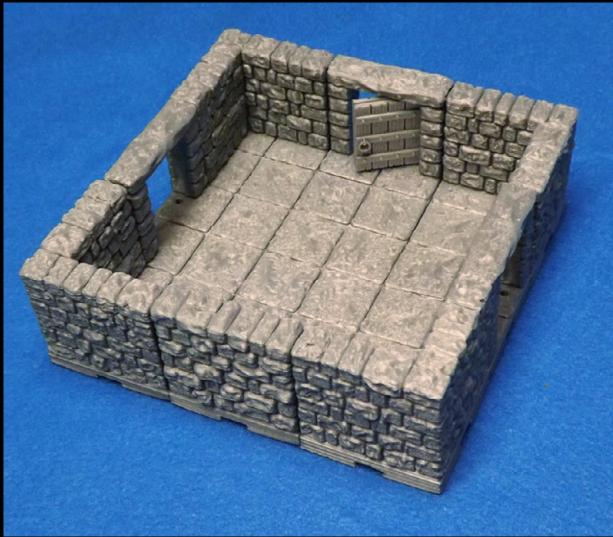
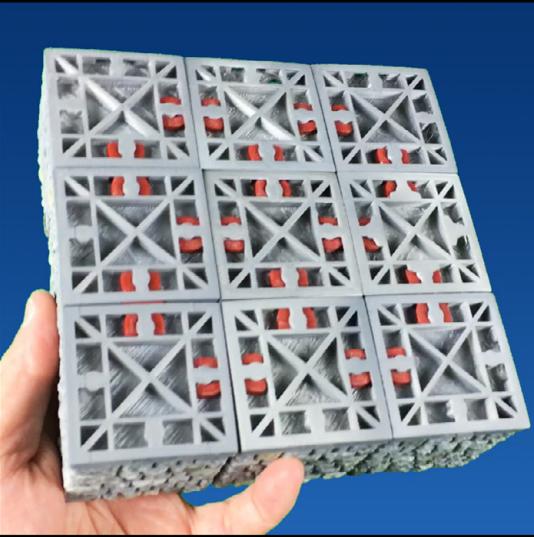


# DRAGONLOCK

ULTIMATE



Miniatures by [www.reapermini.com](http://www.reapermini.com)

## VILLAGE BUILDINGS I

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# DRAGONLOCK

## Getting Started

Welcome to the DRAGONLOCK: Ultimate™ terrain system. This instruction manual will outline some basic materials you will need for 3D printing these models, specific printing information for the models in this set, and links to additional resources.

For more information on getting started with 3D printing, help with choosing a printer, settings for many popular printers, troubleshooting, and more; please visit our 3D Printer forums:  
<http://fatdragongames.proboards.com/board/21/3d-printing-dragonlock-terrain>

For painting tutorials on these and other models in the DRAGONLOCK: Ultimate™ product line, please visit our Youtube channel:  
<https://www.youtube.com/channel/UC5Lbnd97HV3rU98gcwHklzQ>

## Basic Tools and Materials



For gluing models with multiple pieces together, we have found that Gorilla Glue works great (especially the 'gel' type.)

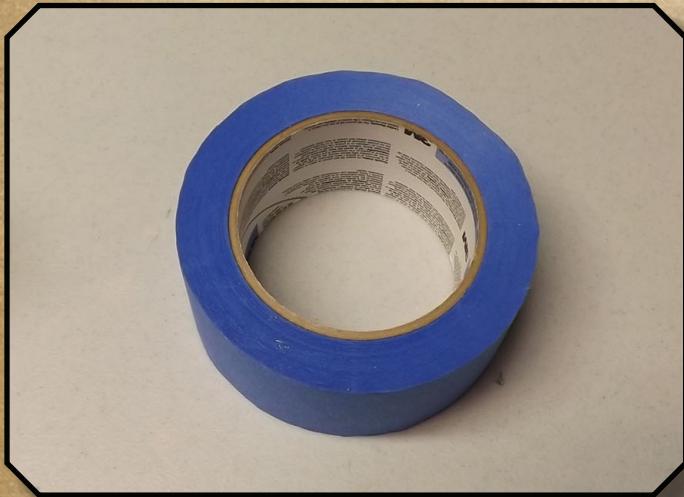


While not necessary, it helps to have a pair of small tweezers on hand. You'll find yourself using them often to pull odd strands of plastic off the model, getting small bits of plastic out of the printer, etc.

