

## ORBITER 2010 – DIY KEYBOARD MODIFICATION Version 2.0



This handy keyboard modification labels all of your spaceship's vital key commands and arranges them in a logical layout on your keyboard. You no longer have to consult the keyboard map or memorize key assignments. This modification works in addition to your regular keyboard. USB keyboards are common and very inexpensive, so they're great for do-it-yourself projects.

Orbiter 2010: Free Space Flight Simulator by Martin Schweiger  
<http://orbit.medphys.ucl.ac.uk/>

DIY Keyboard Modification by Matt Thomas  
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<http://www.DIYspacesims.com>



### Materials

- USB Keyboard (black)
- USB Keypad
- Full page adhesive label
- Thick poster board, black
- Clear cellophane tape, matte
- Loctite Fun-Tak Mounting Putty

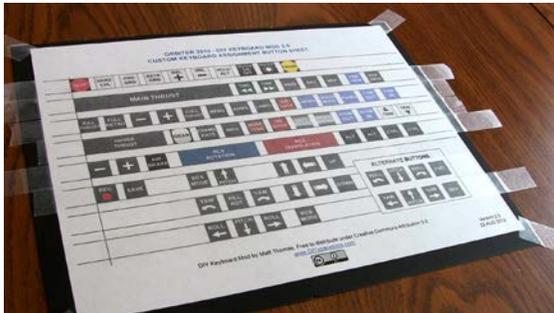
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[www.DIYspacesims.com](http://www.DIYspacesims.com)

## Instructions

Locate the compressed folder (zip folder) that contains these instructions. Choose *Extract All...* to put all files into a regular folder. Locate and open the file called **Button Sheet – Orbiter DIY Keyboard Mod v2-0.pdf**. Print out this sheet on a full sheet label.

Remove the wax paper from the full sheet label, and carefully apply it to a corner of the black poster board. Cut the label away from the rest of the poster board. Tape the corners to a table top so it doesn't move.

The buttons need a layer of protection over them so the ink won't wear off after years of use. Carefully apply a strip of clear cellophane tape over each row of buttons and labels.



Cut out the rows of buttons by cutting along the lines. Next, cut out the individual buttons from the top row. Only cut out the buttons from the top row for now.



Reference the Keyboard Assignment Map on page 4.

Lay out the first row of buttons, in order. We use blue tacky putty to attach each button to the keyboard keys. You only need a tiny bit of tacky putty for each button. Flatten out the putty on the back of the first button, and press it onto the correct key.

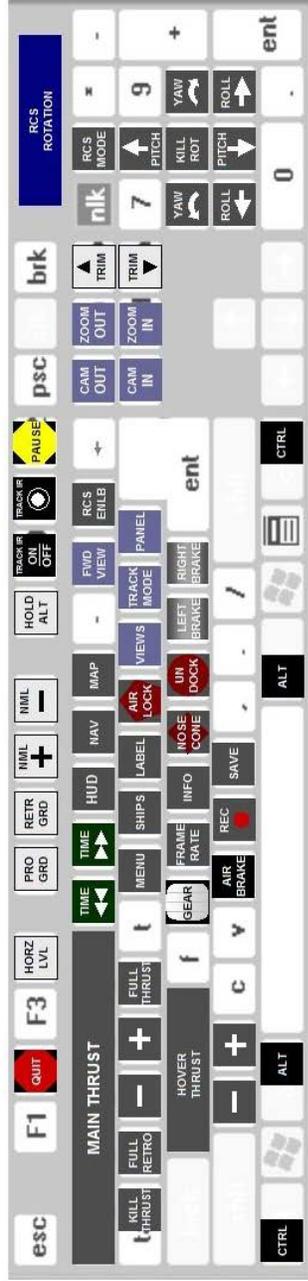
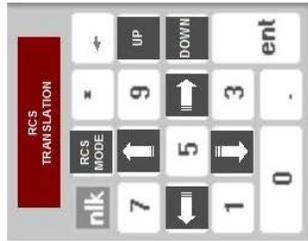


Repeat that process to attach every button to the keyboard in its correct location. Again, reference the Keyboard Assignment Map for proper placement. Use the same technique to attach the long labels (Main Thrust, Hover Thrust, etc).

Several keys are not assigned a function. Use a black permanent marker to obscure the markings on these keys. It's a good idea to apply the marker twice to really make sure the writing is blacked out. Leave the markings visible for the Shift and Arrow keys,

You may add industrial strength Velcro on the back of the modified keyboard if it will be used in a flight simulator cockpit (simpit).

# ORBITER 2010 – DIY KEYBOARD MOD 2.0 CUSTOM KEYBOARD ASSIGNMENT MAP



The next steps will ensure the keyboard commands in Orbiter match the labels on the modified keyboard.

We assume you have already installed Orbiter on your computer. Find the Orbiter folder on your computer. When you downloaded Orbiter, you may have put the folder on the C drive, or the Programs Folder, or the Desktop, etc.

- Open the Orbiter folder and locate the small file named **keymap.cfg**. This is a list of the keyboard key assignments for the default Orbiter installation.
- Right click on **keymap.cfg**, and choose Rename.
- Rename it **keymapbak.cfg**. That means it's a backup of this configuration file. If something undesirable happens in the next few steps, you will be able to get the default key mapping back by removing bak from the spelling.
- Locate the folder that contained the instructions you are reading now.
- Open the folder and locate the **keymap.cfg** file. This file contains the customized button assignments to match your modified keyboard.
- Copy the **keymap.cfg** file and paste it in the Orbiter folder. Now Orbiter will reference the new customized button assignments instead of the default ones.

**NOTE:**

- Press the RCS MODE button to switch between RCS Translation and Rotation. The additional keypad helps you avoid getting confused.



Keyboard mod used with a laptop

Now all the important space ship commands are conveniently labeled, and the keyboard mod looks great too.

Congratulations, you have completed the DIY Orbiter keyboard modification! We hope you enjoy many exciting interplanetary voyages with this product. Happy Landings!

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Keyboard Mod used with a mobile flight simulator



Screenshot from Orbiter 2010 by Martin Schweiger