clearing it. However, fogging is not modeled in FSX so you may position this switch as you like.
40. Move the **WINDSHIELD ANTI-ICE** switch to the ON (⬇) position.
41. Confirm both **L ENG** and **R ENG** Anti-Ice switches are in the OFF (⬆) position.

IRS / FMS ..... INITIATE

42. Rotate both **IRS MODE SELECT** switches to NAV. This begins the process of aligning the Inertial Reference System gyroscopes, which takes 10 minutes. During the time that the white **ALIGN** indicator is lighted, the aircraft must not be moved. When this indicator begins flashing, the alignment is complete.
    Note: To shorten the alignment time, select **IRS Fast Start & Realign** in the **Options** section of the **Super 80 Center**. Using this option makes the alignment almost instantaneous.

WARNING SYSTEMS ..... CHECK

43. Confirm that the **EFIS** selector is in the NORM (⬆) position.
44. Verify that the **ENG SYNC** switch is in the OFF (⬆) position.
45. Unguard the **GND PROX WARN** switch and move it downward to TEST. Verify that the aural alerts are heard — ***Whoop Whoop*** followed by ***Pull up*** and ***Glideslope***. Also confirm that `GPWS FAIL` appears on the EOAP. Verify that the switch returns to the NORM position and reguard the switch.
46. Confirm that the **CKT BKR LT, STBY COMP LT, THNDRSRM LT,** and the **CKPT FLOOD** switches are all in the OFF (⬆) position.
47. Verify that the **ANTI-SKID** switch is in the OFF (⬆) position.
48. Move the **STALL TEST** switch upward to SYS 1 momentarily, then release. This will test Stall Warning System #1. Confirm that the aural warning is heard – 3 buzzes, followed by the spoken alert ***Stall***.

49. Repeat the test and quickly open the Main Panel. Confirm that the flashing red **STALL** warning light on the glareshield illuminates, together with the steady yellow **STICK PUSHER - PUSH TO INHIBIT** light. Both lights extinguish after a few seconds.
50. Repeat for Stall Warning System #2 by moving the **STALL TEST** switch downward.
51. Move the **MAX SPD WARN TEST** switch upward to SYS 1 momentarily, then release. Verify that the audio clacker sounds, followed by the verbal warning ***Overspeed***.
52. Repeat for Overspeed Warning System #2 by moving the switch downward.
53. Move the **YAW DAMP** switch to the ON (⬇) position. Verify that the `YAW DAMP OFF` message on the EOAP extinguishes.
54. Verify that the **MACH TRIM COMP** switch is in the NORM (⬆) position.

AIR CONDITIONING AND PRESSURIZATION SYSTEMS..... CHECK

55. Move the **AIR CONDITIONING RECIRCULATION FAN** switch to the AUTO (⬇) position.
56. Move both **AIR CONDITIONING SUPPLY** switches to the AUTO (⬇) position.
57. Using the **TEMP SELECT** selector switch, check the cabin and the cockpit temperatures on the **CABIN TEMP** gauge.
58. Move the **CKPT TEMP** selector to the AUTO (⬆) position, or select COOL or HOT as necessary to correct the cockpit temperature.
59. Move the **CABIN TEMP** selector to the AUTO (⬆) position, or select COOL or HOT as necessary to correct the cabin temperature.
60. Move the **RADIO RACK** switch to the FAN (⬇) position.
61. Move the **AIR COND SHUTOFF** switch to the AUTO (⬇) position.
62. Confirm that the **RAM AIR** switch is in the OFF (⬆) position.
63. Verify that the Pressurization selector switch is in the PRIMARY (⬇) position.
64. Adjust the value in the **LDG ALT** window to match the departure field elevation. If the current barometric pressure is set, then the altimeters on the Main Panel should read the field elevation.
65. Set the **LDG BARO** to Current Altimeter Setting (or use the [B] shortcut).
66. Verify that the white index mark on the **RATE LIMIT** knob is directed straight up.

ANNUNCIATOR AND WARNING LIGHTS..... TEST

67. Push the **ANNUN/DIGITAL LTS TEST** button to test all annunciator and digital lights in the cockpit, along with the EOAP messages. Confirm that all lights and indicators on the Upper (Aft) Overhead Panel and Main Panel also illuminate properly.

LOWER PEDESTAL

TRANSPONDER..... SET

68. Enter the ATC-assigned Squawk Code.
69. Set the **TCAS RANGE** selector to the desired value for departure.
70. Move the TCAS Vertical Mode Switch to **ABOVE**.

AUTO BRAKE..... OFF and DISARM

71. Confirm that the **AUTO BRAKE** arming switch is in the DISARM (⬇) position.
72. Confirm that the **AUTO BRAKE** selector is in the OFF position.

PNEUMATICS..... SET

73. Move both Pneumatic X-Feed handles to the OPEN (⬆) position. When they are in the open position, the white handles will be adjacent to the PNEU X-FEED VALVE OPEN labels.

UPPER PEDESTAL

TAKEOFF CONFIGURATION WARNING SYSTEM..... TEST

74. Advance both throttles, checking for freedom of movement. Verify that the Takeoff Configuration warning sounds are heard. These may include ***Stabilizer***, ***Full-laps***, ***Slats***, and ***Brakes***, each separated by two beeps. Then close the throttles completely.
    Note: The [F3] and [F2] shortcuts may be used to increase and decrease the throttles, respectively.

STABILIZER TRIM..... CHECK, then SET

75. Move the **LONG TRIM** handle in both directions and verify that the white trim indicator moves in the same direction as the handle motion.
76. Enter the Takeoff Flap setting that you intend to use on the **FLAP** indicator.
77. Enter the Takeoff Center of Gravity (`TOW CG`) setting that you obtained from the Super 80 Pro Dispatch report in the **CG** indicator.
78. Confirm that the value shown in the **LONG TRIM** indicator window matches the `STAB` setting that was given in the Dispatch report, to within ±0.5 unit.
79. Entering the FLAP and CG values causes the green Trim Takeoff Position Indicator to move so that it indicates the correct position trim position. Use the Trim handle to align the white Trim Indicator with the green marker.

SPOILER LEVER..... RET

80. Confirm that the spoiler lever is in the RET (forward) position.

FLAP HANDLE/INDICATOR..... CHECK

81. Confirm that the Flaps/Slats handle is in the UP/RET position.
82. Verify that flaps and slats indicators on the Main Panel agree with the Flaps/Slats handle position.

WEATHER RADAR..... TEST then OFF

83. Move the Mode Selector switch to TEST. The radar screen should display its green, yellow, and red banded test pattern. Return the Mode Selector switch to OFF.

MAIN PANEL

FGCP LIGHTS AND INSTRUMENT BRIGHTNESS CONTROLS..... ON

84. Turn the knob on the EFIS Dimmer panel clockwise to increase the PFD brightness to the desired level.
85. Turn the knob on the EFIS Dimmer panel clockwise to increase the ND brightness to the desired level. At this point, before the FMS is initialized, the error message **MAP FAIL** is displayed on the ND.
86. Turn the knob on the TCAS display clockwise to increase its brightness to the desired level.
87. On the main instrument panel, verify that all no red flags or error messages are visible on any of the flight instruments (other than the ND).