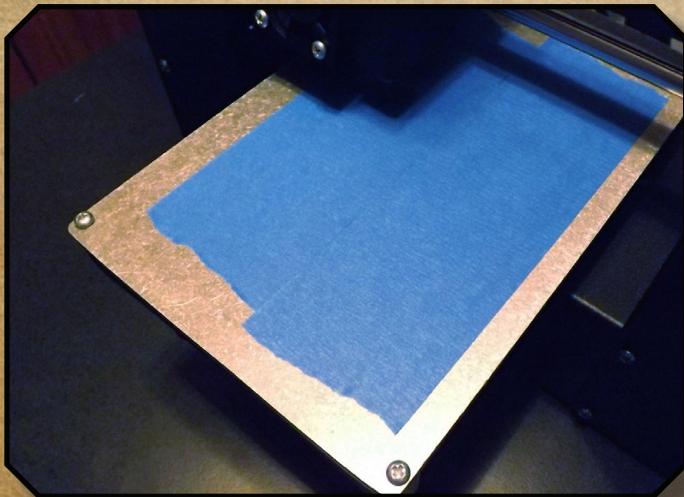
# DRAGONLOCK



Absolutely essential is a small metal spatula to help remove models from your build plate. We've found that ones like this from art supply aisles at craft stores work great and should only cost you a few dollars.



When printing PLA on a non-heated build plate, applying blue painter tape to your build-plate works great to help the plastic adhere.



To make your print stick as well as possible, you can wipe off newly applied tape with a paper towel that has a little rubbing alcohol on it (the tape has a wax coating on the back that sometimes inhibits the plastic from properly sticking to it).

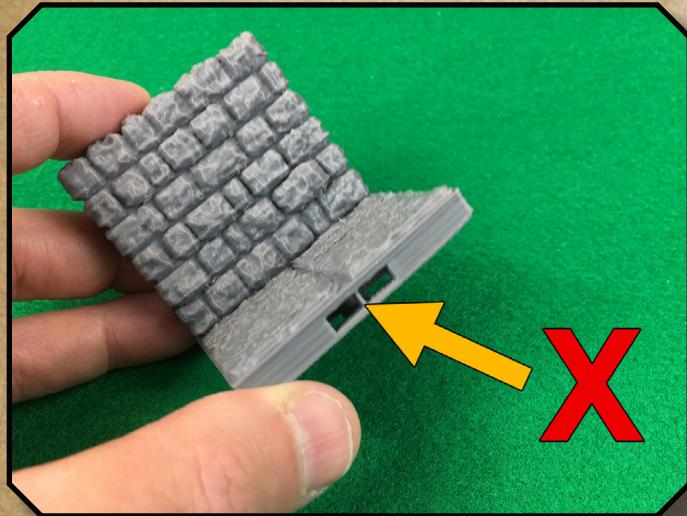
# DRAGONLOCK

## General printing tips for DRAGONLOCK: Ultimate™ models

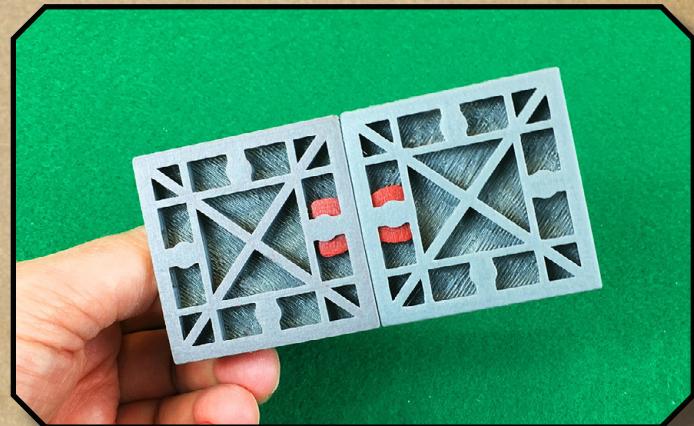
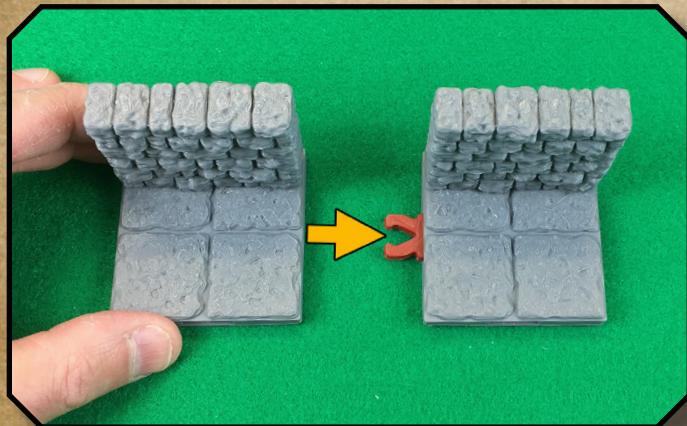
With the wide variety of printers and filaments on the market, it isn't possible for us to list printer settings that will work with multiple machines. Please visit the Fat Dragon Games forums for printer-specific tips and information:

