

# ShopBot®

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the tools  
for making the  
future.

## Project: Wooden Knot Puzzle

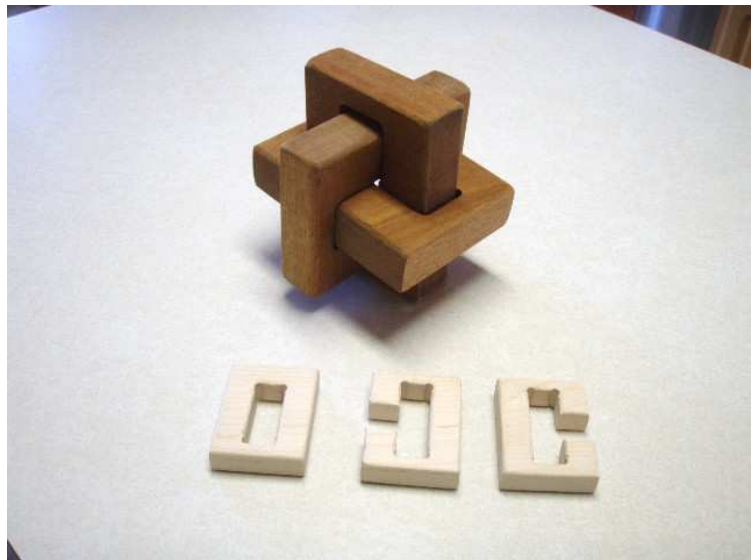
**Overview:** A great way to turn shop scraps into puzzles fun for all ages, the wooden know puzzle has been around for years, but now can easily be cut with the ShopBot.

**Materials:** Any type of hardwood or softwood that you have laying around the shop.

**Minimum Cutting Area:** 4.5" x 11" for small puzzle. 8" by 20" for larger puzzle.

**Bit Size:** 1/4" for small puzzle. 3/8" for larger puzzle

**Finishing:** Minwax WipeOn Polyurethane works great for this puzzle because it is easy to wipe in all of the inside corners. It also has a thin coating so it does not interfere with the puzzle sliding together.



*\*\*Always read the entire project details before starting to cut the file yourself\*\**

*\*\*Account for the thickness of the physical material on hand and the material thickness in the file\*\**

*\*\*This file is zeroed to the tables surface, Zero your bit to the tables surface\*\**



Included with the cut file is a hold down toolpath that shows where it is safe to put screws. Run this file separately from the cut file so you can screw down the work piece, or if you have a different size board or different type of hold down disregard the file.



As the file starts cutting the profile of the parts make sure the cut is going all the way through the work piece and into the table surface. If you need to adjust any part of the file make sure you do not remove the hold down or you will lose position.



Tabs are used to hold all the pieces to the scrap wood attached to them. Use a utility knife to score these edges. Never try to push a piece out without cutting the tab, it will tear the grain on your project. Sand remaining tab flat.



A 1/4" roundover not only brings eye appeal to the puzzle, but makes the puzzle safer to handle on soft hands and contributes to the ease of assembling the pieces.



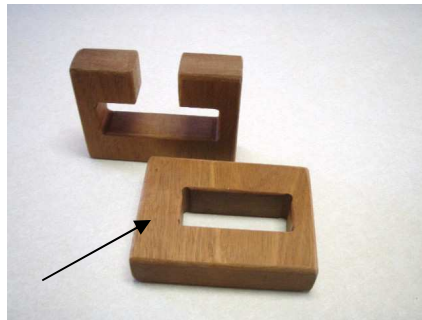
Sand all of the wood parts with great detail, this project will be handled by many people who are concentrating on the puzzle assembly, not paying attention the wood.



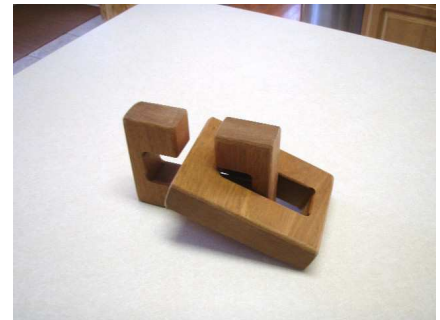
:Use a WipeOn poly and give it several coats to seal up the wood.



The project is not complete. It is time for the hard part, learning how the puzzle goes together!!!



Both of the "C" shaped pieces are identical. The "O" shaped piece has one end of the "O" wider then the other. Not the picture layout above.



Slide the O piece onto the C piece with the wider end of the O inside the C



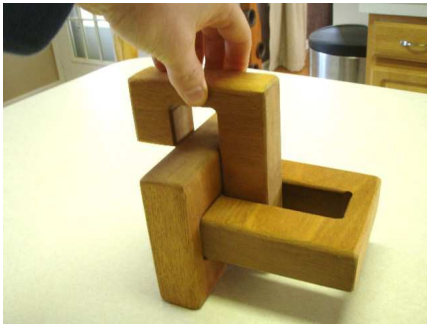
Rotate the pieces so the C is standing up



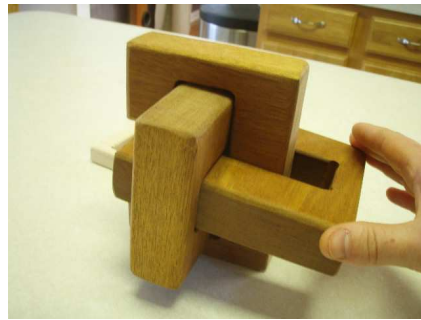
Push the O to the bottom part of the C piece.



Now slide the 2nd C piece onto the assembly.



Push the standing C down until the O piece is able to be pushed off to the side.



Push the O piece all the way into the assembly.



The wooden knot is now tied up. Just reverse the steps to take the knot apart.

As all woodworking projects should go, do a dry run of fitting the pieces together before staining them. Depending on your material thickness, additional sanding may be required to make sure the pieces slide together smoothly.