FUEL QUANTITY..... TEST, CHECK, and RESET

88. Press the **FUEL USED RESET** button to reset the fuel used counters.
89. Rotate the **SET ZFW KNOB** to enter the aircraft's Zero Fuel Weight (from the Super 80 Dispatch report).
90. Push the Fuel Quantity Test button to test the Fuel Quantity Indication System. Verify that the 3 individual tank quantity indicators display **3000**, the total fuel quantity displays **9000**, and the Zero Fuel Weight displays a value equal to ZFW+9000.

TAKEOFF SPEEDS / SPEED BUGS..... SET

91. Click on the Airspeed Indicator to open the Speed Card. Select Takeoff Mode, then click on the weight value to increase/decrease it until the aircraft's Gross Weight is shown (rounded up). Click on the tab at the bottom that corresponds to the flap setting you will be using (and which you earlier entered into the Takeoff Condition Computer on the pedestal). This will display the important speeds for takeoff, and set the corresponding bugs on the Airspeed Indicator.

92. Verify that the correct bug speeds for the takeoff have been set. The 4 bugs should be set at …
    - V_1 – decision speed (stopping is no longer possible on the remaining runway)
    - V_2 – takeoff safety speed (minimum climb speed with one engine)
    - Flap retraction speed – the speed at which all flaps are retracted (slats remain extended)
    - Slat retraction speed – the speed at which slats are retracted

    Note: The Speed Card allows you to set a Flaps 11 or Flaps 15 takeoff. However, the Dispatch report only provides the CG setting for a Flaps 15 takeoff, so you must determine the proper CG value for a Flaps 11 takeoff.

LANDING GEAR ..... DOWN

93. Confirm that the gear handle is down and that all the 3 green landing gear lights are on.

ENGINE INSTRUMENTS ..... CHECK

94. Verify that all engine instruments readings are appropriate.

IRS / FMS ..... PROGRAM

95. By now, the IRS should be aligned. Initialize the system by entering the current position, either by entering the departure airport or by using the latitude/longitude. Once the initial position has been entered, the **MAP FAIL** indication on the ND when it is map mode disappears. The **ALIGN** lights on the Right Overhead Panel will also extinguish. Enter the route and remove all discontinuities. Then use the ND (in PLN mode) to check that the route is correct. If possible, you should use current charts to verify that the FMS entries for departure and arrival procedures, especially if they contain speed/altitude constraints. There are many free sources for these charts on the Internet. After the route has been checked, return the ND to MAP mode.

96. Open the **Dispatch** page in the **Super 80 Center**. Earlier, you should have set the **PAX & Cargo** load and the **Fuel** load, and pressed the **Update** button to actually load the aircraft. (If you have not done this yet, then do it now.) Click on the **FMS➡** button at the bottom of the Dispatch report to send the **GROSS WT**, **FUEL**, and **ZFW** values to the **PERF INIT** page of the FMS.

97. After the three weights have been transferred, then enter then **RESERVE** fuel amount, the **COST INDEX**, and the **CRZ ALT**. While on that page, make sure the **TRANS ALT** is correct for the departure airport. The other values on that page are optional.

FUEL QUANTITY ..... CHECK

98. Check that the Fuel Display shows the correct amount in each tank, and that amount of fuel in the main (wing) tanks does not differ significantly.

MAIN PANEL – FGCP

FLIGHT DIRECTOR ..... ON

99. Move the **FD** switch to the ON (⬆) position. Confirm that the small blue FD on the FMA is illuminated, and that boxes 3 and 4 of the FMA display **TRK OFF**.

AUTOTHROTTLE ..... OFF

100. Verify that the **AUTOTHROT** switch is in the OFF (⬇) position.

AUTO-PILOT ..... OFF

101. Verify that the **AP** switch is in the OFF (⬇) position.
102. Move the Autopilot selector to the side of the Pilot Flying. If the Captain will be the PF, move it to the **1** position. If the First Officer will be the PF, move it to the **2** position. Confirm that the small blue light on the right side of the FMA matches the choice that you made by showing either AP1 or AP2.

FLIGHT GUIDANCE CONTROL PANEL ..... SET

103. If manual VOR flying will be performed immediately following takeoff, enter the appropriate frequencies and courses in the **VHF NAV1** and **NAV2** radios.
104. Unless ATC or the expected departure procedure requires another value after takeoff, enter **250** in the **SPD SEL** window.
105. Enter the heading of the most likely departure runway in the **HDG** window.
106. Enter the initial altitude that was assigned by ATC in the **ALT** window.
107. Arm the altitude capture function by "pulling" the **ALT** knob (i.e. click on it with the mouse). Depending on your selected option, the 2nd FMA window should now show either **ALT** or the actual altitude.

MAIN PANEL – First Officer's Panel

HYDRAULIC PUMPS ..... SET

108. Move both **ENG** Pump switches to the OFF (⬇) position.
109. Move the **TRANS** Pump switch to the OFF (⬇) position.
110. Move the **AUX** Pump switch to the OFF (⊙) position.

This concludes the Normal Preflight Checklist.
Continue with the APU Start Checklist on the next page.

APU START

Use this procedure to start the APU either on the ground or in flight.

BATTERY ..... **ON**

1. On the Lower Overhead Panel, confirm that the **BATT** switch is in the ON (⬇) position.

APU DOORS ..... **AUTO**

2. Confirm that the APU **DOORS** switch is in the AUTO position (if the guard is closed, the switch is set).

APU AIR ..... **OFF**

3. Confirm that the APU **AIR** switch is in the OFF (⬆) position.

APU FIRE CONT ..... **NORM**

4. Confirm that the **APU FIRE CONT** switch is in the NORM (⬆) position.

START PUMP ..... **AS REQUIRED**

5. If AC electric power is available (External Power in use or at least one engine running), the **START PUMP** switch is left in the OFF (⬆) position. Otherwise, the **START PUMP** switch is turned ON – this is most common when the APU is started immediately after the battery is turned on.

FUEL BOOST PUMPS ..... **AS REQUIRED**

6. If AC electric power is available (External Power in use or at least one engine running), move the **RIGHT AFT FUEL PUMP** switch to the ON (⬇) position. The Start Pump and a Fuel Boost Pump are not required simultaneously; only one of them (usually a fuel pump) is needed to supply fuel to the APU.

APU MASTER ..... **START/RELEASE**

7. Move the APU **MASTER** switch to the START (⬇) position and release it. The spring-loaded switch will move back to RUN after it is released.
8. Verify that the APU EGT and RPM gauges start rising. At approx. 15% RPM, the EOAP message `APU OIL PRESS LOW` appears.
9. At approximately 95% RPM, confirm that the `APU OIL PRESS LOW` message disappears.

APU POWER ..... **CONNECTED**

10. When both the APU EGT and RPM gauges have stabilized, the blue **APU POWER AVAIL** button illuminates.
11. Move the **APU L BUS** and **APU R BUS** switches on either side of the indicator to the ON (⬇) position. The lights and gauges may flicker a bit. The small blue power-in-use lights adjacent to the switches will then illuminate to indicate the APU power is connected to the aircraft's systems.
12. If External Power had been in use, turn off both **EXT PWR L BUS** and **EXT PWR R BUS** switches. Click on the central **EXT PWR AVAIL** indicator (this simulates the ground crew disconnecting the External Power cables).