<http://fatdragongames.proboards.com/board/21/3d-printing-dragonlock-terrain>

### Using the DRAGONBITE™ clips

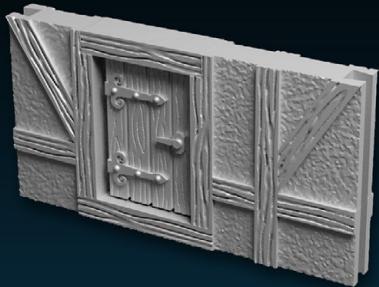


Before inserting a Dragonbite™ clip, you must first remove the printing support present in each slot on all four sides of every model. We recommend using needle-nose pliers to gently twist the support out of place (always wear eye protection when using tools.) Clips can be printed with 0% infill, but 15-20% is better.

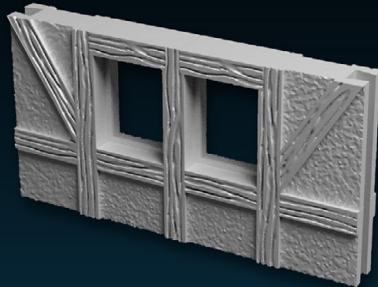


To connect DRAGONLOCK™ Ultimate models together, simply insert a Dragonbite™ clip into the slot of one model, then slide the adjoining model into the opposite side. Four sizes of Dragonbite™ clips are provided (loose, standard, tight, extra tight.) We recommend trying the tight clip first. The clips will work more easily after using them a few times.

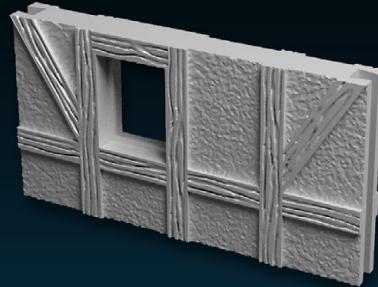
# DRAGON LOCK



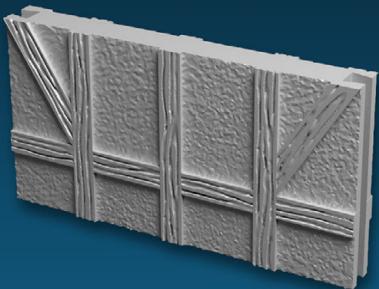
Wall D, Door (three pieces, glue lintel in place)



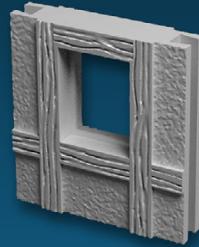
Wall D, 2 Windows



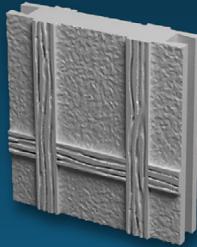
Wall D, 1 Window



Wall D



Wall C, 1 Window



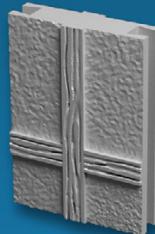
Wall C



Floor Hole Plug



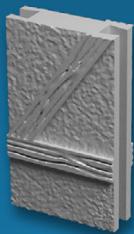
Slot Plug



Wall B



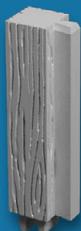
Wall C, Door  
(three pieces, glue lintel in place)



Wall A



Post 0



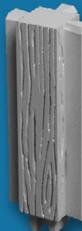
Post 1



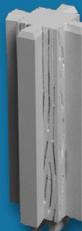
Post 2



Post 2 'L'



