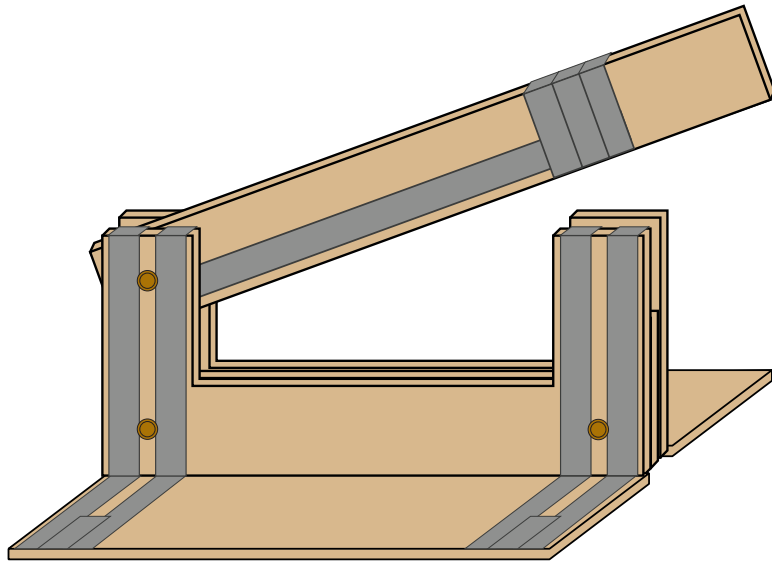
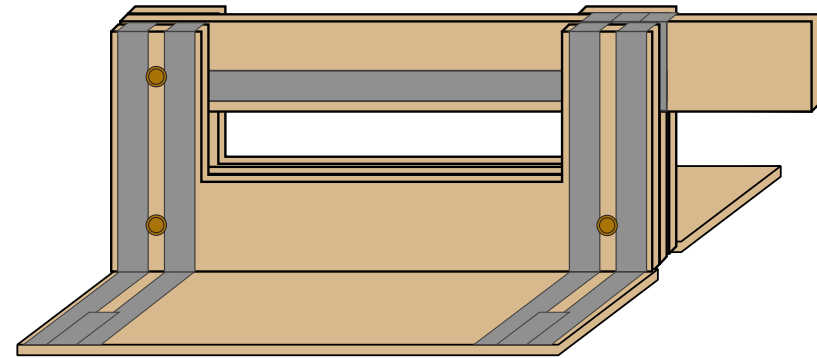


# Giant Cardboard Knife Switch



Open



Closed

Knife switches are a fun way to visualize how a circuit becomes completed when a switch is engaged.

It's easy to see how the switch is "opened" or "closed" which represent the two states of a single throw switch.

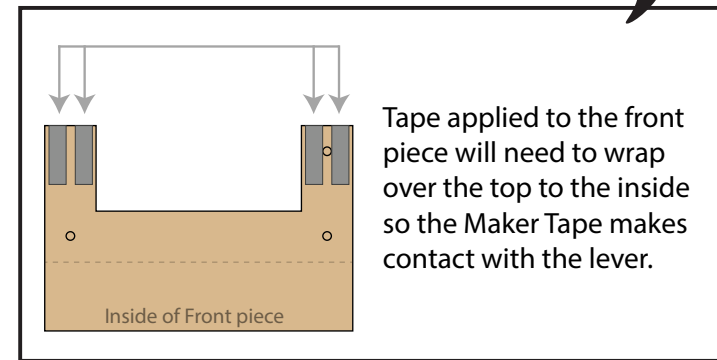
Knife switches are not used for most modern day circuits as they have been replaced by switches that are safer at high voltages, but since we'll be working with low voltage circuits this DIY cardboard knife switch is perfect!

# Giant Cardboard Knife Switch

Note!