FUEL BOOST PUMPS ..... **AS REQUIRED**

13. If it is not already in use, move the **RIGHT AFT FUEL PUMP** switch to the ON (⬇) position to provide fuel to the APU. Alternately, the center tank fuel pumps may also be used for APU operation at the Captain's discretion, usually to keep wing fuel from becoming unbalanced due to lengthy APU use. Note: The **RIGHT AFT FUEL PUMP** switch remains ON, even while the center tank fuel pump switches are also turned on.

START PUMP ..... **OFF**

14. If the **START PUMP** was used to start the APU, move the **START PUMP** switch to the OFF (⬆) position.

APU AIR ..... **ON**

15. Move the APU **AIR** switch to the ON (⊙) position or COLDER (⬇) position.

PNEUMATIC PRESSURE ..... **CHECK**

16. Verify that the **PNEU PRESS** Gauge (to the right of the Fuel Heat switches) indicates at least 35 PSI.

PNEUMATIC X-FEED VALVES ..... **OPEN**

17. On the Lower Pedestal, move both Pneumatic X-FEED handles to the OPEN (up) position.

PUSHBACK

APU ..... **RUNNING**

1. If necessary, start the APU in anticipation of Engine Start. See the separate **APU START** checklist.
2. Once the APU is running and the APU bus switches have been switched on, disconnect External Power by clicking on the blue **EXT POWER AVAIL** button. (This simulates disconnecting the cables before moving.)

DOORS / AIRSTAIRS / JETWAY ..... **CLOSED / RETRACTED**

3. Verify that all **DOOR** annunciator lights and EOAP messages are off.
   Note: The annunciator panel only shows the state of the front left door. When the rear ventral stairs and/or the airstairs at the front door are in use, the panel does not give this information.
4. Retract the airstairs or jetway.

CLEARANCE TO PUSHBACK AND START ENGINES ..... **OBTAINED**

5. If you are using ATC at a controlled airport, get clearance to push back and start engines.

ANTI-COLLISION BEACON / EXTERIOR LIGHTS ..... **ON / AS REQUIRED**

6. Move the **ANTI-COLLISION** light switch to the ON (⬇) position.
7. Verify that the **POS/STROBE** light switch is in the BOTH (⬇) position.

PUSHBACK ..... **INITIATE**

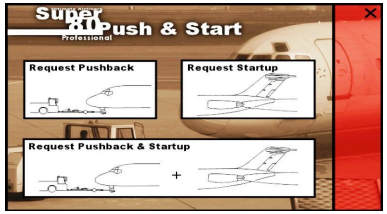
8. Use the hotspot (to the right of the TCAS gauge) to contact ground personnel. Request Pushback, Engine Start, or both. Follow the instructions given. See Note 2 below.

PARKING BRAKE ..... **SET**

9. Set the Parking Brake (shortcut [CTRL] + [.]).

Note 1: While "powerbacks" (engine-powered pushbacks) were once common, most airlines have banned them.

Note 2: The Pushback hotspot (between the TCAS and the FMS, as shown in the diagram on the left) provides the option to Pushback and/or Start Engines (diagram on the right). It works whether or not a pushback truck is visible in front of the aircraft.



The pushback causes a 80 second timed pushback, during which the aircraft moves approximately 150 ft (45 m). Turns may be accomplished during the pushback by using the MSFS default keystrokes.

- Pressing [1]* turns the nosewheel to the left, which causes a nose right/tail left turn.
- Pressing [2]* turns the nosewheel to the right, which causes a nose left/tail right turn.

If the default pushback distance is not enough, the MSFS default keystrokes ([SHIFT] + [P], along with [1] or [2]) may be used to move the aircraft further and to turn in either direction.

*In this situation, only the [1] and [2] keys that are located above the [Q] and [W] keys will work.

ENGINE START

GALLEY POWER ..... **OFF**

1. Move the Galley Power switch to the OFF (⬆) position.

AIR CONDITIONING SUPPLY SWITCHES ..... **OFF**

2. Move both Air Conditioning **SUPPLY** switches to the OFF (⬆) position.

ENGINE IGNITION ..... **SET**

3. Move the Engine Ignition switch to the GND START & CONTIN (⬇) position.

FUEL PUMPS ..... **ON**

4. Turn on both fuel pumps for all tanks that contain usable fuel. (This will involve 4 switches if the Center tanks are empty, or 6 switches if the Center tanks contain fuel.)

HYDRAULIC PUMPS ..... **SET**

5. Move both **ENG** Hydraulic Pump switches to the LOW (⊙) position.
6. Move the **AUX** Hydraulic Pump switch to the ON (⬆) position.

PNEUMATIC PRESSURE SOURCE ..... **ESTABLISHED**

A source of pneumatic pressure is required to start an engine. At the gate, with neither engine running, this will be the APU. Once one engine is running, it can provide bleed air to start the other engine. (Crossbleed air is also used after performing a one-engine taxi, or if an engine has been shut down during an extended delay.)

7. For a start using bleed air from the APU, the following procedure is used:
   - Start the APU if necessary (refer to the **APU START** checklist).
   - Move the APU **AIR** switch to the ON (⊙) position.
   - The Pneumatic X-Feed handle for the engine you are about to start must be in the OPEN (⬆) position. Both handles may be open if you prefer.
   - Check the **PNEU PRESS** gauge (to the left of the **ENG START** switches on the Lower Overhead Panel). Optimum starting pressure is 30 - 38 psi. The gauge is just to the left of the ENG START switches.
8. For a start using crossbleed air from a running engine, the following procedure is used:
   - Both Pneumatic X-Feed handles must be in the OPEN (⬆) position.
   - Check the **PNEU PRESS** gauge (to the left of the **ENG START** switches on the Lower Overhead Panel.) Optimum starting pressure is 30 - 38 psi.

LEFT ENGINE START

9. Open the guard to the **L ENG START** switch and move the switch to the GND (⬇) position.
10. Verify that the `L START VALVE OPEN` message appears on the EOAP.
11. Verify that the **PNEU PRESS** gauge remains above 25 psi. If the pneumatic pressure drops below 25 psi, be alert for a hung or hot start (not modeled in the Super 80 Pro).
12. Check for increasing oil pressure, increasing N_2, increasing N_1, and increasing hydraulic pressure.
13. At maximum motoring (~20% N_2), the First Officer will call ***20 percent***. At that time, move the left Fuel Lever (under the throttle handle) upward to ON.
14. Monitor the values of N_1, EGT, N_2 and Fuel Flow.

15. At 40% N_2, reguard the **L ENG START** switch.
16. Verify that N_2 stabilizes at about 50% - 60%.
17. When the engine has stabilized at idle RPM, confirm that the following has occurred:
    - The blue **APU L BUS** power-in-use light is off.
    - The `L&R OIL PRESS LOW` EOAP message has changed to `L OIL PRESS LOW`.
    - The `L&R HYD PRESS LOW` EOAP message has changed to `L HYD PRESS LOW`.
    - The digital EGT readout for Engine #1 should indicate 300 °C – 480 °C. (This temp is always in °C, no matter what units are specified in the FSX menu.)
    - The digital Fuel Flow readout for Engine #1 should indicate 800 – 1100 lbs/hr.

