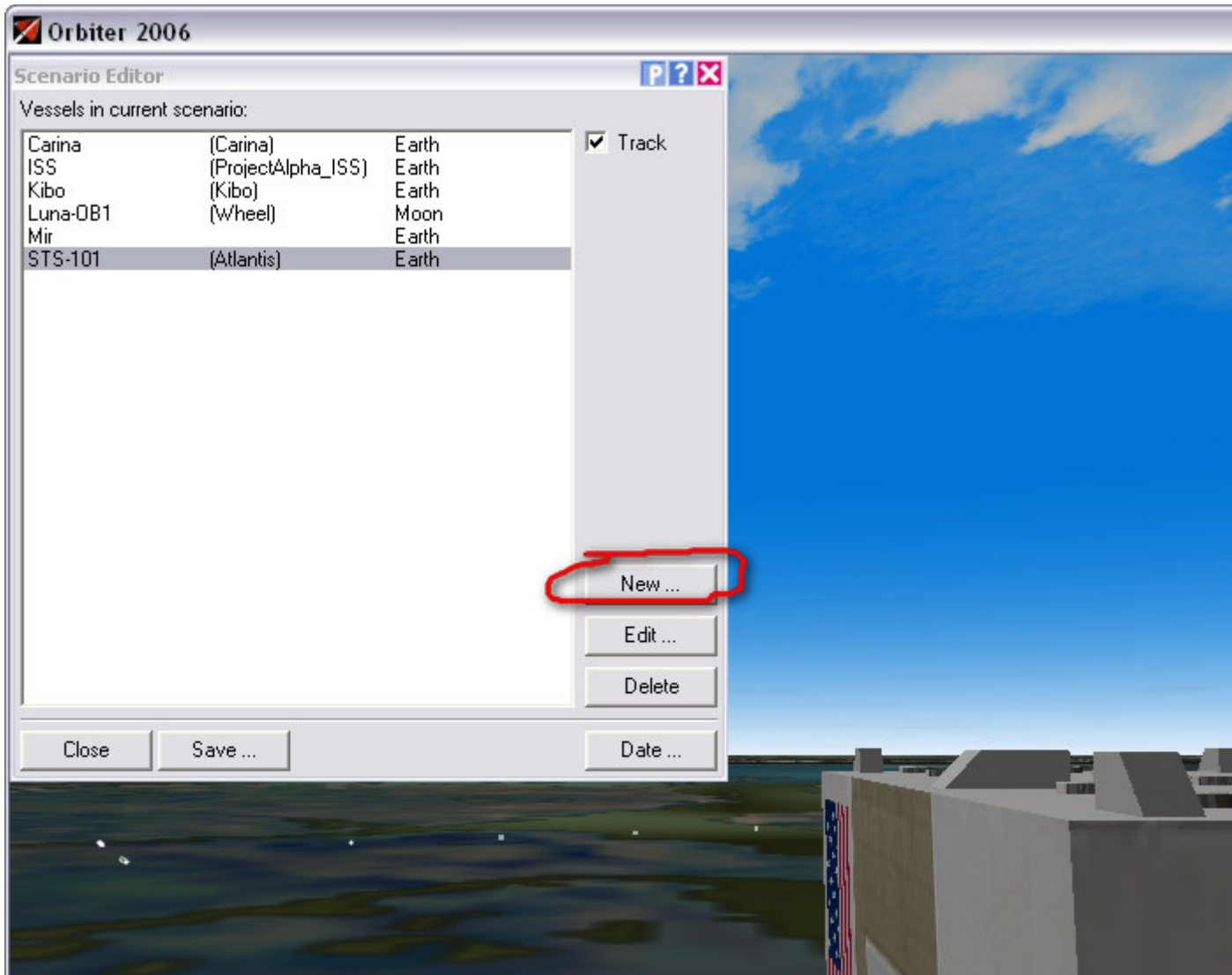


A Guide on how to dock

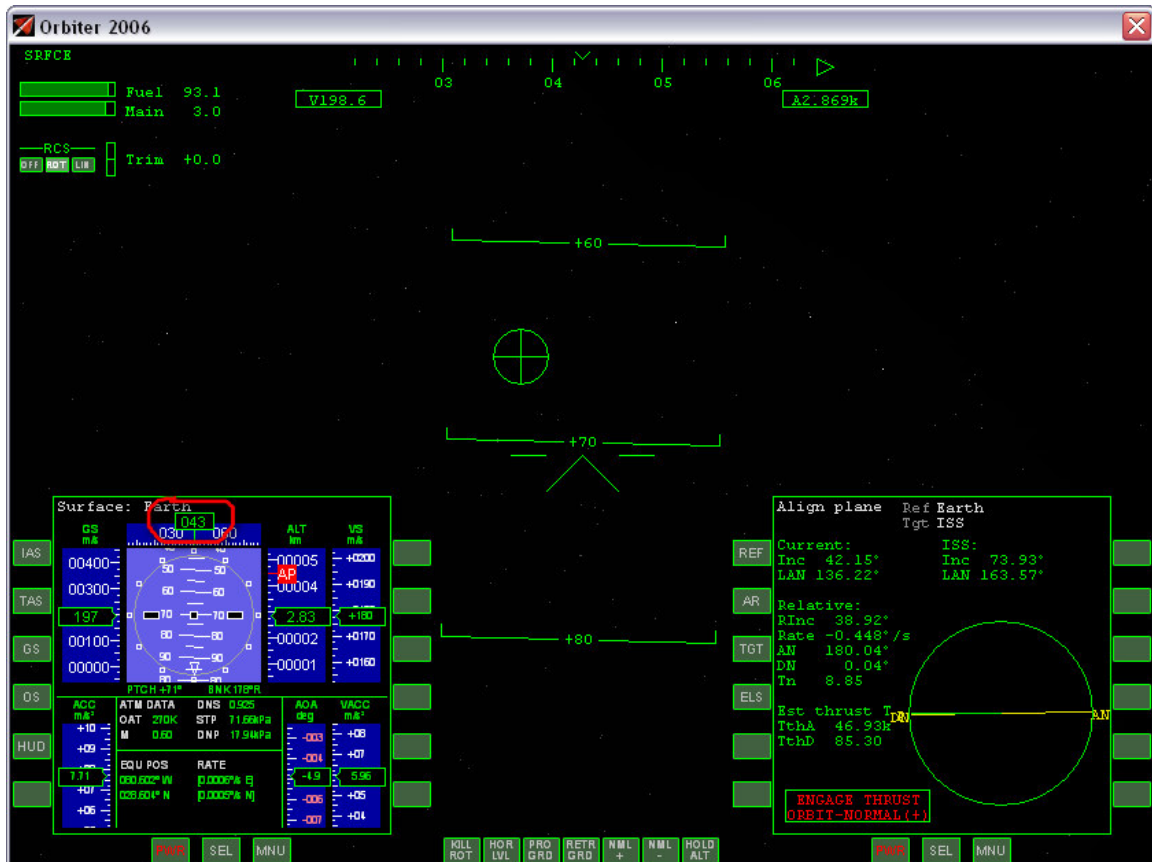
This manual is made for people who do not know how to dock or who cannot master it. It is made really short and a revised version will be released soon after this one. It is intended to help in the sections of launching, aligning planes, syncing orbit, and rendezvous. Let us use the stock Atlantis since it is simple for this scenario. When your shuttle is on the launch pad, press F4 and click on custom. After you have clicked on that, go to scenario editor. Click on the “new” button.



After you have reached the screen after that, scroll down and look for ProjectAlpha_ISS. Type that in exactly like it is. You will have to switch views between crafts a couple times to focus on the shuttle.

If you have GPC you can go ahead and skip these first steps. If not then read carefully.

- 1) Ignite your engines and launch with a heading of 42-43 degrees.



- 2) At 5km pitch to about 65 degrees
- 3) At 8km pitch to about 60 degrees
- 4) Now you should kind of see a pattern of three kilometers, pitch 5 degrees. Do this type of interval all the way up to 35km. Hold your pitch to 15-20 degrees until you reach 80-90km zone.
- 5) At 88km pitch to about 15 degrees.
- 6) At 91km pitch to about 14 degrees.
- 7) At 94km pitch to about 13 degrees. 96km is 12 degrees and so on until 107-108km.
- 8) Perform the roll maneuver at 107-108km and adjust your pitch to 30-35 degrees.
- 9) Use the RCS linear thrusters to gain some distance between you and the ET. Now turn to normal-orbit and watch the Align Planes MFD carefully. Especially your relative inclination and when your descending node is.

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Watch everything under "relative." Mostly our ascending and descending node, and Rinc.