## Assembly Instructions - Part I

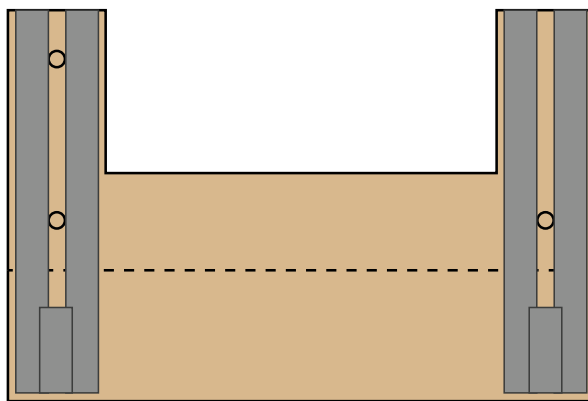
- Use the template found in this document as a guide to cut out the four pieces of cardboard that are needed.
- Arrange your switch pieces as shown below.
- Add Maker Tape to the front and knife pieces.



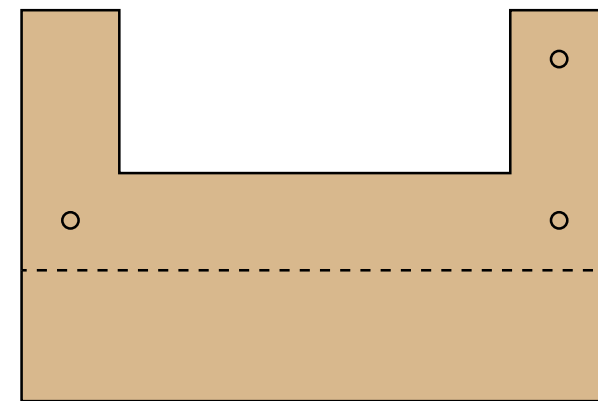
Knife



Middle



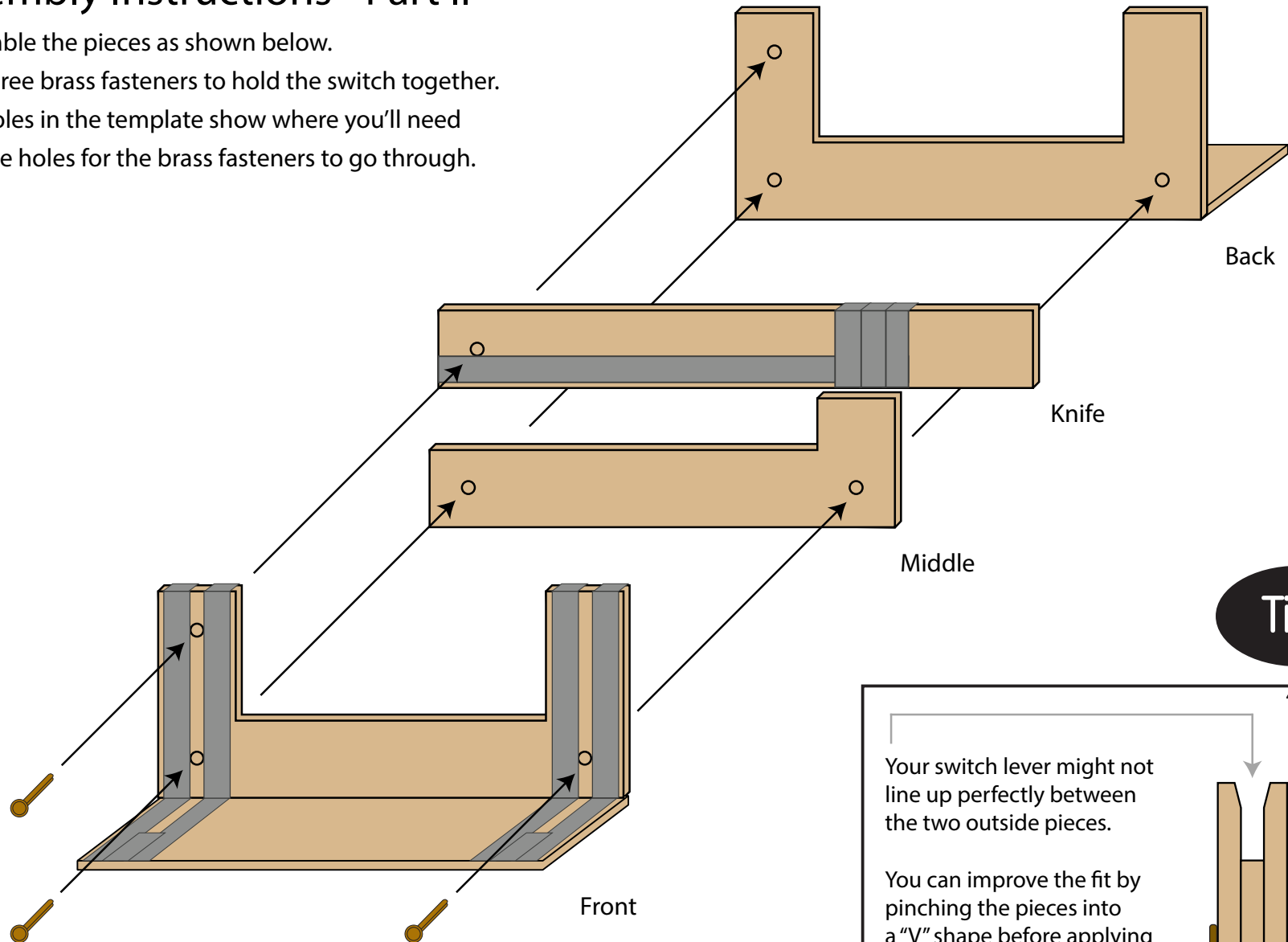
Front



Back

## Assembly Instructions - Part II

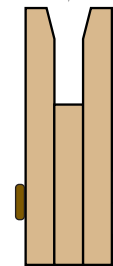
