

Trick Gift Box

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VIEW IN BROWSER

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Summary

I designed this as a fun way to give a gift card or cash as a gift. It is a trick gift box.

Seasonal designs > Winter & Christmas & New Year's

Tags: puzzle design gift winter magic prusaprinters contest surprise giftbox trick puzzlebox

I designed this as a fun way to give a gift card or cash as a gift. It is a trick gift box. When initially opened it appears to be empty. However, you'll have pre-loaded it with a gift. It will fit gift cards, money, and other small items. When opened from the regular position it will always be empty. To load it, it must be opened from the special slider position. Please be sure to read through the printing and assembly instructions before printing (no really, it'll help prevent frustration).

You can see a video demo of the box here: https://youtu.be/5p3jeHYH_Ss

UPDATE: I've added a 3 piece version of this model for people that may be struggling with the 1 piece print tolerances. The body can be printed in 2 pieces and the slider as a 3rd piece. The slider can then be placed on the bottom, and the top glued to the bottom to hold it all together. Be sure your slider moves freely before applying glue. The instructions below can be followed for assembly.

Print instructions

UPDATE: I've added a 3 piece version of this model for people that may be struggling with the 1 piece print tolerances. The body can be printed in 2 pieces and the slider as a 3rd piece. The slider can then be placed on the bottom, and the top glued to the bottom to hold it all together. Be sure your slider moves freely before applying glue. The instructions below can be followed for assembly.

It is important that your printer is well calibrated for this print. Over extrusion will cause the moving parts to not work correctly. The reason for such tight tolerances is so that the hidden pieces remain hidden. If you have trouble with the tolerances (especially with the "main body pieces.stl") try lowering your extrusion multiplier by a few percent. You can also test by only printing the first few mm of "main body pieces.stl and ensuring you can break the slider free. The entire print is designed to be printed without supports. All parts should already be in the correct orientation. Read the assembly instructions completely before trying to assemble.

Note: There's now a version of the main body pieces with a little bit more play than the original piece. You can try that first, or try it if you're having trouble with the original files. It's called "MORE TOLERANCE Main Body Pieces.stl"

Printing:
I recommend printing at .2 layer height and with 3 perimeters.

1. "Main Body Pieces.stl" - Main Body Piece 1 and 2 must be printed inside one another. If the slicing doesn't work correctly with the combined file, they can be loaded separately with the "Main Body Piece 1.stl" and "Main Body Piece 2.stl." The tolerances are quite tight, so if combined with the separate files be sure to get the spacing even all the way around the tracks so that the pieces will be able to move freely after printing.
2. "Main Drawer.stl" - this is the outside drawer for the box
3. "Hidden Drawer.stl" - This is the inside, hidden drawer, that actually holds the gift contents.
4. Main Ribbon.stl, Front Ribbon.stl, Directional Bow.stl, NonDirectional Bow.stl - These are optional pieces that can be glued on later. The direction bow has groves to align it with the ribbon and help hold it in place. The NonDirectional is flat on the bottom and can be put in any orientation.

Assembly:

- ◦ These steps can be skipped if you printed the main body in 3 pieces.
  *After printing the "Main Body Pieces.stl" a single layer cover over the opening will need removed. It is there to help support the sides of the box during printing and can be removed by either breaking it out or with an Exacto knife.

*Next, There are two tracks for the drawer on both sides of the inside of the box. The one that was on the bottom is open, the one on the other side has a single support layer that will need cleaned out. You can us anything from an Exacto knife or a file to clean out the bit of filament covering it. I found a sharp, long, thin, knife to be the easiest to use (You may have something in your kitchen. Don't tell my wife). Then I cleaned it up a bit with a long file. BE SURE TO HAVE IT THOROUGHLY CLEANED out before inserting the drawers as they are designed NOT to come out once in place.

*Finally, Be sure your slider is able to move. If it needs broken free place the "Main Body Pieces.stl" vertically with the print bed side on the bottom. Place it on a table and slide the slider off the edge of the table and tap the slider with something round and flat to break it free. The slider moves toward the print bed side, it will not move the other direction so be sure you're trying to move it the right way.

Now insert "Hidden Drawer.stl" into "Main Drawer.stl" with the hook facing out. There is an unsupported lip on the "Main Drawer.stl" opposite of the side you insert the hidden drawer that may need trimmed a bit depending on how well your printer bridges. Be sure the drawers slide freely between themselves before you insert them into the main body pieces. NOTE: Be sure to insert the hidden drawer into the main drawer before putting the main drawer into the main body pieces. The drawers are designed NOT to come out after assembly.

Finally insert the assembled drawers into the main body. The slider must be out to allow both drawers to fully close. Once fully closed if the slider is returned to the normal position the hidden drawer will remain hidden when opened. When the slider is out, or in the open position, the hidden drawer will open with the main drawer.

Open the drawer with the slider out to insert a gift card, money, etc. Close the drawer, then return the slider to the normal position and the contents will now be hidden.

Lastly, you can add the ribbon files. Glue them with Loctite Gel Super glue or other glue of your choosing. DO NOT GLUE THE RIBBON TO THE SLIDER.

Feel free to leave a comment if you have questions or need help with anything.

Model files



3-piece-main-body-3_slider_.stl



3-piece-main-body-2_bottom_.stl



main_drawer.stl



3-piece-main-body-1_top_.stl



main_body-piece-1.stl



main_hidden-drawer.stl



main_body-pieces.stl



main_body-piece-2.stl



more-tolerance-main-body-piece-2.stl



ribbon_nondirectional-bow.stl



more-tolerance-main-body-pieces.stl



ribbon_main.stl



more-tolerance-main-body-piece-1.stl



ribbon_-directional-bow.stl



ribbon_front.stl

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