RIGHT ENGINE START

Repeat Steps 9 through 17 for the Right Engine. After the start, the low pressure EOAP messages should have disappeared.

AFTER ENGINE START

GALLEY POWER ..... **ON**

18. Move the Galley Power switch to the ON (⬇) position.

AIR CONDITIONING SUPPLY SWITCHES ..... **AUTO**

19. Move both Air Conditioning **SUPPLY** switches to the AUTO (⬇) position.

ENGINE ANTI-ICE ..... **AS REQUIRED**

20. If the outside temperature is below freezing, move the **L** and **R ENG** Anti-Ice switches to the ON (⬇) position.

PNEUMATIC SYSTEM ..... **AS REQUIRED**

21. Close both **PNEU X-FEED VALVE** levers, except when wing anti-ice is in use.

HYDRAULIC PUMPS ..... **CHECKED and HI / ON**

22. Move both **ENG HYD PUMP** switches to the HI (⬆) position.
23. Move the **TRANS** pump switch to the ON (⬆) position so that both hydraulic systems are powered in the event of an engine or pump failure.
24. Confirm that the **AUX** hydraulic pump switch is in the HI (⬆) position.

TAXI / BEFORE TAKEOFF

This checklist is normally performed while the aircraft is taxiing, although it can be performed while waiting for the taxiway to clear of other aircraft or vehicles. It is assumed that two-engine taxi is the standard procedure, although one-engine taxi may be used when a delay or extended taxi is expected.

ATC CLEARANCE ..... OBTAIN

1. At a controlled airport, obtain clearance to taxi to the active runway.

NOSE GEAR LIGHTS ..... BRIGHT

2. Move the **NOSE LTS** switch to the BRT (⬇) position just prior to movement to indicate the aircraft is about to move. During taxi, be alert for situations in which your lights might blind oncoming pilots.

APU ..... AS REQUIRED

3. Unless one-engine taxi is planned or extra bleed air for cabin cooling is required, shut down the APU.
   - Move the APU **AIR** switch to the OFF (⬆) position.
   - Verify that the APU **DOORS** switch is guarded; this ensures that the switch in the AUTO position.
   - Move the APU **MASTER** switch to the OFF (⬆) position.
   - When the APU PWR AVAIL light extinguishes, turn off both APU BUS switches.

FLAPS AND SLATS ..... TAKEOFF

4. Set flaps for takeoff according to the Dispatch report, or as desired.
5. Confirm that the slats are in the takeoff position by observing the **TO** light. The diagram on the right shows the most typical takeoff configuration: flaps 15°, and extended slats.

TRANSPONDER ..... AS REQUIRED

6. Confirm that the Transponder Function selector is in the STBY position.
   Note: An increasing number of airports are employing ASDE-X, or similar systems, that employ transponders for ground control. This requires the transponder to be in TA/RA mode.

ANTI-SKID ..... ARM

7. After the pushback tug has disconnected and you are away from the gate area, move the **ANTI-SKID** switch to the ARM (⬇) position.

FLIGHT CONTROLS ..... CHECKED

8. To begin movement, use the minimum amount of thrust required. Once the aircraft has gained some momentum, it may be possible to reduce thrust.
9. Slowly move the rudder pedals, control wheel and control column to their extreme positions, checking for freedom of movement and normal control forces.
10. Verify that the `SPOILER DEPLOYED` EOAP message appears during the aileron check, then disappears.
11. Verify that the blue **ELEVATOR PWR ON** light comes on when the control column is moved fully forward, then extinguishes when it is pulled back to neutral.

FLIGHT GUIDANCE SYSTEM ..... T/O MODE

12. Press the **TO/GA** button. Confirm that the pitch and roll FMA windows (boxes 3 and 4) display `TRK OFF`.
13. Verify that the FD command bars in the PFD are wings-level at or near the horizon line.

FLT INSTRUMENTS & BUGS ..... SET AND CHECKED

14. Confirm that the bugs are set correctly on the airspeed indicator. Review the important speeds.
15. Confirm that there are no visible flags on the PFD, ND, RDMI, or any other instrument.
16. Confirm that the Radio Altimeter reads zero.
17. With the current barometric pressure set, confirm that the altimeters read field altitude.
18. Crosscheck the Standby Altimeter with the primary altimeter.
19. Confirm that the **ART** switch is in the AUTO (guarded) position.

AIRFOIL ANTI-ICE ..... OFF

20. Confirm both **AIR FOIL** Anti-Ice switches are in the OFF (⬆) position. If icing conditions exist or are anticipated, these switches can be turned on again after reaching 1000 feet AGL.

STAB TRIM ..... CHECK

21. Verify that the position of the white LONG TRIM Indicator against the green LONG TRIM TAKEOFF Position Indicator. They should be aligned.

ENGINE ..... START

22. If one engine has not yet been started, do it early enough so that it is ready when the aircraft reaches the takeoff runway. Follow the procedure outlined in the **ENGINE START** checklist.

AUTO BRAKE ..... SET and ARMED

23. Move the **AUTO BRAKE** Selector to T.O.
24. Move the **AUTO BRAKE ARM/DISARM** switch to ARM.

SPOILER LEVER ..... ARMED

25. Arm the spoiler lever (forward raised position). The MSFS shortcut is SHIFT + /, or open the Upper Pedestal and right-click on the lever. It will move forward slightly.

CABIN ..... NOTIFIED

26. At least one minute to assuming takeoff position, notify the flight attendants by PA or chime.

ANNUNCIATOR LIGHTS ..... CHECKED

27. Verify that the blue **RUDDER TRAVEL UNRESTRICTED** advisory light is on.
28. Verify that no other amber warning lights are on, and that the **CAUTION** and **WARNING** lights are off on the Main Panel. Press each button if necessary to clear it.

POSITION ..... UPDATED

29. If the takeoff runway threshold is a long distance from the gate, the aircraft's position should be updated to make navigation more precise. To do so, select `INIT REF`, then `<INDEX`, then `TAKEOFF>`, and finally `RWY UPDATES>`. Then click on the **LEGS** button to prepare the FMS for takeoff.
30. At a controlled airport, wait at the designated holding line until ATC gives permission to enter the runway.

NORMAL (FULL POWER) TAKEOFF / INITIAL CLIMB

The yellowish background coloring is a reminder that the next 2 pages are *procedures*, not checklists. Therefore, you may feel free to alter them as you feel appropriate.

ON THE RUNWAY

In Flight Simulator, you are doing the work of two pilots. Take your time and make sure you do everything correctly, even if it means an approaching aircraft must execute a go-around.

1. Once ATC has given permission to enter the runway, visually check the approach path for landing aircraft, then taxi onto the runway and align the aircraft with the centerline.

2. Verify that the compass heading against the published runway heading. Refine the HDG value if necessary.

3. When takeoff clearance is received from ATC…
   - Move the **WING LDG LTS** switch to the EXT ON (🡻) position to turn on the wingtip landing lights.
   - Move the Transponder switch to TA/RA and confirm that the **ABOVE/NORM/BELOW** switch is in the ABOVE (🡹) position.

4. Press the **TOGA** button to activate TO/GA mode if it is not already active. Confirm that **TAK OFF** is displayed in the 3rd and 4th boxes on the FMA.