- Assemble the pieces as shown below.
- Use three brass fasteners to hold the switch together.
- The holes in the template show where you'll need to poke holes for the brass fasteners to go through.



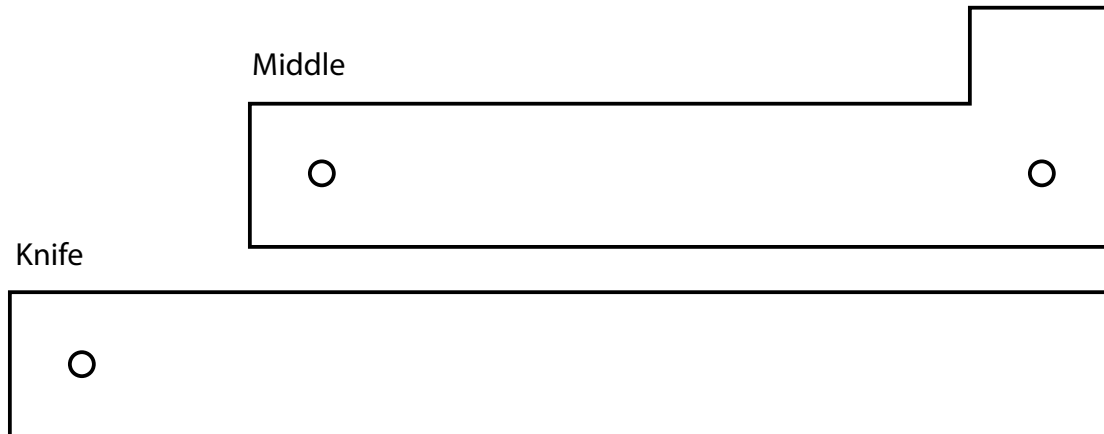
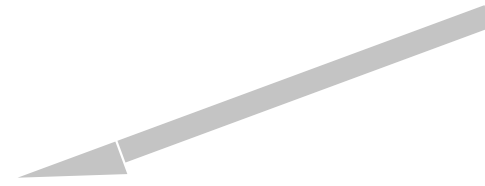
Tip!

Your switch lever might not line up perfectly between the two outside pieces.

You can improve the fit by pinching the pieces into a "V" shape before applying the Maker Tape.