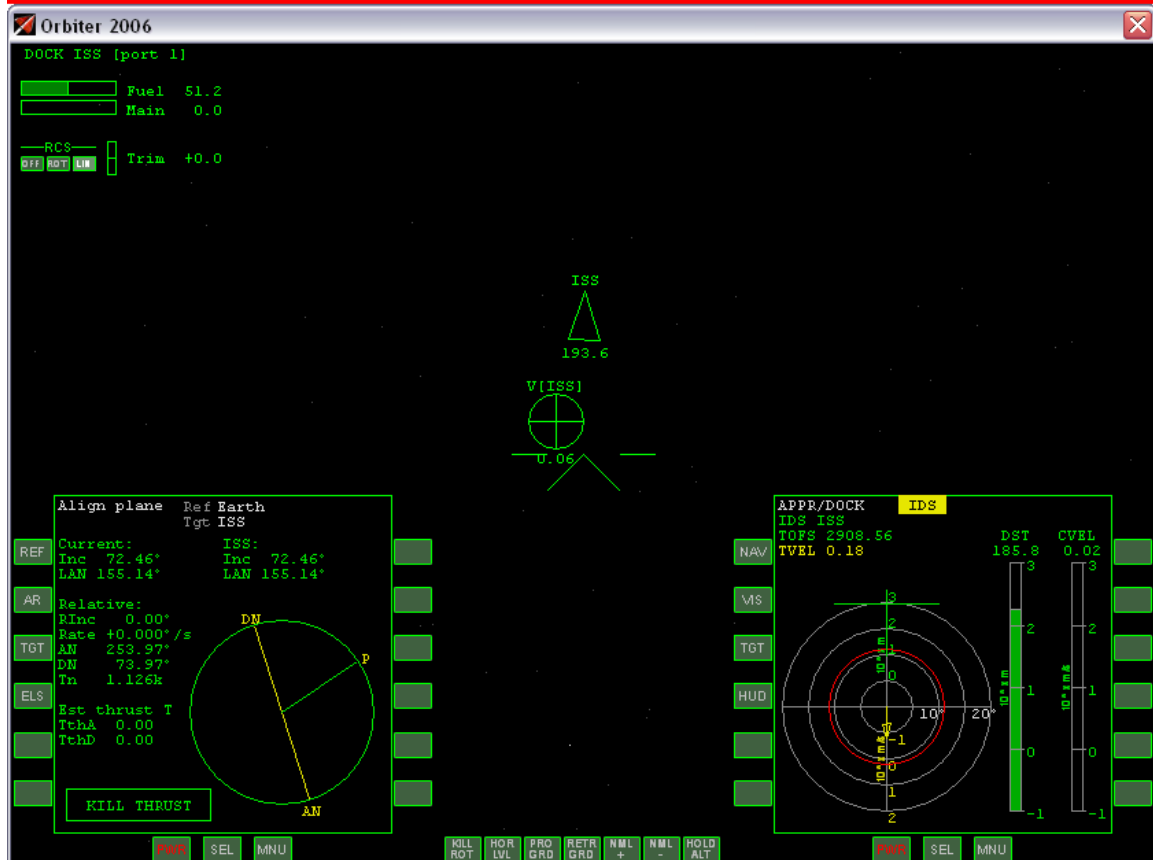


- 10) Depending on how well you made your orbit, wait until your descending node and burn normal-orbit. Make sure your relative inclination is 0.00. It is really crucial. If the ISS already passed your apoapsis then wait until it is about to pass it and when it is at your apoapsis write down it's altitude.
- 11) If you were successful and your Rinc is 0, burn horizon level prograde when you are either at or near you apoapsis. Bring your periapsis to at **least** 115km. It is real low so I suggest you should increase it.
- 12) Stay in horizon level prograde and when you are at your periapsis burn until your apoapsis is that of the altitude you have written down.
- 13) Bring up the Sync MFD and set your target to the ISS. Then click on "mod" until it says Sh apoapsis

- 14) Around apoapsis burn horizon level prograde and burn until the DTMin is about or is exactly 0. If your Rinc is not zero then you need to adjust it so it is 0.
- 15) When you get really close to the ISS and less than 5km, burn prograde into the velocity vector so your relative velocity is under 10m/s.

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On this picture, you can see that the velocity vector says 0.06m/s. Keep it below 10m/s or you will probably pass it up. Tip: Keep you closing velocity above 0 or else the ISS with slowly get farther away in some cases.



- 16) Open your cargo bay doors and point directly to the ISS.
- 17) Now try to get under the ISS and when you are, point upside down at it and use your rotational thrusters to point at the docking port and wait. You might have to use the RCS linear thrusters to stay lined up.
- 18) You are now docked to the ISS. Hopefully.