5. Slowly advance the throttles to 1.4 EPR while monitoring the engine instruments for normal and symmetric increases in the gauges.

6. If the autothrottle is be used for takeoff (recommended), move the switch to the AUTO THROT (🡹) position. Verify that **EPR T/O** appears in box 1 of the FMA, and that it changes to **CLMP** as the speed passes 60 KIAS.

7. Continue to monitor and crosscheck all engine instruments during the takeoff roll. This is especially important in icing conditions.

8. Throughout the takeoff roll, the Automatic Reserve Thrust system monitors the performance of both engines. A green **READY** light is shown directly below the ART control switch to indicate the system is ready to activate in the event of an engine failure, as shown on the right.

   If one engine were to actually fail, the **READY** light would extinguish and the amber **ART** light beneath it would illuminate to indicate the Automatic Reserve Thrust System had activated. (This function is not modeled in the Super 80 Pro.)

9. Unless deactivated in the **Super 80 Center** Options, the First Office will make callouts at ***80 knots***, ***V_1***, and ***Rotate***. Remember that the first two bug speeds on the airspeed indicator are at V_1 and V_R.

10. When the ***Rotate*** callout is heard, slowly and steadily pull back on the control column to raise the nose until it is at an angle of approximately 8°. Follow the FD bars on the PFD.

11. The ***V_2*** and ***V_2 plus 10*** callouts should be heard as the aircraft continues to accelerate.

12. When the aircraft has established a positive rate of climb (and the FO makes that call), select Gear Up. Gear retraction takes several seconds, so continue flying the aircraft.

INITIAL CLIMB (BELOW 800 ft AGL)

13. Verify that the gear has been properly retracted by observing that all three gear lights are off. The FO callout ***Gear Up and Locked*** should be heard.

14. Trim the aircraft so that it maintains an airspeed of V_2 + 10 knots without elevator input. A heavy aircraft may require an airspeed greater than V_2 + 10 knots to keep the pitch angle below 20°.

15. If ATC assigned an initial heading, turn to it when it is safely possible or at the assigned turn altitude.

16. The Autopilot may be turned on after you pass through 200 ft AGL.

17. NAV mode may be engaged after you pass through 400 ft AGL.

18. If you are manually flying a published departure procedure that requires an early turn, follow the FD command bars on the PFD. Keep the banking of any turns less than 15° until you reach V_{Clean}. If a lot of low-speed, low-altitude maneuvering is expected, set the Bank Angle Limiter to 15°.

800 ft – 3000 ft

19. Approaching the acceleration height, note the vertical speed. Then push the control column forward or retrim the aircraft to reduce the pitch angle and decrease the vertical speed to ½ of its current value. This will allow the aircraft to accelerate to flap retraction speed.

20. At the flap retraction speed — the 1st bug beyond V_2 — retract the flaps. If the flaps were initially set at 15º, this requires *two* presses of the flaps up button/key. The FO call will be ***Slats, Takeoff Position*** which is a reminder that the slats are still extended.

21. Select **CL** mode on the TRP for climb power, and continue to the slat retraction speed.
    Note: VNAV may be used at any time after **CL** mode is engaged, although its use is usually postponed until after slat retraction.

22. At the slat retraction speed — the 2nd bug beyond V_2 — retract the slats. The FO call will be ***Flaps Up and Retracted***.

23. Continue accelerating to V_{Clean} and maintain at least that speed through 3000 feet, unless departure procedure dictates a lower speed. The airspeed should *never* drop below V_{Clean} without slats extended.

24. If VNAV is to be used, it can be engaged after all flaps and slats have been retracted and **CL** mode has been selected on the TRP. Confirm on the FMA that VNAV has engaged correctly.

25. If it was reduced earlier, increase the Bank Angle Limit Selector to 30°.

26. If icing conditions exist, move both **AIR FOIL** Anti-Ice switches to the ON (🡻) position.

ABOVE 3000 ft

27. Unless restricted by the departure procedure, accelerate to 250 KIAS. This may require a reduced pitch angle if the aircraft is heavily loaded. Maintain a vertical speed of 500 – 1000 fpm during acceleration.

28. Make sure the gear, flaps and slats are up and stowed. Turn off the **NOSE LTS** switch (the nosegear lights turn off automatically when the nose gear is raised.)

29. Check the Annunciator Panel to make sure there are no advisory messages. The blue RUDDER TRAVEL UNRESTRICTED light should have extinguished as you passed through 200 KIAS.

30. The next major event is passing through 10,000 ft or the local Transition Altitude, whichever occurs first.

CLIMB

The Climb checklist is performed after the aircraft has been cleaned up (gear, flaps and slats up/retracted) and when workload permits. Fly the airplane first, and follow all ATC instructions.

LANDING GEAR .....UP / NO LIGHTS

1. Verify that the gear has been properly retracted by observing that all three gear lights are off.

SPOILERS .....DISARMED

2. Disarm the spoilers.

AUTOBRAKES .....OFF and DISARMED

3. Move the **AUTO BRAKE** Selector to OFF, and the arming switch to DISARM.

FLAPS AND SLATS.....UP / NO LIGHTS

4. Verify that the Flaps Lever is in the UP/RET position, and that the Flaps Indicator agrees.
5. Verify that all lights are off on the Slats Advisory Lights panel.

PRESSURIZATION AND AIR CONDITIONING SYSTEMS..... CHECKED

6. Verify that the Cabin Altitude indicator is indicating normally (altitude is rising).
7. Verify that the Differential Pressure indicator is indicating normal values. Beware of excessive cabin differential pressure. The maximum allowed cabin differential pressure is 8.32 psi.
8. Check the Cabin Vertical Speed indicator. It should indicate a climb of less than 500 fpm. Higher climb rates may cause discomfort or even ear injuries among the passengers.
9. If necessary, adjust the cabin climb rate with the Rate Limit Control knob.
10. Check the Air Conditioning gauges. Check pressure and temperature.

ASCENDING THROUGH 10,000 ft

Note: This often occurs *after* the Transition Level is reached (next section), especially outside North America.

LANDING LIGHTS ..... OFF

11. Move the **WING LDG LTS** switch to the OFF (⬆) position.

STERILE COCKPIT..... CABIN CHIME

12. Press the **ATTENDANT CALL** button as a signal to the Flight Attendants that the cockpit is not longer sterile, and that passengers may use approved electronics. (The **SEAT BELT** sign should remain on.)

ENGINE IGNITION ..... AS REQUIRED

13. Move the **ENG IGN** switch to the OFF (⊙) position. When flying through thick clouds, heavy precipitation or turbulence, keep the switch in the GND START & CONTIN (⬇) position.

FUEL SYSTEM ..... CHECKED

14. Check the Fuel Quantity gauges, Fuel Flow gauges and fuel pump switches to verify proper engine fuel feed.

AIRSPEED ..... INCREASE

15. Unless restricted by ATC, there is no airspeed limit above 10,000 ft. Lower the nose slightly to accelerate to the recommended climb speed. This ECON SPD can be found by pressing the CLB button on the FMS. If using NAV, verify that the orange indicator on the airspeed indicator moves to this value.

HYDRAULIC PUMPS ..... LOW / OFF

16. Move both **ENG** Hydraulic Pump switches to the LOW (⊙) position.
17. Move the **TRANS** Hydraulic Pump switch to the OFF (⬇) position.
18. Move the **AUX** Pump switch to the OFF (⊙) position.