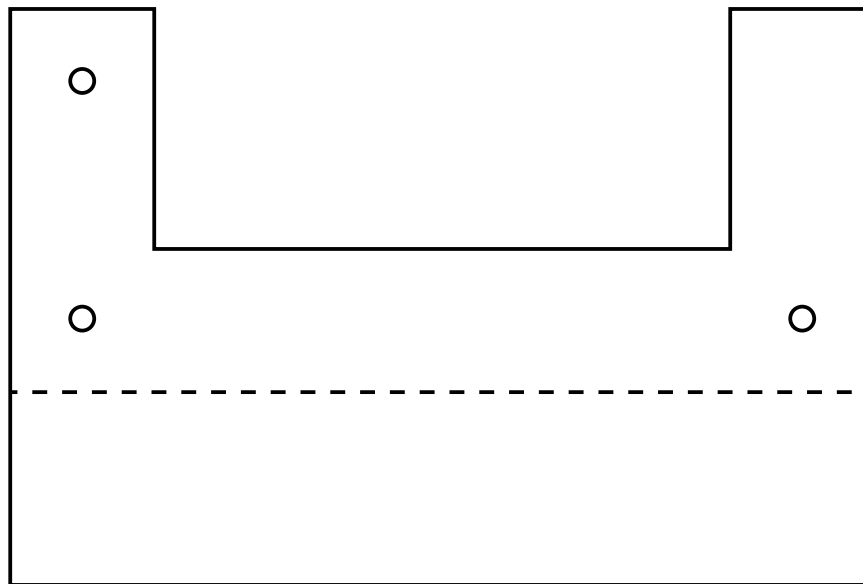


# Giant Cardboard Knife Switch

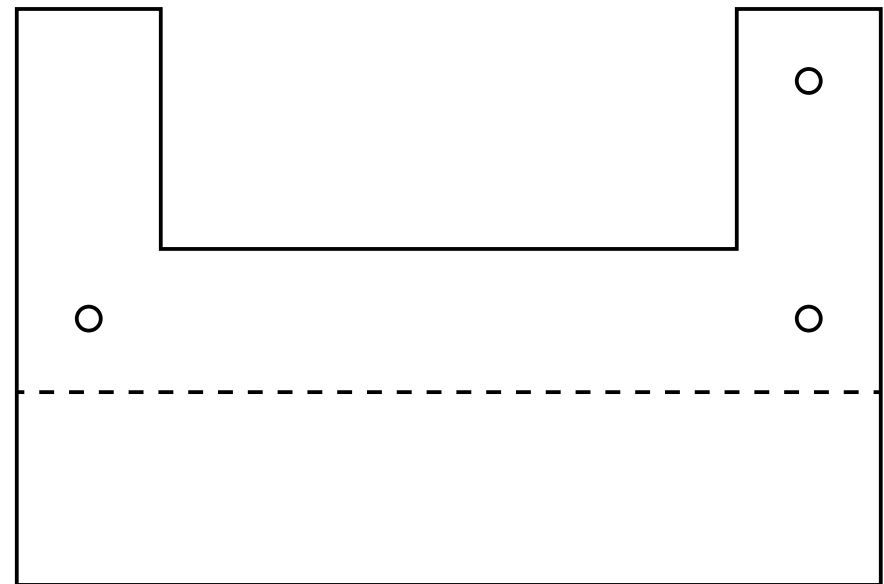


## Template Instructions

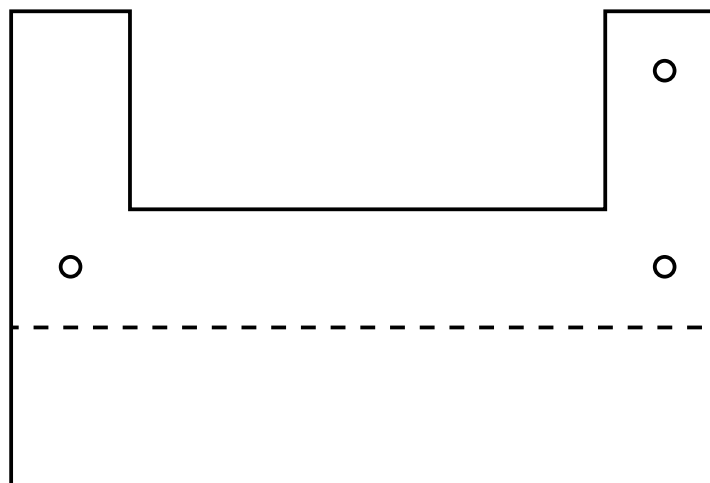
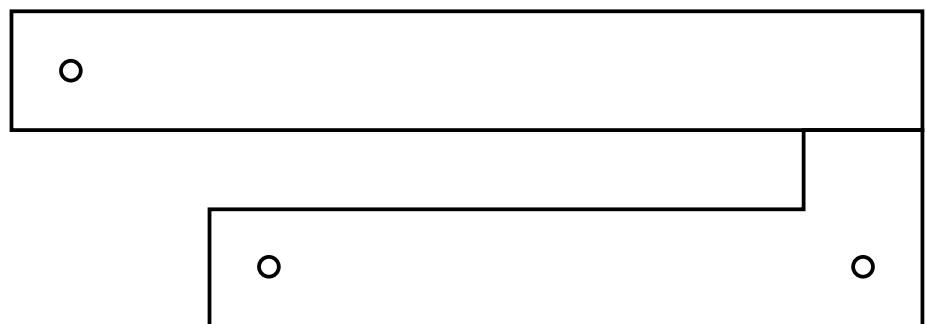
1. You can print this page out to use as a guide.
2. Glue it to a piece of cardboard.
3. Cut out the four pieces.