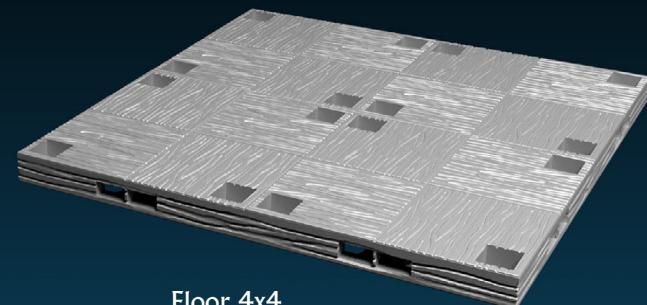
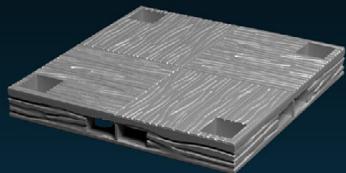
Post 3



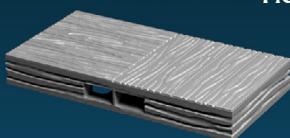
Post 4

# DRAGONLOCK

Floor 2x2

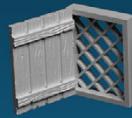


Floor 1x2



Floor 4x4

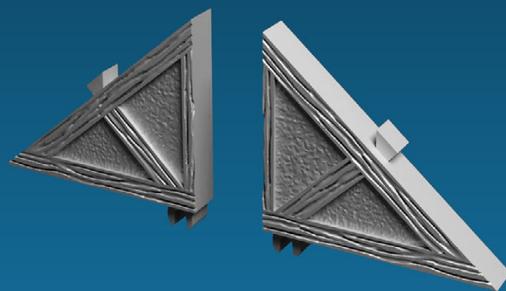
Frame Only



Window Closed Shutter

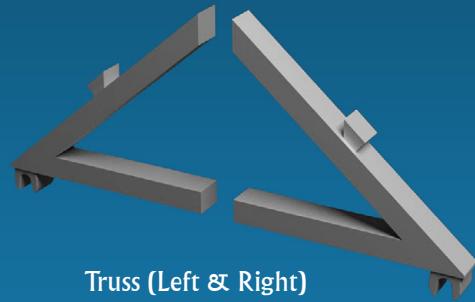


Window Open Shutter

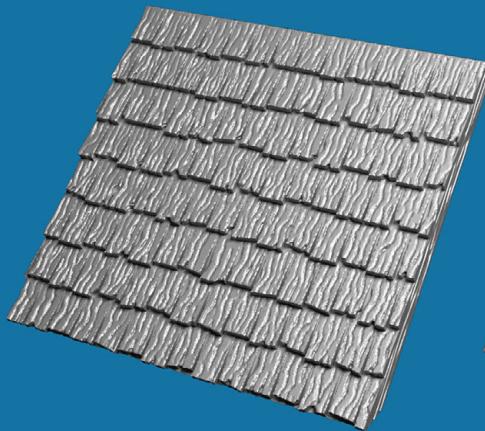


Gable (Left & Right)\*

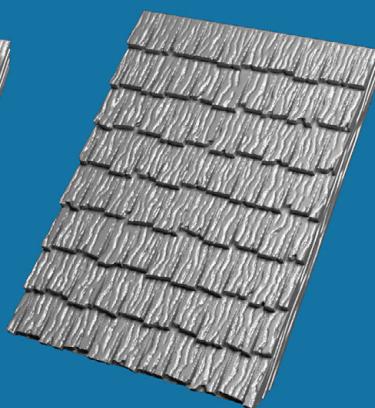
\*Note: Gable rear face must be glued in place



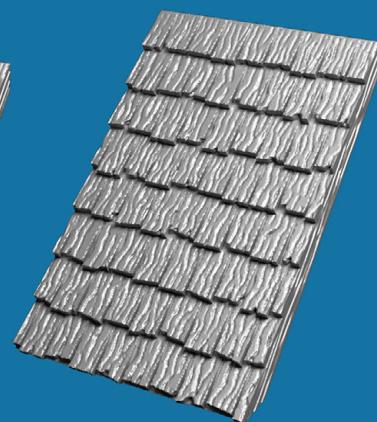
Truss (Left & Right)



Roof 3O (3" plus overhang)

