

Setup information and hints excerpted from the 2015 Simulator Instructional Guide

Installation

Orbiter can be installed by two methods - manually by extracting a ZIP file, or automatically by running an MSI installation file. All instructions for installation are provided as part of the file.

Orbiter Download Web site is <http://orbit.medphys.ucl.ac.uk>

There is a significant amount of reference material and tutorial simulations in the program, feel free to let students explore these as they practice. There are also many help sites and forums on the web for orbiter. The orbiter sound add on files is highly recommended and can be found at: <http://orbiter.dansteph.com/forum/index.php?page=download>

This instructional system only uses a small amount of the capabilities of the Orbiter program. There are other simulated space craft available to fly as well as digital reproductions of the planets and solar systems which can be used in the classroom.

Setup Hints for PowerPoints:

Go to the Astronaut Challenge website (<http://www.astronautchallenge.com>) and select the reference section in the left-hand page list. Two Power Points need to be downloaded: Basic Control Panel Master and Flight Engineer Panel. Click on the **download** label after each selection. When the option to open or save appears, select open and then use the **file > save** command to save the Power Point to your desktop. Do this for each Power Point. Once saved to the desktop, each Power Point can be executed by a double-click. The Basic Control Panel Master will need to be placed on the Pilot PC and the Flight Engineer Panel will need to be placed on the Flight Engineer PC.

Setup hints for Orbiter

Once Orbiter is downloaded, start the program by double-clicking the Orbiter icon. The first time the program is started it will run a check on your PC and when successfully completed, the program will start. If any of the three checks fail, consult your IT staff. The corrections are pretty simple and should not be a problem.

Once Orbiter is running:

1. In the module section of the main screen make sure you **activate all modules**



2. If you are using a joystick (recommended) this is activated in the Joystick section.



3. In the parameters section do not check off damage and failure simulation.



4. Full screen mode usually works the best but you may have to experiment to get the best visual settings for your computer.



Operating the Simulator

Initiating Launch

To use the simulator program system three separate programs are run on the classroom computers, one on each computer. The Mission Commander runs the **“Orbiter”** program on their computer. The Pilot runs (double-click the icon) the **“Basic Control Panel Master”** Power Point on their computer: This first slide is:



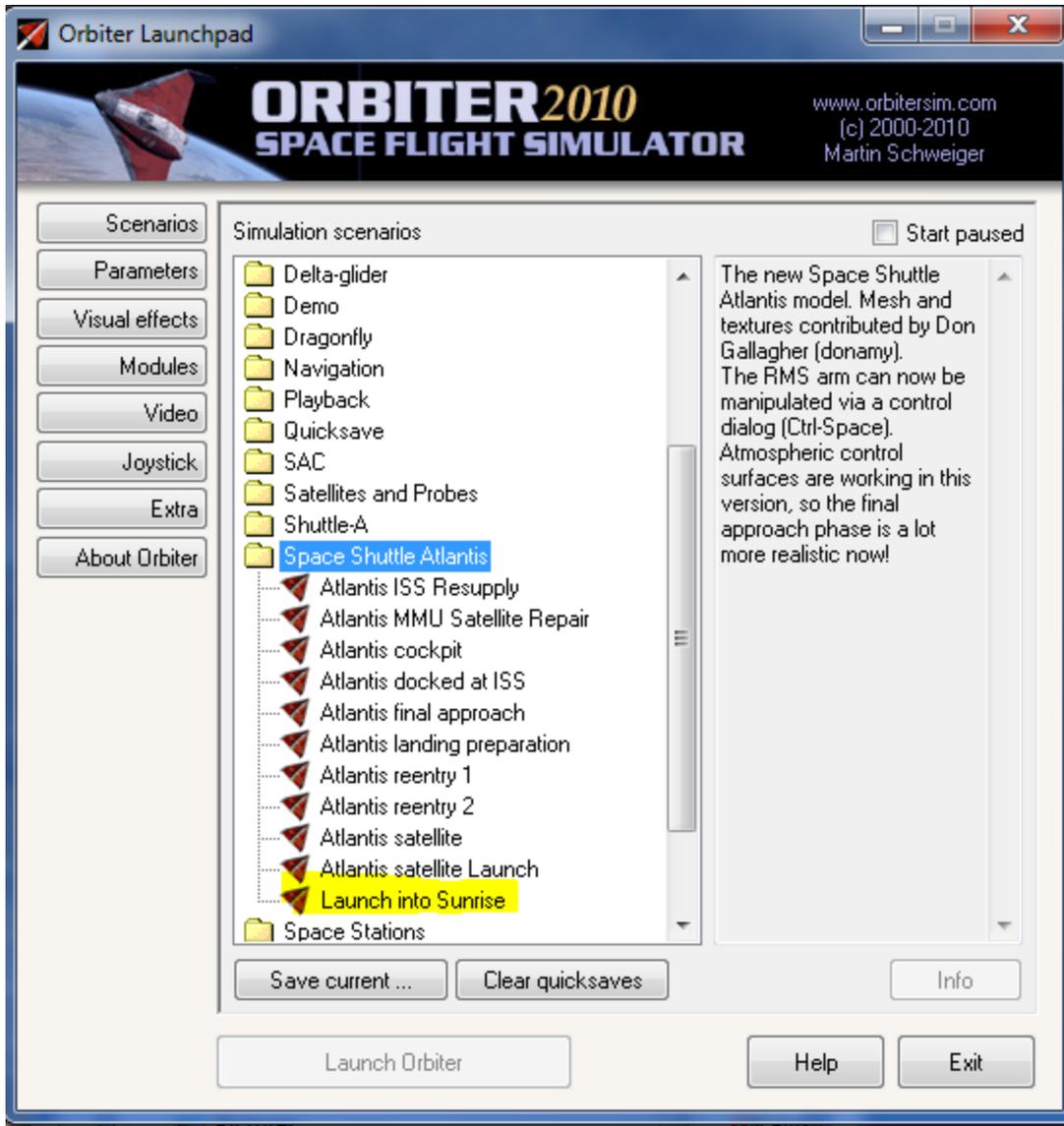
The Mission Specialist runs (double-click the icon) the **“Fight Engineer Panel”** Power Point on their computer. The first slide is:



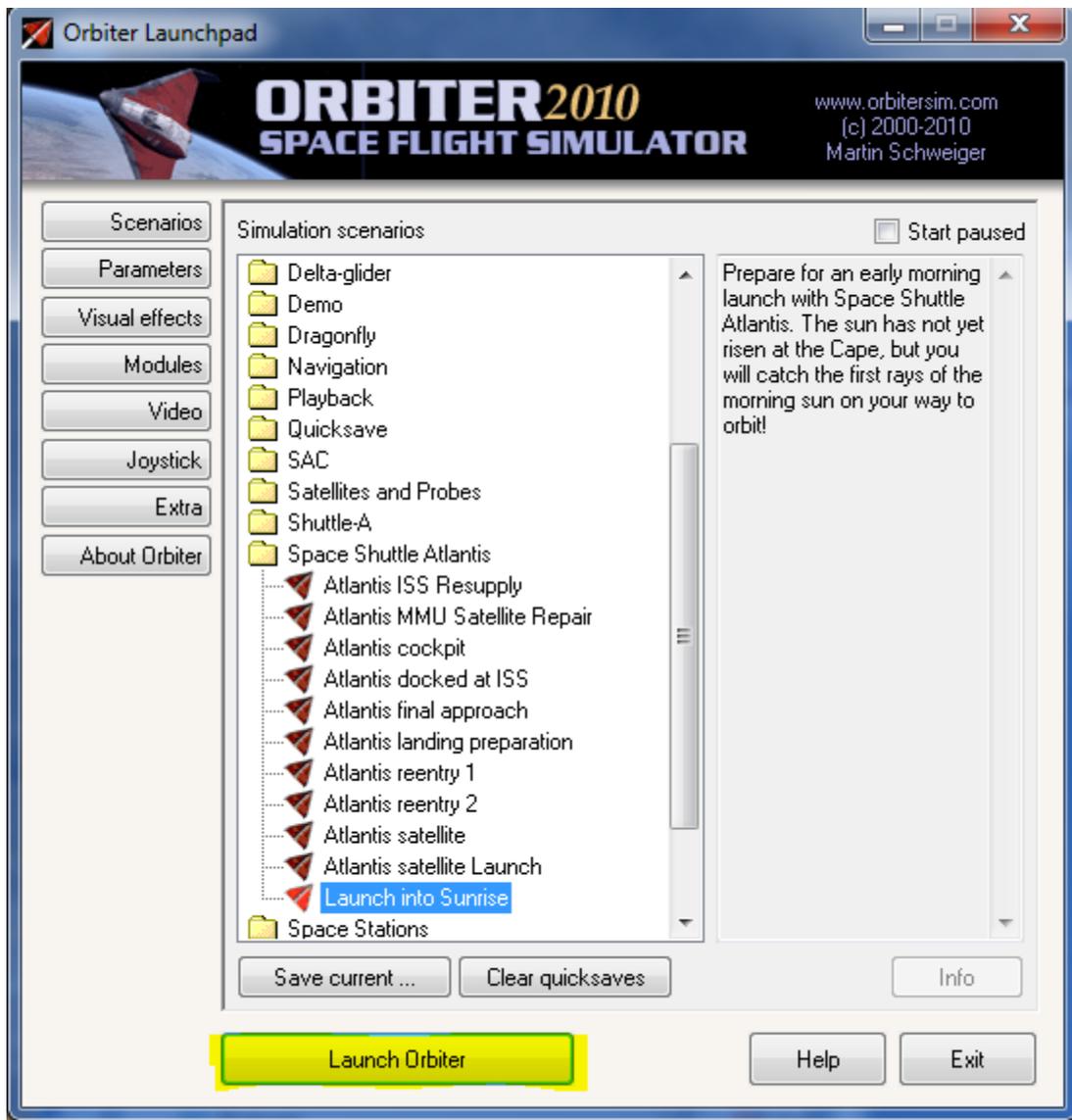
Have the Mission Commander load the Orbiter program.



Have them select the "Space Shuttle Atlantis" File. Then locate and select the sub-file "launch into sunrise" program



and then launch orbiter.



This should launch Orbiter displaying an external view of the shuttle on the launch pad. Use F1 to switch to the cockpit view, which is the one you saw in coaches training.

At this point, you are set to start a mission.

Mission Commanders Screen (Orbiter)

Have the student use the mouse and click on **[SEL]** on the right Multifunction Display (MFD) and then **[Orbit]**.

Have the student input and follow the Shuttle Launch Commands for the right Terminal Multi-Function Display (MFD), but **DO NOT** hit the last **ENTER** command until launch.

Shuttle Launch Commands for the Left Terminal MFD(Mission Commander)

1. Have the Student hit **[SEL]** on the left MFD with the mouse and then select **[Terminal MFD]** (you may have to hit **[SEL]** twice to get to this prompt)
2. Then select **[INP]**. An "Input Script Command" dialog box will pop up.

Type in **run"atlantis/launch"** and press **ENTER**

3. Select **[INP]** and then type in **do_oms2=false** and press **ENTER**

4. Select **[INP]** and then type in **launch()**

5. Press **ENTER** when you are queued to launch the shuttle at T-minus 4 seconds. Be careful not to touch the keyboard before then or it may change or erase the final command and mess up your launch timing with the Pilots Power Point.