4. Score the dotted lines so you can fold the bottom pieces at a 90 degree angle.
5. If you want a Giant Knift Switch just use this page as a guide for how to sizes your pieces in relation to each other.



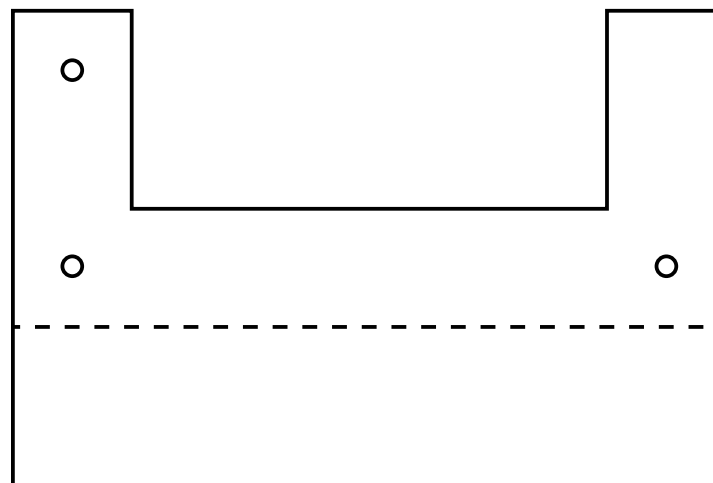
Front

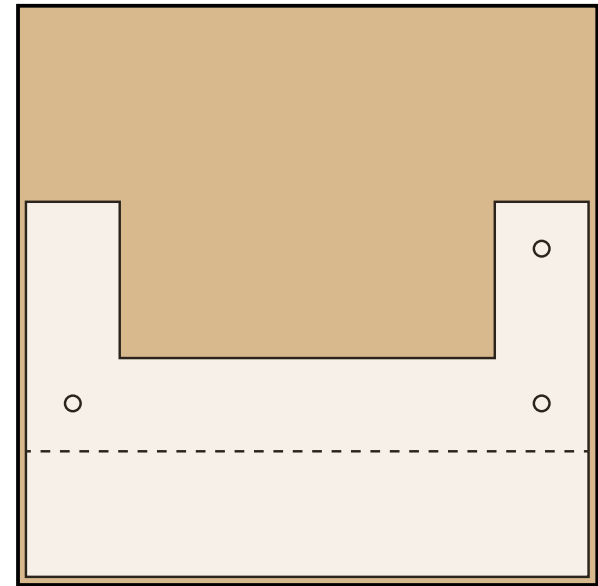
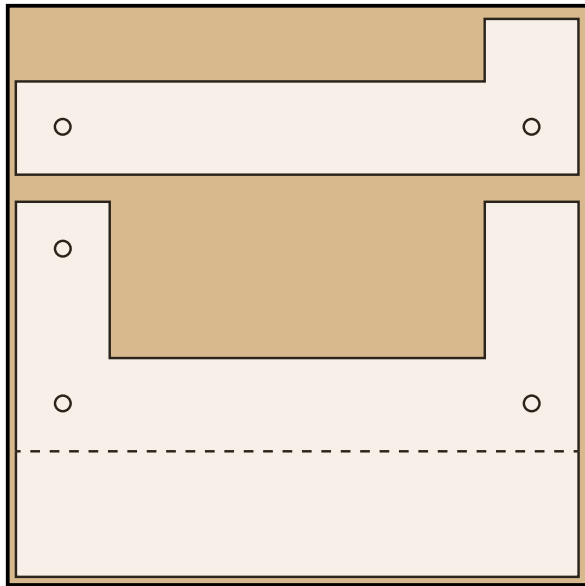


