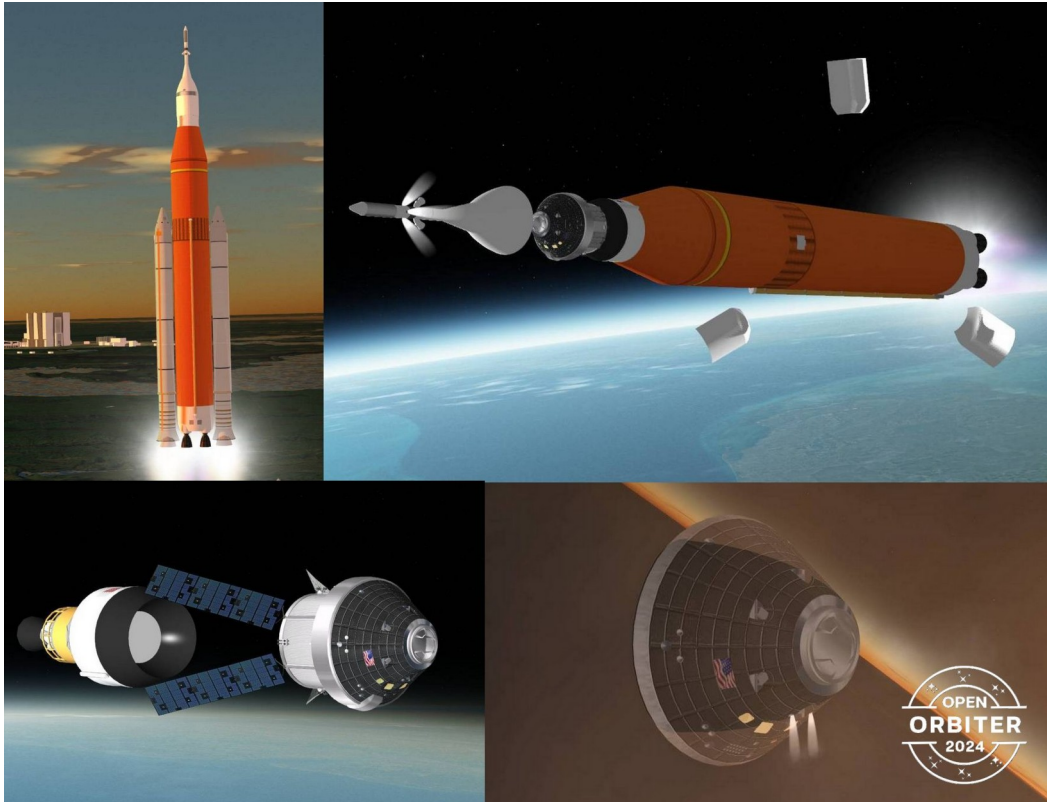


Orion-MPCV and Orange-SLS

The Orion-MPCV is an old Orbiter project, now updated for Orbiter 2024. It comes with an Orange-SLS launcher with ICPS and EUS upper stages. The names were chosen to avoid conflicts with other addons.



Key Commands for the Orion - MPCV

[C] Deploy drogue, deploy chute;
Note: Drogue will deploy automatically at 3000 m, main at 800 m altitude

[K] Open / close the hatch door

[S] Deploy solar panels, swivel forward / straight

[D] Solar panels swivel back / straight

[Ctrl] [J] Jettison the resource module

Hover thrusters [Num-0] [.] are the auxilliary thruster

Keys Commands for Orange - SLS

[Num +] Start engines (core & booster)

[J] Jettison first stage, jettison payload

Scenario File Keywords

Orion

FAIRING

This will show fairing panels between service module and launcher.

If omitted, the launcher can bring its own fairings (as the SLS does).

The fairings are automatically jettisoned at 108 km altitude.

SLS

FAIRING Includes a generic 5 m-fairing for non-Orion launches.

ICPS If this keyword is present, the smaller ICPS upper stage is used.

If not, the upper stage defaults to the larger Exploration Upper Stage.

Abort Mode 10

The Orion has a functional Launch Abort System (LAS).

An abort can be triggered by pressing:

Ctrl [J] to separate from the launcher, and quickly

[J] to activate the LAS

Then, after the LAS has burned out:

[C] to Jettison the LAS and activate the automatic chute sequence

Known Issues

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- In linear RCS mode, pressing two directions at once leads to unwanted rotation.

This is due to the oblique orientation of the RCS thrusters.

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| Scenarios | Description |
|---------------------------|--|
| X-37 1-Launch to Anduru | A strange object has moved into a highly elliptical Earth orbit. Launch the X37 on a FalconHeavy to investigate it. The FalconHeavy addon is required for this scenario. |
| X-37 2-Approach to Anduru | Approach carefully and investigate the comet Anduru. After the reconnaissance mission turn retrograde and burn for a periapsis altitude of 55 km. Aerocapture during several passes through Earth atmosphere. |
| X-37 3-Finals on KSC | Approach the KSC spaceport. Use upward trim to adjust the flight path. |
| X-37 Finals on Edwards | Approach and land on Edwards AFB. |
| X-37 Molniya launch | Press [V] to launch into a 200 km x 600 km orbit with 63.4° inclination. Circularize to a 600 x 600 km parking orbit. After a few orbits, burn over the South Atlantic to a Molniya orbit with an orbit time (T) of 43 046 sec and an apoapsis height of 39 750 km. |
| X-37 Payload Test | Open the payload bay doors [K], deploy the solar panels [S] and jettison the 'Ion Sled' payload [J]. |

| Specifications | X-37 | With Service Module |
|-----------------|---------------|---------------------|
| Length [m] | 8.8 | 9.5 |
| Wingspan [m] | 4.6 | |
| Height [m] | 2 | |
| Dry mass [kg] | 4000 | 4500 |
| Fuel Mass [kg] | 1500 | 2000 |
| ISP [m/s] | 3 200 (x 1.1) | |
| Main thrust [N] | 14 700 | |

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The service module was made by BrianJ.

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