Printables by JOSEF PRUSA

3Dconnexion SpaceNavigator Knob Replacement

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VIEW IN BROWSER

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Summary

Replacement Knob for my 3Dconnexion SpaceNavigator.

Hobby & Makers > Other Ideas

Tags: replacement sparepart 3dconnexion spacenavigator

After some years of use the knob of my beloved SpaceNavigator became very sticky. Blame the silicon cover for it, the only downside of this great tool. I'd like to recommend using cling film to cover the sticky silicon surface, it's thin, very adhesive to this matter and also probably available in your household.

I disassembled the SpaceNavigator completley and non-destructive, so that I could take measurements of the knob for my attempt to resemble it in Fusion 360 (using the same SpaceNavigator after reassembly, yes, it still works).

I'm sharing an early model of my work, because I feel like it might be useful to a lot of fellow SpaceNavigator owners.

After printing it, I realized some features where missing. On reworking the model I added an additional chamfer so you can more easily access the top cover of the knob.

Print Settings

Printer Brand:

Velleman

Printer:

K8400

Rafts:

Doesn't Matter

Supports:

Yes

Resolution:

0.2mm

Infill:

80%

Notes:

Print it with tree-like support, it works wonders!

How I Designed This

Disassembly of the 3dconnexion spacemouse

To remove the knob only, you need to remove the plastiv cover on the knobs top. Unscrew the three screws, done.

I figured this out after I disassembled the SpaceNavigator from bottom up, so there are some pictures to share with you who are curious on how the spacemouse works and what parts are inside. Actually it is a high quality design. And very intelligent, props to 3dconnexion.

Here's a link to the Fusion 360 project: https://a360.co/3azLISk

Description of the pictures from disassembly

Actually the easiest part to be removed.

Some more parts.

Mainboard with Atmel µC.

Electronics and mechanics inside the knob (it's not a pulled out via, just tin), springs, optics.

The actual spacemouse electronics that is connected to the mainboard and performs the 6DOF measurement.

Model files

knob.stl

3d-connexion-spacemouse-knob-v11.f3d

Find source .stl files on Thingiverse.com

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