Back

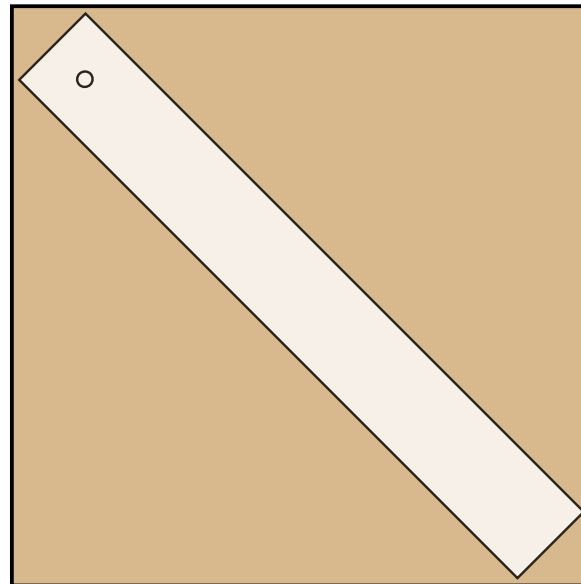


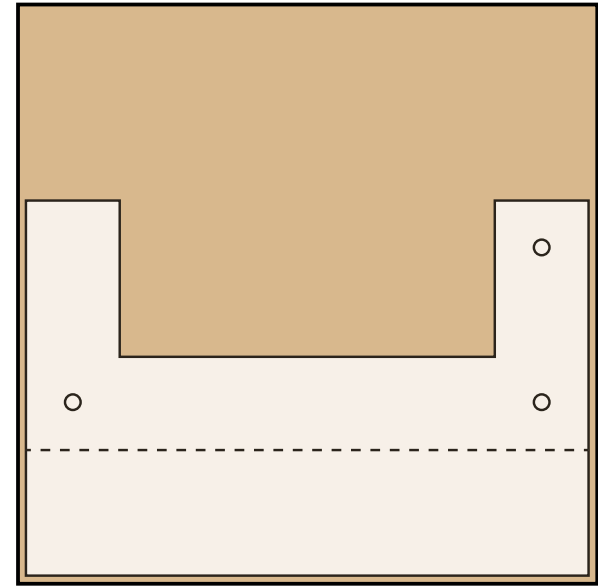
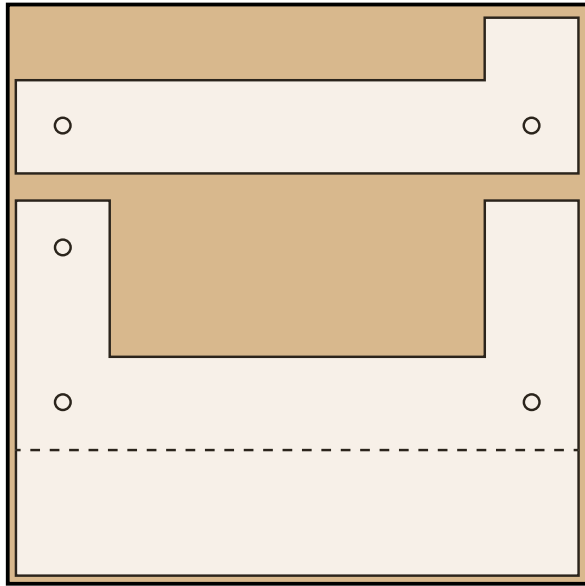
For the inside piece and the knife piece you should try to make them equal the height of the top part of the knife switch so that when the switch is closed it lines up horizontally.



