

**Use Case 1: Monitor Pre-Launch****Scenario:** Monitor the Countdown**Scope:** LaunchSimulator**Level:** Flight Controller Goal**Primary Actor:** Flight Controller**Related Use Cases:** None**Stakeholders & Interests:**

- Flight Controller: wants to control the countdown as part of the Launch
- Engineer/Technician: wants to know the Current Countdown Time
- Astronaut: wants to know the Current Countdown Time

**Pre-Conditions:** The System is running and ready to begin the Countdown and enter Pre-Launch**Post-Conditions:** The Countdown Time is entered**Main Success Scenario:**

Flight Controller	System
1. Start Pre-Launch Sequence	
	2. Request Countdown Time Entry
3. Enters Countdown	
	4. Reflects the Countdown Time Entered
5. Starts the Countdown	
	6. Starts the Countdown Clock
	7. Transitions to Pre-Launch
	8. Periodically Updates and displays the Countdown Time for the entire Countdown
	9. Alerts the Actors when the Countdown reaches zero

**Alternative Flows:**

- \* At anytime, the Flight Controller can hold the countdown; this hold may or may not be due to a System Anomaly/Error.
  - \* At anytime, if the Countdown is on hold, the Flight Controller can resume the Countdown; the Countdown continues at the time stopped
  - \* At anytime, if the Countdown is on hold, the Flight Controller can chose to abort the Countdown. the System responds by abandoning the Countdown
- 3a. If the Flight Controller enters an unacceptable Countdown Time ( $time < 0$ ), the System refuses to set the time: instructing the Flight Controller to enter an acceptable time

**Special Requirements:**

- Only the Flight Controller can abort the Countdown. The rest of the Stakeholders have input
- The entered Countdown must be  $\geq 1$  hour

**Technology & Variations List:**

- \* All Actors can view the Countdown Time

3b,4a. The Flight Controller can change the Countdown time as desired prior to starting the Countdown.

3c,4b Once the Countdown is started, the Countdown time cannot be changed.

**Frequency of Occurrence:** Almost continuously

**Open Issues:**

- Can the Countdown be Aborted without the Hold?
- What happens if the Countdown Timer fails?