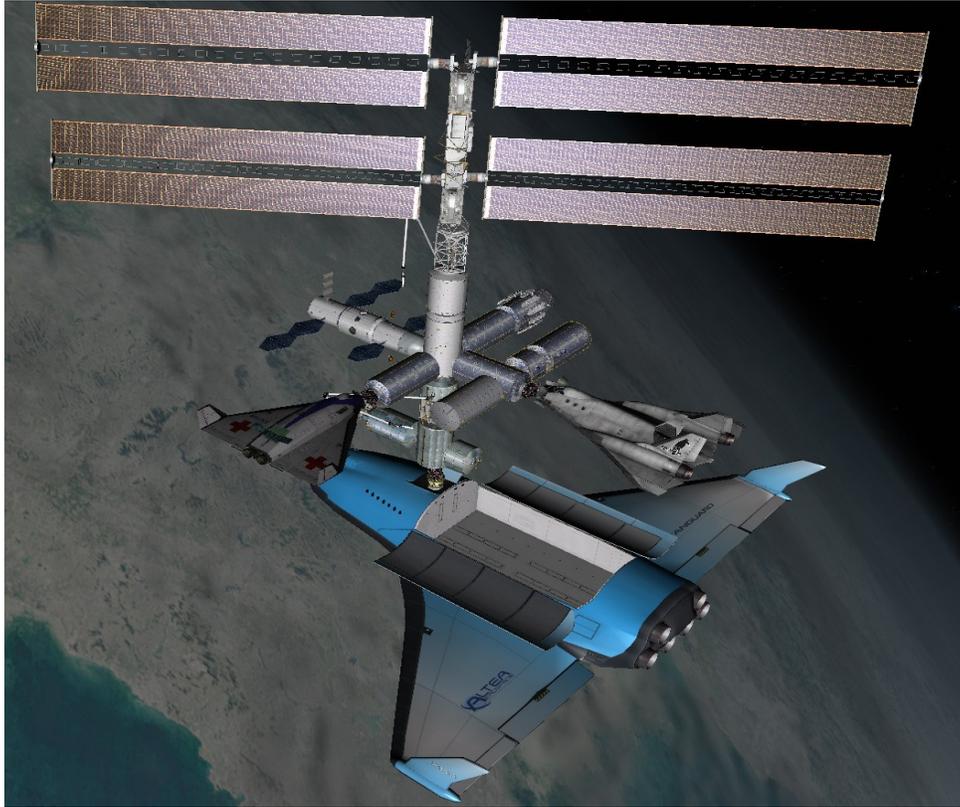


Daylight Space Station v2

Flight Scenarios by Tex



Update v2 (July 3, 2011)

- ⤴ Fixed missing 'P5' in scenario: #006 XR5 + P6 + HabMod2 [launch]
- ⤴ Fixed objectives for scenario: #008 XR5 + RecMod + PMA + Comet [launch]
 2. Attach RecMod to HabMod2 docking port #2.
 3. Attach Dock3 (PMA) to HabMod1 docking port #2.*(This ensures a vessel docked to Dock3 is right-side up; See the DG4 in the screen shot above.)*
- ⤴ Fixed #008 STS + Pulsar2 reentry & landing scenario titles to #007.
- ⤴ 3 New scenarios: XR5 reentry/landing.
- ⤴ 2 New scenarios: Ariane6/Esastar rendezvous & docking.
- ⤴ 1 New scenario: 'Daylight Space Station' (completed with 3 vessels docked).
- ⤴ New and improved flight manual documentation.

Introduction:

A collection of flight scenarios created with only the minimal objectives for constructing the space station. This will help you get started with space station construction, but allows you to expand on each flight if you choose to (ie: EVA objectives, vehicle inspection fly-around, photo ops, etc). If you don't have the patience to move every piece into position using the Universal RMS, then you can also use the scenario editor. Once completed, DSS is capable of holding 3 docked vessels. Dock #1 on the bottom is reserved for large vessels such as the space shuttle or the XR5.

Getting Started:

- Create a new Orbiter 2010-P1 installation and install Orbiter Sound 3.5.
- Install every addon in the order listed below to the clean Orbiter installation.
- After the required addons have been installed, extract the Daylight Space Station package into your Orbiter installation.