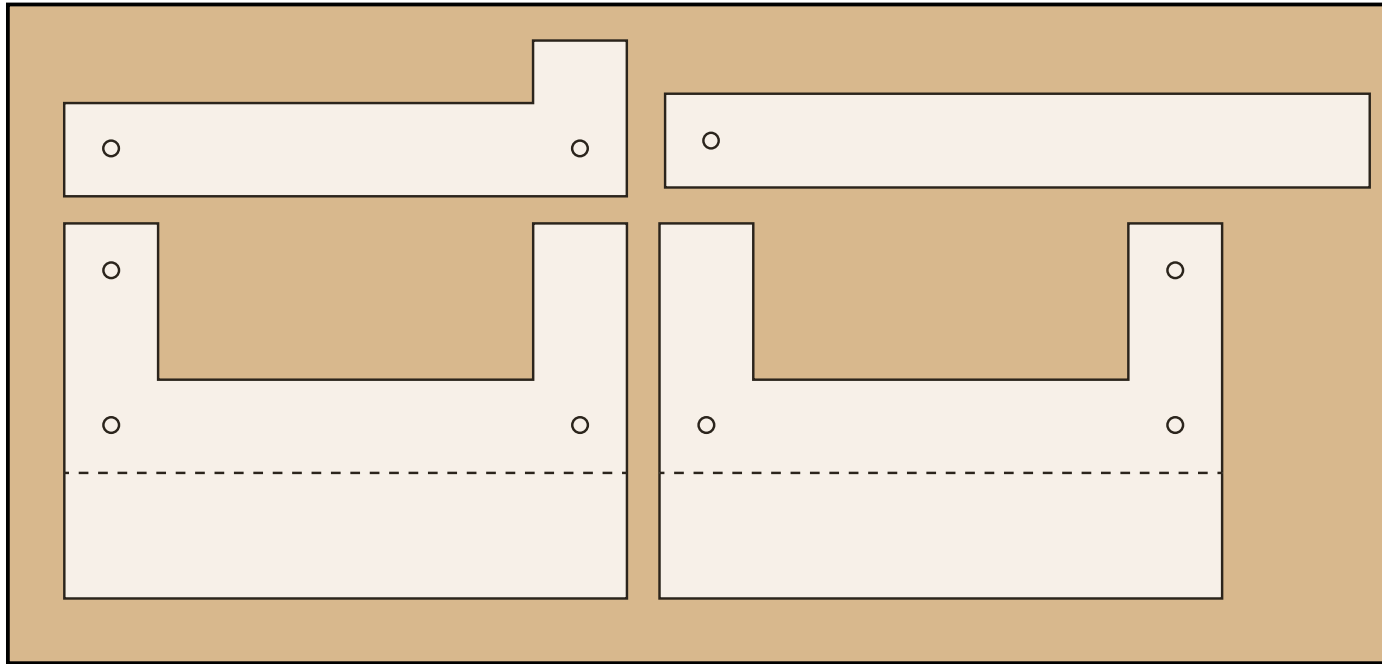


If you are using three pieces of equally sized cardboard and want to maximize the size you may need to rotate the longer knife piece to a 45 degree angle.





If you've got a longer piece of cardboard you can use for the knife piece that can work well too. (Try to make sure all of the pieces of cardboards are the same thickness though!)



Once giant piece of cardboard can also work! It's just rare that we find a single piece of cardboard that is large enough for the Giant Knife Switch, so multiple pieces are totally fine in this case.