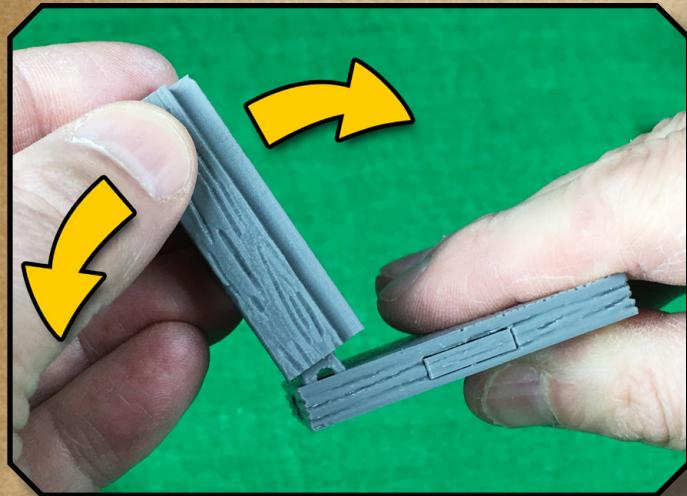


Roof 2O (2" plus overhang)

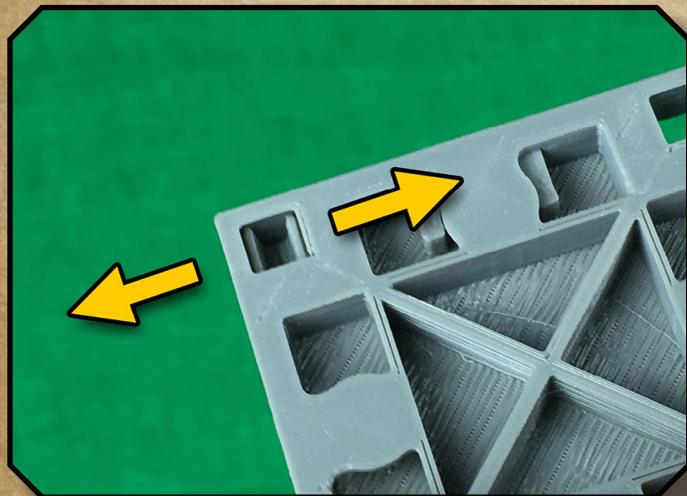


Roof 2 (2" no overhang)

# DRAGON LOCK



When inserting or removing posts, it helps to gently rock them back and forth along the axis of the grip-claw on the bottom (never rock against the claw as this will break it off.)

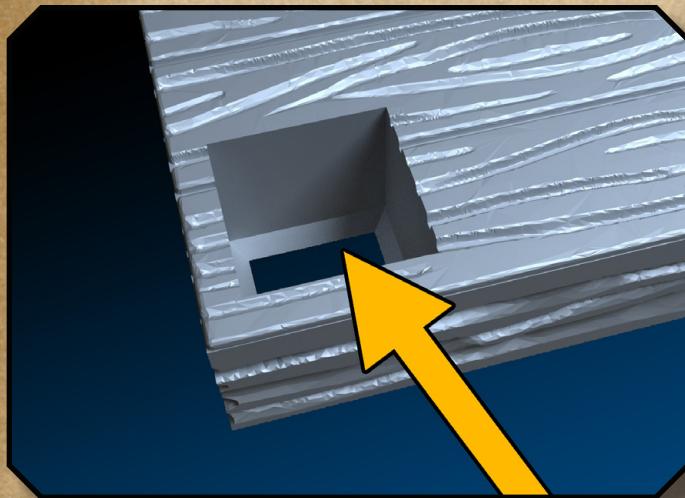


You can easily tell which way to rock the post when it is inserted in a tile by looking at the bottom. Rock in the direction of the claws.

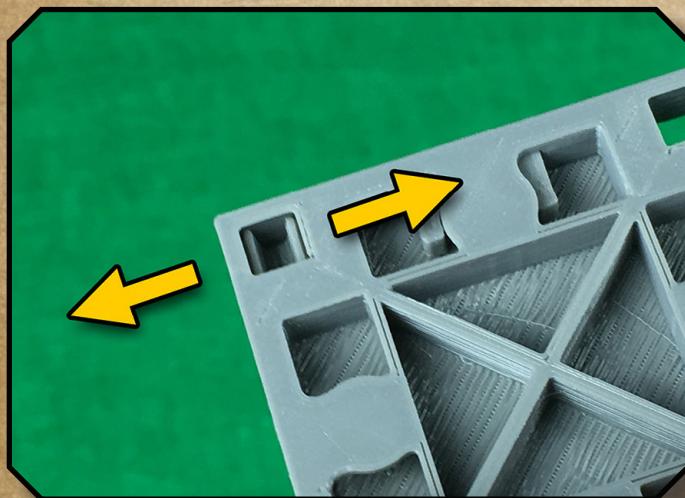


If your posts fit too tight, use sandpaper or a file to gently remove a small amount of plastic on the outer edges of the 'claw' as shown in red.