FLIGHT CONTROLS .....CHECK

19. On the Annunciator Panel, verify that the blue RUDDER TRAVEL UNRESTRICTED light is off.

ASCENDING THROUGH FL180 (or local Transition Level)

ALTIMETERS.....RESET and CROSSCHECKED

20. In the North America the altimeters should be set to 29.92'' above 18,000. Elsewhere, the altimeters are reset at the specified Transition Altitude obtained from charts or ATC; the standard barometer setting in most other locations is 1013 mb.

APPROACHING CRUISE LEVEL

AUTOPILOT..... SELECT MODE

21. Select the appropriate mode, either VNAV or Speed/Altitude control.

SPEED / ALTITUDE .....MONITOR

21. Monitor and adjust as necessary.

TRI MODE.....CHECK

22. Confirm that the TRI mode changes to CRZ. If it doesn't change automatically, press the **CRZ** button.

TRANSPONDER.....NORM

23. Move the **ABOVE/NORM/BELOW** switch to the NORM (⊙) position.

FUEL HEAT ..... AS REQUIRED

24. For the remainder of the flight, monitor the digital **FUEL TEMPERATURE** readouts. If they display 32 °F or less, move the **L** and **R FUEL HEAT** switches to the ON (⬇) position. The spring-loaded switches will return to OFF when released. The heat is applied for 60 seconds at a time. While it is on, the pink L FUEL HEAT ON and R FUEL HEAT ON advisories appear on the EOAP.

CRUISE

SEAT BELT LIGHTS ..... **OFF**

1. Upon reaching the cruise altitude and cruise speed, move the **SEAT BELT** switch to the OFF (⬆) position. Delay this action if turbulence would make it unsafe for passengers to be out of their seats.

ENG SYNC ..... **ON**

2. On the Lower Overhead Panel, move the **ENG SYNC** selector to N1.
   Note: While the Autothrottle is on, the engines are automatically synchronized.

FLIGHT INSTRUMENTS ..... **MONITOR**

3. Monitor engine instruments regularly.
4. Monitor the Fuel Panel. If the center tanks are used, turn those Fuel Pump switches off when that fuel is exhausted. The **CAUTION** light will illuminate when those tanks are empty.
5. At least every 30 minutes, the actual fuel burn should be compared to the predicted fuel burn. Also monitor the Reserve fuel. If there are problems with either of these, then consider possible causes (fuel leak, stronger-than-predicted winds, etc.).

FLIGHT CONDITIONS ..... **MONITOR**

6. If turbulence is encountered that would make it unsafe for passengers to move around the cabin, turn the Seat Belt lights on for the duration of that turbulence. Do not turn them off until 10 minutes have elapsed since the last major "bump".

DESTINATION ..... **MONITOR WX CONDITIONS**

7. During the cruise, periodically check the weather conditions at the destination. If conditions are poor, or if they are borderline and worsening, the weather at the alternate(s) should also be checked. If necessary, begin planning an alternate route in the FMS.
8. Once the destination has been selected, review the likely approach(es) and runway(s) that may be used.

APPROACHING TOP OF DESCENT POINT

DESCENT TRANSITION LEVEL ..... **ENTERED**

9. If the Transition Level for the descent is different than the one that was used during the climb, enter the new value in the FMS. The appropriate FMS page is reached by selecting INIT REF, then PERF.

APPROACHES ..... **REVIEW**

10. Organize the charts for the expected STAR and runway approach. Also find the charts for other STARs and/or approaches that ATC may assign.
11. Enter as much arrival data into the FMS as possible. If the arrival and approach has already been programmed, confirm each waypoint and any speed/altitude restrictions.
12. Enter the frequency and course for the likely runway into NAV1 and NAV2. This information is provided by the FMS once the landing runway has been selected.

LANDING DATA ..... **PREPARED**

13. Prepare the speed bugs on the Airspeed Indicator:
    - Open the Speed Cards.
    - Select the Maneuvering Page.
    - Set the aircraft landing weight (rounded up).
    - Click on LND 28 or LND 40 at the bottom of the card to set the approach/landing speed bugs.

PRESSURIZATION ..... **SET and CHECKED**

14. On the pressurization panel, enter the destination's field elevation in the cabin LDG ALT window.
15. Enter the barometric pressure at the destination (as reported by ATC) in the LDG BARO window.

CABIN ..... **NOTIFIED**

16. Approximately 5 minutes before the descent begins, notify the Flight Attendants and passengers.

DESCENT

INITIAL DESCENT

DESCENT MODE and SPEED ..... **AS DESIRED**

1. For VNAV descent, decrease FGCP altitude. At the T/D point, the engines will throttle back to idle and the descent will commence. Continue to decrease the FGCP altitude throughout the descent as needed.
2. For a non-VNAV descent, slow to descent speed and select the descent mode (VS or IAS/Mach).

ENG SYNC ..... **OFF**

3. Move the **ENG SYNC** selector to OFF.

TRANSPONDER ..... **BELOW**

4. Move the **ABOVE/NORM/BELOW** selector to the BELOW (⬇) position.

ENGINE IGNITION ..... **CONTIN**

5. Move the **ENG IGN** switch to the GND START & CONTIN (⬇) position.

PRESSURIZATION ..... **SET and CHECKED**

6. Verify that the **CABIN CLIMB** gauge indicates a descent. The gauge should read less than –500 fpm for passenger comfort.
7. Verify from the **CABIN DIFFERENTIAL PRESSURE** gauge that the Cabin Differential Pressure is decreasing.

ENGINE and AIRFOIL ANTI-ICE ..... **AS REQUIRED**

8. If icing conditions are anticipated, turn on Engine and Airfoil Anti-Ice. Note that the use of Anti-Ice causes a slight decrease in available thrust.

WINDSHIELD ANTI-ICE ..... **ON**

9. Confirm that the **WINDSHIELD ANTI-ICE** switch is still in the ON (⬇) position.

SEAT BELT SIGNS ..... **ON**

10. Before reaching FL200, move the **SEAT BELT** switch to the ON (⬇) position.

DESCENDING THROUGH FL180 (or local Transition Level)

Note: This often occurs after the next section (Descending Through 10,000 ft)

ALTIMETERS ..... **RESET and CROSSCHECKED**

11. Reset altimeters to the ATC-supplied local barometric pressure.
12. Crosscheck the primary and secondary altimeters.

HYDRAULIC PANEL ..... **HI / ON / CHECKED**

13. Move both **ENG** Hydraulic Pump switches to the HI (⬆) position, and monitor the **HYDRAULIC PRESS** gauges.
14. When both gauges have stabilized at approximately 29 (*i.e.* 2900 psi), move the **TRANS** pump switch to the ON (⬆) position.
15. Move the **AUX** pump switch to the ON (⬆) position.
16. Check the Hydraulic Quantity gauges. Both gauges should read **18** quarts.
17. Check the **BRAKE PRESS** gauge. Both needles should be high in the green band, at or near **3** (3000 psi).

DESCENDING THROUGH 10,000 FT

SPEED LIMIT ..... OBSERVE

18. In most parts of the world, the speed limit below 10,000 ft is 250 KIAS. It may be even less in some areas or when you use certain STARs.