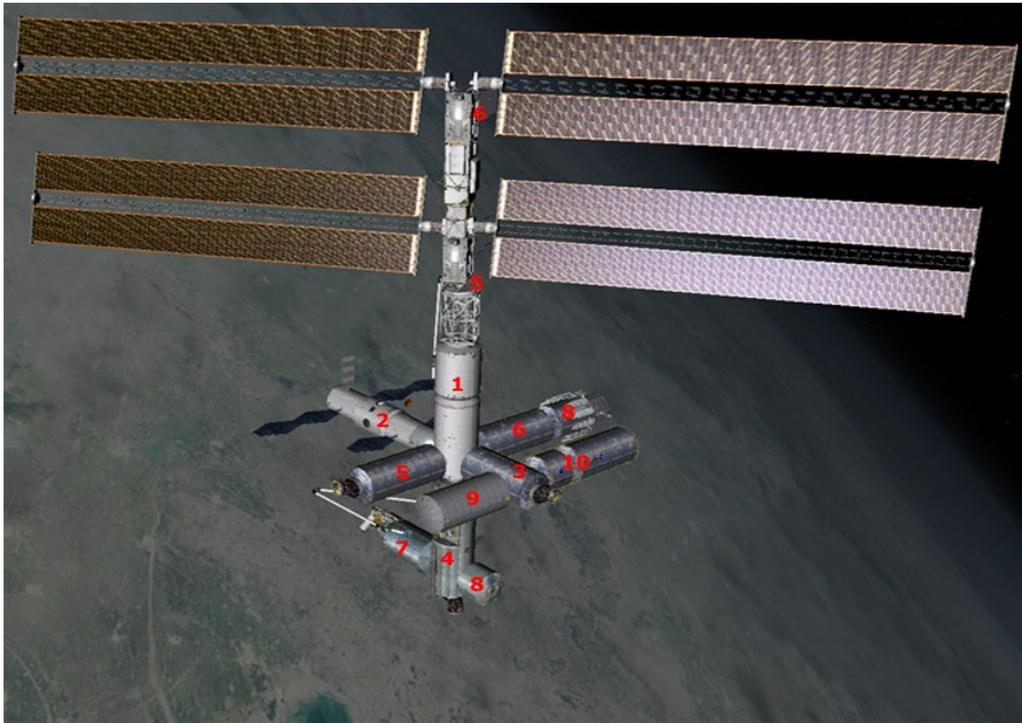
****Addons Required / Installation Order****

1. [Various Space Station Modules](#) (by Piper)
2. [Esastar](#) (by Siriusfess)
3. [Eranda v1](#) (by Siriusfett)
4. [Neesys v1.3](#) (by Siriusfett)
5. [Ariane6 v1.3](#) (by jekka & momo)
6. [Solar Modules ITS](#) (by Mustard, BrianJ, RussH)
7. [Comet V2](#) (by Mustard)
8. [Pulsar V2](#) (by Mustard)
9. [Universal RMS](#) (by Kulch)
10. [Universal Cargo Deck](#) (by Kulch)
11. [Well-PMA](#) (by Well)
12. [Wideawake](#) (by WHAP)
13. [Launch MFD](#) (by Enjo)
14. [Aerobrake MFD](#) (by gp)
15. [DeltaGliderIV-2](#) (by Dan Steph)
16. [XR2 Ravenstar](#) (by Doug Beachy & Steve 'Coolhand' Tyler)
17. [XR5 Vanguard](#) (by Doug Beachy & Russell Hicks)
18. [Shutte Fleet v4.7](#) (by David413)

Depending on your computer hardware, you may wish to use higher resolution Earth textures or other visual enhancements. You should be OK to install them before or after the required addons.

[BaseSyncMFD](#) (by jarmonik) is also highly recommended for coming home.

***Don't forget to extract this Daylight Space Station package last!**



Flight Overview:

1. Core (Neesys) Module [Launch Vehicle: XR5]
2. Esastar [Launch Vehicle: Ariane6]
3. HabModCore [Launch Vehicle: Discovery]
4. Eranda [Launch Vehicle: XR5]
5. P3P4 Solar Mods + HabMod1 [Launch Vehicle: XR5]
6. P6 + HabMod2 [Launch Vehicle: XR5]
7. Pulsar2 [Launch Vehicle: Discovery]
8. Exercise & Recreation Mod + Comet [Launch Vehicle: XR5]
9. Centrifugal Accommodations Module [Launch Vehicle: Discovery]
10. Sensitive Materials Lab + Clean Room [Launch Vehicle: XR5]

