Landing Challenge Checklist

While practicing for the Landing Challenge select "Atlantis Landing Preparation" in Orbiter to practice the actual approach to the Kennedy Space Center. **During the <u>Competition</u> Landing Challenge, the 2nd member (Flight Engineer) will activate all commands.** During practice, it may be helpful to set up the keyboard in front of the 2nd member while the joystick is placed in front of the commander. Refer to the landing information document for any assistance on landing procedures and telemetry. Remember that one of the two landings during the competition will be instrument only. While practicing an instrument only landing it may be helpful to cover the orbiter screen except for the HSI and Surface Earth MFDs. Remember that the HSI will need to be programed (refer to the landing info document)

Blue text will indicate a command that must be performed on the keyboard by the FE

Key board landing controls for Orbiter

<u>RCS control</u> ------------------ Use mouse to turn off RCS in upper left corner of Orbiter

<u>Gear control</u> ----------------- G

<u>Speed Brake</u> ----------------- [CTRL] B
        The timing and use of the speed brake is at the discretion of the Mission
        Commander. It may be used any time during the landing approach and can be used
        repeatedly, if so requested by the Commander.

<u>Left wheel brake</u> ------------ , (comma)

<u>Right wheel brake</u> ---------- . (period)

<u>Trim control</u> ----------------- [Insert] down / [delete] up

---

COM	Altitude	Procedure
1	**35 k**	Announce: Current altitude and speed *Disengage RCS mode* RCS to OFF [Select on Orbiter in top left of screen]
2	**28 k**	*(Lift takes affect)* Announce: Current altitude and speed
3	**25 k**	Advise: Hydraulics / Brake Heater have been activated Announce: Current altitude and speed every 5 km (change to 1 km beginning at 10 km in altitude)
4	**3 k**	*Power Up Landing Gear* LANDING GEAR to ARM Announce: Current altitude and speed every 500m
5	**2.5 k**	GEAR to DOWN [G key in Orbiter] Announce: Gear deployed
6	**0.5 k** **(500 m)**	SPEED BRAKE to DEPLOY [[CTRL] B in Orbiter] The speed brake is required to help stop the shuttle after landing. Its use at this point may be delayed until touchdown by order of the Mission Commander. Announce: Speed Brake deployed
7	**Touchdown**	Announce: Touchdown CHUTE to DEPLOY
8		*End of Mission*