2021 Student Astronaut Challenge
Space Flight Simulation Challenge - Mission Control Job Tasks

Mission Director Responsibilities

1. Performs the supervision of the Mission Control team and all ground flight operations and team role assignments.
2. Call out all T-minus and T-plus communication time blocks.
3. Give the **Go/No-Go** order for launch.
4. Perform the ten-second countdown for activating the Flight Engineer's panel at T minus four minutes (T-00:04:00) and the ten-second countdown to launch.
5. Announce negative return at approximately (T+00:04:20)
6. Manage the countdown for the re-entry burn.
7. Call out the <u>specified</u> altitude and airspeed blocks (listed in the Landing checklist) during landing operations.
8. Manage the emergency process including identifying and confirming the emergency with the Mission Commander and approving the emergency procedure that will be followed by the Mission Control team.
9. Confirm all abort and non-abort conditions with the Mission Commander.

The following are <u>recommendations</u> for the roles and responsibilities of the Mission Controllers. It is the responsibility of the Mission Director to assign and monitor team operations.

Mission Controller 1

1. Handle telemetry checks for data on Pilot and Orbiter panels (both responding and initiating)
2. Share reading out loud the designated "announce and advise" communications within the checklist with Mission Controller 2
3. Read the emergency checklist and work with the flight crew when using the emergency checklist
4. Track general flight checklist progress and verify completion
5. Start the launch Clock at T-00:00:00

6. Share the call out of altitude and airspeed on Landing at appropriate intervals with Mission Controller 2. These altitude/airspeed calls would be other than the <u>specific</u> checklist entries.

<u>Mission Controller 2</u>

1. Handle telemetry checks for data on the Flight Engineer panel (both responding and initiating)
2. Share reading out loud the designated "announce and advise" communications within the checklist with Mission Controller 1
3. Track the emergency checklist progress for Mission controller 1
4. Work with the flight crew on the emergency checklist as needed
5. Work with Mission Commander and Flight Engineer on use of the shuttle schematics as they relate to the Flight Engineer checklist and panels during an emergency
6. Track checklist progress and verify completion
7. Share the call out of altitude and airspeed on Landing at appropriate intervals with Mission Controller 1. These altitude/airspeed calls would be other than the <u>specific</u> checklist entries.