*Scenario Notes:

- ⤴ Objectives for each flight can be found in the scenario description. Each scenario will tell you exactly which modules to dock or attach together.
- ⤴ 'P3P4' is the first solar panel connected to a pivoting base which is docked to the Core module. 'P5' is attached to the end of P3P4 which acts as an extender for the final solar panels, 'P6' to attach to.
- ⤴ You may have trouble with flight #6 while trying to attach 'P6' to 'P5'. You can manually attach it by adding the following line directly below the VROT values for P6 in the scenario file: **ATTACHED 3:0,P5**

The Core Module:

This uses the 'Neesys' module which will be the first part carried into orbit. In the scenario it is named 'Core' which is the heart of the station. All other modules will dock to it with the solar panels on top. The top half of the Core module is the power supply and controls. The habitat modules and scientific labs all attach to the lower half. The Core module does have RSC controls, but limited fuel. You can use the Core module thrusters to adjust the space station orbit if needed or use the auto-pilot to aid in docking vessels with overhead docking ports, like the space shuttle or the XR5.

*The “Max Attitude Thrust” for the Core module thrusters is set relatively high so they can maneuver the station as it gets heavier. You can always adjust the power of the thrusters and the fuel consumption (Isp) by editing the custom config file located in:

Config/Vessels/NeesysDSS

Universal RMS:

There are two URMS arms on the space station. The first is attached to the Core (Neesys) module and the second is attached to Eranda. Operating them is easy enough once you open the vessel dialog (F3) and change to the one you need. The URMS control dialog window should then open, if not press 'Ctrl+Space'.

You can use the scenario editor to easily increase the size of the arms or re-position them.

Docking Tips:

- ⤴ **Flights #1-4:** Activate the (+) Normal auto-pilot on the Core module. This allows you to then activate the Prograde auto-pilot in the shuttle or XR5 in order to hold the proper angular alignment with the docking port (Dock1).
- ⤴ **Flights #5-10:** Rotate Core module to (+) normal attitude, then activate the level hold auto-pilot. This allows you to then activate the Retrograde auto-pilot in the space shuttle or the XR5 in order to hold the proper angular alignment with the docking port (Dock1).

Shuttle Fleet Tips:

- ⤴ Be sure to activate the GPC MFD in the module list!
- ⤴ The ascent program is already open on the GPC MFD when the scenario loads. The auto-pilot is programmed for a North-East launch heading (65 degrees), so you must choose the North-Eastern intersection to launch.
- ⤴ If you've launched your station into a different orbital inclination, then you will need to change Discovery's auto-pilot launch heading in the scenario file. Locate and change the following line highlighted in red to the launch heading required:

TGT_HEADING 65.24

- ⤴ With 'Core' selected as a target on the Launch MFD, watch time to intersection until it reaches 288 seconds. Press 'ITEM' on the GPC MFD, then type 777 and press ENTER to activate the launch auto-pilot.
- ⤴ During the launch, you can yaw to the left or right by pressing 1 or 3 on the numpad in order to get Rinc as low as possible without disabling the launch auto-pilot.
- ⤴ To turn on the shuttle bay lights, press F3 to open the vessel dialog. Change vessel to 'BayLights' and press the space bar to open the light controls. Do the same for the 'RMSLight'.

XR5 Vanguard Tips:

- ⤴ Take-off when Launch MFD 'time to intersection' reaches 350 seconds.
- ⤴ Pitch up 40 to 50 degrees initially, until you reach 10km altitude. Pitch down to 10 degrees so you can use your scram jets after you've reached mach 4. At this stage, hold a relatively low pitch in order to reach orbital velocity around 70km altitude.
- ⤴ To jettison cargo, change vessel to 'UCargo' and open the control dialog by pressing 'Ctrl+Space' if its not already open after changing vessels.

Ariane 6 Tips:

- ⤴ Launch 300 seconds before the South-Eastern intersection by pressing 'P' to engage the auto-pilot. The guidance file for the launch auto-pilot is set to 128 degrees. If you've launched your station into a different orbital inclination, then you will need to edit the guidance file for the Ariane6 located in: *Config/Ariane6JM/A6BEsalabDSS*

Edit the launch heading highlighted in red: 10=roll(1,88,128,80,1)

- ⤴ The auto-pilot will get you to orbit, but I find it useful taking control just before the orbit burn is complete for the best accuracy. Pressing * on the numpad will kill the engines.