STERILE COCKPIT..... CABIN CHIME

19. Press the **ATTENDANT CALL** button once to notify the FA's that passengers must put away electronics and that the cockpit is now sterile.

LANDING LIGHTS ..... ON

20. Turn on the landing lights by moving the **WING LDG LTS** switch to the EXT ON (⬇) position. As the lights lower into the airstream, the drag will increase slightly.

RADIOS ..... SET FOR ILS/LOC APPROACH

21. Once the runway has been finalized, check the localizer frequency on the NAV 1 radio (also NAV 2 if you intend to use autoland). Then check the localizer course in the **CRS** window for both radios. Be prepared to change these values if the winds change, or ATC assigns a different approach or runway!

22. On the Captain's Side Panel, turn on the NAV1 radio to be able to hear the Morse Code identifier for the appropriate runway. Once the runway has been positively identified, the NAV1 radio may be turned off again.

DECISION HEIGHT ..... SET

23. Set the appropriate Decision Height value on the Radio Altimeter. As the adjustment knob is tuned, the DH value is shown in the upper right corner of the PFD.

APPROACH

This checklist should be performed and completed before passing over the outer marker or final approach fix. Final flap extension may occur past the outer marker as per schedule.

ALTIMETERS..... SET and CROSSCHECKED

1. Once below local Transition Level, continually set and crosscheck both altimeters.

FLIGHT INSTRUMENTS ..... CHECKED

2. Verify that none of the flight instruments have any flags visible. Crosscheck all standby flight instruments against the primary flight instruments.

SPEED BUGS..... CHECKED

3. Verify that the correct weight is entered in the Speed Card, and that the speed bugs have been set for a Flaps 28/Flaps 40 landing, whichever you prefer. Familiarize yourself with the bug speeds.

   First (highest) bug ..... Slat extension speed
   Second bug..... Flaps 11 extension speed
   Third bug..... Flaps 28 extension speed
   Final (lowest) bug ..... V_{REF}

   The optimal Landing Speed is calculated using this formula:
   Landing Speed = V_{REF} + Wind Correction†
   †Wind Correction = ½ (Steady Wind) + Gust Factor [Max. Wind Correction is 20 kts]
   Note: The Landing Speed can be indicated by the orange speed bug, which is adjusted manually using the hotspot at the top of the Airspeed Indicator.

SLATS and FLAPS..... EXTEND

4. Extend the slats at the flaps and slats on schedule. Monitor the **FLAPS** and **SLATS** panels to make sure they show the same settings as the flap handle.

SPOILER LEVER..... ARMED

5. Arm the Spoiler lever (forward raised position). Go to the Upper Pedestal and right-click on the Spoiler lever to arm it – you should see it move upward slightly. Or you may use the shortcut: SHIFT + 7.

AUTO BRAKES ..... SET and ARMED

6. Move the **AUTO BRAKE** selector to the appropriate setting. MIN is used for normal braking, MED and MAX for short and/or slick runways.

7. Move the **AUTO BRAKE** Arming switch to ARM.

INSTRUMENT APPROACH (ILS or LOC)..... INTERCEPT BEAM

8. As you approach the localizer beam from the left or right, the localizer needle will become active and the FO will make the call ***Localizer Captured***. As you near the center of the beam, the aircraft will turn onto it. Confirm that the FMA indicates this as well.

9. As you approach the glideslope from below, the glideslope needle will activate and the FO will make the call ***Glideslope Captured***. As you reach the glideslope, the aircraft will begin a descent (700 – 1000 fpm). Confirm that the FMA indicates this as well.

FINAL APPROACH

This checklist should be performed and completed when established on final approach (5 – 8 miles from touchdown).

AUTOLAND ..... AS DESIRED

1. If a fully-automatic landing is to be performed, press the **AUTOLAND** button.

GEAR..... DOWN, 3 GREEN

2. Select Gear Down. Verify that the gear is down and locked by observing three green gear lights. The First Officer should also call ***Gear Down and Locked***.
3. When the gear is fully extended, move the **NOSE LTS** switch to the BRT (⬇) position to turn on the nosegear lights.

ANNUNCIATOR LIGHTS ..... CHECKED

4. Verify that no messages appear on the EOAP or annunciator lights are illuminated.

MISSED APPROACH PROCEDURE..... REVIEWED

5. Once the localizer and glideslope have been intercepted, prepare for a Missed Approach. Set the initial MAP heading in the HDG window, and the Hold altitude in the ALT window. If the published MAP is shown on the ND, make sure the range is appropriate to see the holding point.

AUTOMATIC SYSTEMS ..... AS REQUIRED

6. For a full Autoland, leave the autothrottle and autopilot ON throughout the landing.
7. For a normal landing, turn off the autothrottle and autopilot before landing. It is common to do this while passing through the DH, although you may turn off either system earlier.

RADIO ALTIMETER..... ACTIVE

8. At 2500 ft AGL, the Radio Altimeter activates. It provides more accurate altitude information than the barometric altimeters, although it fluctuates a great deal over hilly ground.

DECISION HEIGHT..... MONITOR

9. At 1000 ft AGL, the Decision Height annunciator will activate.
10. The verbal warning ***Approaching Minimums*** is heard when 50 ft above the DH.
11. At the DH, the verbal message ***Minimums, Minimums*** is heard. The decision must be made then whether to continue the approach or whether to abandon it and execute a Missed Approach.

BANK ANGLE..... AS REQUIRED

12. If a lot of maneuvering is expected at low speed, set the Bank Angle Limiter to 15°.

AUTOLAND ..... MONITOR

13. When executing an Autoland approach, constantly monitor the FMA and the PFD.

LANDING / ROLLOUT

SPOILER AUTO-DEPLOY ..... CONFIRMED

1. Upon touchdown, verify that the Spoiler has automatically deployed. Deploy it manually if necessary. (The MSFS default key is [/].)
2. Lower the nose wheel gently to the runway.

REVERSE THRUST ..... APPLY AS NEEDED / CONFIRM BALANCED THRUST

3. Apply Reverse Thrust (FS shortcut: [F2]). Initially the setting is Reverse Idle, which provides minimum braking effect. Since reversing is more effective at higher airspeeds, use of thrust reverse should be initiated as soon as the nose gear is on the runway.
4. Verify that both red **REVERSER DEPLOYED** lights come on when reverse thrust is initially applied. If one indicator remains unlit, use extreme caution when applying unbalanced reverse thrust.
5. If more braking action is needed, apply more reverse thrust (by holding down the [F2] key).
6. Confirm that both blue **REVERSER THRUST** lights come on.

SLOWING THROUGH 60 KIAS..... CANCEL REVERSE THRUST / AUTOBRAKES

7. At 60 knots the First Officer will make the callout ***60 knots, manual braking***. Cancel reverse thrust (shortcut: [F1]). Verify that both blue and both red lights extinguish.
8. The ABS system should apply the autobrakes automatically to continue slowing the aircraft. Confirm that the yellow ABS light illuminates on the left panel.

