Printables by JOSEF PRUSA

Key Trap - Interlocking puzzle by Christoph Lohe

Printable Puzzle Project

VIEW IN BROWSER

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Summary

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Key Trap

Interlocking puzzle by Christoph Lohe

Assemble the various pieces into the lock shape shown in the cover photo. The key is looped around the shackle so that they are permanently bound together, but can move freely against each other. How can they be manipulated so as to maneuver the rest of the pieces into the lock frame?

With a difficult level 26 solution, Key Trap is a complex puzzle that will challenge even experienced puzzle solvers. You may need software such as BurrTools to help put it together; assembling it unassisted is beyond my own abilities. Once in its assembled state, it makes a fun take-apart puzzle.

Printing Instructions

Print one copy each of lohe.key-trap.frame.stl, lohe.key-trap.shackle.stl, lohe.key-trap.pieces.stl, and lohe.key-trap.key.stl. Alternatively, you may print lohe.key-trap.curved-shackle.stl and lohe.key-trap.curved-key.stl in place of lohe.key-trap.shackle.stl and lohe.key-trap.key.stl; they are functionally identical, but the appearance is different (the curved variants have a more "lock-like" shape; see photos). **You will need to print the key using build-plate supports in order to support the snap joint.** DO NOT ASSEMBLE THE KEY YET! Read the following instructions **carefully** before proceeding.

This design uses snap joints. After you print it, first connect all the joints before attempting to solve the puzzle. Snap each male connector into a corresponding female connector (for example, the male connector labeled "A" should connect to the female connector with a matching "A" label on the interior).

To assemble the key: before connecting the joint, loop the ringed part of the key around the shackle and into its proper orientation, as shown in the photo. Only after the ringed part is in place, secure the straight part of the key and attach the joint. You must assemble it in **exactly** the configuration shown in the photo or you will wind up with an unsolvable puzzle. I strongly recommend reinforcing the joint on the key with a few drops of superglue.

The snap joint concept is discussed further in this tutorial: Getting Started with Puzzle Printing.

The Printable Puzzle Project

The Printable Puzzle Project aims to make available high-quality open-source models of many puzzle designs. All of our models are posted with the generous permission of their designers and are licensed for **non-commercial use only**. Anyone may print copies for their own personal use, but selling or otherwise monetizing them is not permitted, and puzzle designers retain all rights as copyright holders of their work.

Our puzzles are modeled using the open-source puzzlecad library. The .scad file is included with this model in case you want to modify any of its design parameters; more information on how to do this can be found in the PPP Puzzle Modeling tutorial.

About the Designer

Christoph Lohe's innovative output spans an impressive variety of puzzle forms. Lohe's designs have attracted increasing attention from puzzle

makers and collectors and have been realized by some of the world's top puzzle craftspeople. His designs are both challenging and beautiful, with several incorporating creative figurative elements, such as a popular series of burr puzzles in the shape of locks.

Happy puzzling!

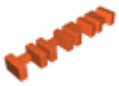
Model files

lohekey-trapcurved-key.stl

lohekey-trap.scad

lohekey-trapcurved-shackle.stl

lohekey-trapshackle.stl



lohekey-trappieces.stl

lohekey-trapkey.stl

lohekey-trapframe.stl

Find source .stl files on Thingiverse.com

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