SLOWING TO TAXI SPEED..... EXIT RUNWAY

9. Upon reaching taxi speed (30 knots for a high-speed turnoff, 15 knots for a right-angle turn), cancel the ABS by touching the brakes.
   Note: The yellow ABS light will remain illuminated.
10. Turn off the autothrottle (this occurs automatically during an autoland).
11. Turn off the autopilot.
12. Press the flashing red THROTTLE and AP lights in the FMA panel.
13. Move the **AUTO BRAKE** selector to the OFF position.
14. Move the **AUTO BRAKE** arming switch to the DISARM position. Confirm that the yellow ABS light on the left side of the main panel extinguishes.
15. When clear of the runway holding line, contact ATC for taxi clearance.

TAXI IN

These items are accomplished after the aircraft is clear of the runway.

TAXI CLEARANCE ..... OBTAINED

1. At a controlled airport, remain at the runway hold line until cleared to the gate by ATC.

LANDING LIGHTS ..... OFF

2. Move the **WING LDG LTS** switch to the RET (⬆) position to turn off the landing lights.
3. The Nosegear lights may be left on during the taxi in, remembering not to blind other pilots.

SPOILERS and SLATS/FLAPS ..... RETRACTED

4. Move the Spoiler Lever to RET.
5. Move the Flaps Handle to the UP/RET position.

RADAR ..... OFF

6. Move the Mode Selector to the OFF position.

TRANSPONDER ..... STANDBY

7. Move the Transponder Function Selector to the STBY position, unless ASDE-X is in use at the destination airport.

FD SWITCHES ..... OFF

8. Move the Flight Director switch to the OFF (⬆) position.

BRAKE PRESSURE ..... MONITOR

9. Check the **BRAKE PRESS** gauge. Both needles should indicate within the green band. Without sufficient pressure, braking action may be compromised.

APU ..... AS REQUIRED

10. If the APU is going to be used for power while parked at the gate, it may be started during the taxi in. Refer to the **APU START** checklist for the procedure. Note that this is ***not*** the preferred method for powering the aircraft on the ground, since External Power will be available immediately after the aircraft is parked.

ANTI-SKID ..... OFF

11. Move the **ANTI-SKID** switch to the OFF (⬆) position before entering the ramp area.

PARKING / SHUTDOWN

PARKING BRAKES ..... SET

1. Set the parking brake by raising the knob in the center of the Steering Tiller, or by using the CTRL + . shortcut.

SEAT BELT SIGN ..... OFF

2. Move the **SEAT BELT** switch to the OFF (⊙) position.

EXTERNAL POWER (Preferred) ..... CONNECT

3. To simulate hooking up to External Power, follow this procedure:
   - Confirm that the Parking Brake is set. The brakes are ON when the button in the center of the steering tiller (Captain's Side Panel) is in the up position.
   - Click on the **EXT POWER AVAIL** button; it will illuminate to indicate power is available.
   - Move the **EXT PWR L BUS** and **EXT PWR R BUS** switches on either side of the illuminated button to the ON (⬇) position. The blue power-in-use lights next to the switches will NOT illuminate while both engines are still running.
4. If External Power is connected, the APU is turned off. Move the APU **MASTER** switch to the OFF (⬆) position, and move the APU **AIR** switch to the OFF (⬆) position.

APU POWER (if External Power is not available) ..... ESTABLISHED

5. If the APU was started during the taxi in, it should be ready now. If so, the **APU POWER AVAIL** button will be illuminated to indicate power is available. Move the **APU L BUS** and **APU R BUS** switches on either side of the illuminated button to the ON (⬇) position. The blue power-in-use lights next to the switches will also illuminate. All electrical systems on board are now fully powered from the ground.

FUEL LEVERS ..... OFF

6. Move one engine's fuel lever (under the throttles) to OFF.
7. Verify that the External Power (or APU power) power-in-use light illuminates on the side of the engine that is shutting down to indicate it is taking up the electrical load from the engine.
8. Move the fuel lever for the remaining engine to OFF.
9. Monitor both engines' shutdown by observing the engine instruments.

ANTI-COLLISION / EXTERIOR LIGHTS ..... OFF / AS REQUIRED

10. When N2 reduces to 5%, open the First Officer's Panel and move the **ANTI-COLLISION** switch to the OFF (⬆) position.
11. Move the **POS/STROBE** light switch to the OFF (⬆) position during daytime. Leave the position lights on at night (POS position), or in poor visibility conditions.

DOORS / AIRSTAIRS ..... AS REQUIRED

12. Open the door(s) as required. The MSFS shortcuts SHIFT + E (left front door) and SHIFT + E, 3 (rear ventral door/stair) may be used.
13. Extend the front airstairs when no jetway is available.
    Note: Using SHIFT + E, 2 to deploy the airstairs will cause the nearby baggage carts to activate, even though the Super 80 Pro does not have working cargo doors.

ENGINE IGNITION ..... OFF

14. Move the **ENG IGN** switch to the OFF (⊙) position

PROBE HEAT ..... OFF

15. Rotate the **METER SELECTOR & HEAT** selector to the OFF (⬅) position.

FUEL PUMPS ..... **OFF**

16. Move all Fuel Boost Pump switches to the OFF (⬆) position. If the APU is operating, leave the RH AFT pump on.

ANTI-ICE..... **OFF**

17. Move all Anti-Ice and Anti-Fog switches to the OFF (⬆) position.

HYDRAULIC PUMPS ..... **SET**

19. Move both **ENG** Hydraulic Pump switches to the HIGH (⬆) position.
20. Move the **TRANS** Hydraulic Pump switch to the OFF (⬇) position.
21. Move the **AUX** Pump switch to the OFF (⊙) position.

OVERNIGHT SHUTDOWN

(AFTER ALL PASSENGERS HAVE DEPLANED)

GALLEY POWER..... **OFF**

22. Move the **GALLEY** power switch to the OFF (⬆) position.

EMERGENCY LIGHTS..... **OFF**

23. Move the **EMER LIGHTS** switch to the OFF (⬆) position.

AIR CONDITIONING ..... **OFF**

24. After the last flight of the day, the Air Conditioning system is turned off. Move both Air Conditioning **SUPPLY** switches to the OFF (⬆) position.

PNEU XFEED VALVES.....**CLOSED**

25. Move both Pneumatic X-Feed Valve levers to the CLOSED (down) position.

LIGHTS ..... **OFF**

26. All cockpit lights should be turned off to minimize heat buildup in the cockpit.
    - On the Main Panel, click on the two white tabs (above the right fire handle) to turn off the FGCP lights.
    - Open the Lower Pedestal. On the **CTR INSTR & PED LTS** panel, turn off the **PANEL** and **DIGITAL** switches.
    - Open the Captain's Side Panel to access the **INSTR PANEL LTS** controls. Turn off the **PANEL** light switch and the **DIGITAL** light switch.
    - On the **OVHD CONSOLE LTS** panel, turn off the **PANEL** light switch and the **FLOOD** light switch.
27. External logo and position/nav lights may be left on for visibility and security at night and in low-light conditions. Otherwise, they may be turned off.

APU ..... **AS REQUIRED**

28. If the APU is required for power (no External Power is available), start the APU or leave it running unless advised by ground crew to shut it down.

BATTERY SWITCH..... **AS REQUIRED**

29. If the aircraft has External Power connected or the APU is running, leave the **BATT** switch in the ON (⬇) position. If the aircraft is being completely shut down for the night (after the last flight of the day), move the **BATT** switch to the OFF (⬆) position.