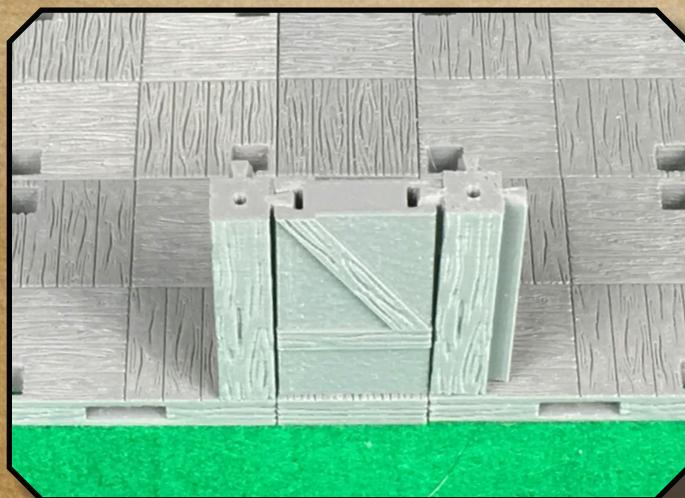
# DRAGON LOCK



Be sure the post holes are clear of any stringing or excess plastic from the printing process, as even a small amount will hinder the posts fitting properly.

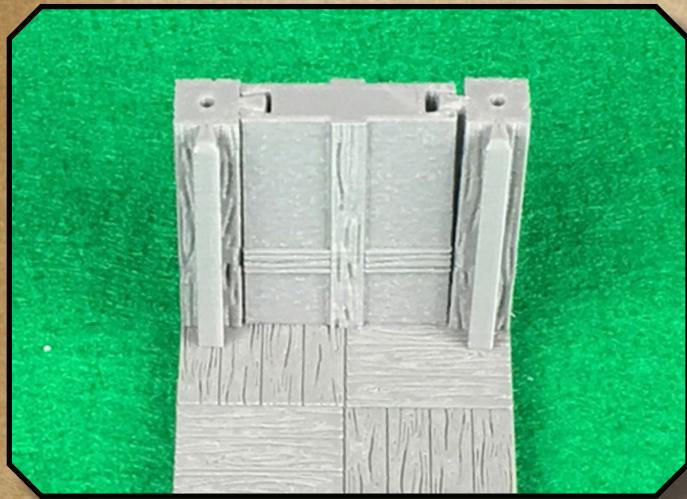


You can easily tell which way to rock the post when it is inserted in a tile by looking at the bottom. Rock in the direction of the claws.

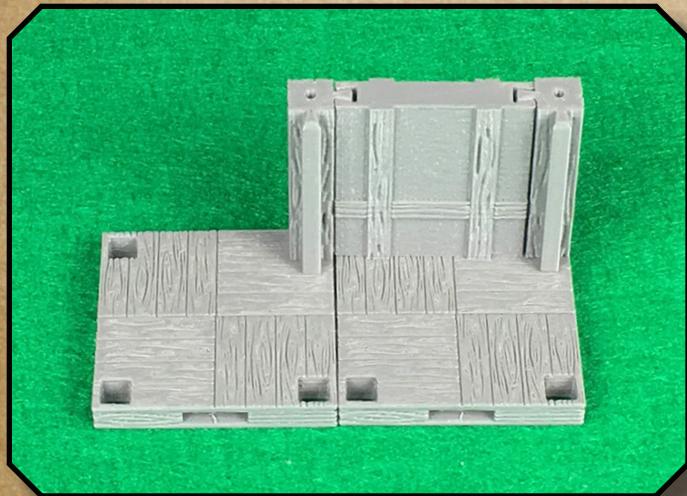


There are four sizes of walls included in this set. The shortest is type 'A'. Wall A is exactly 1" wide, and is paired with the 2x1 floor extension pieces.

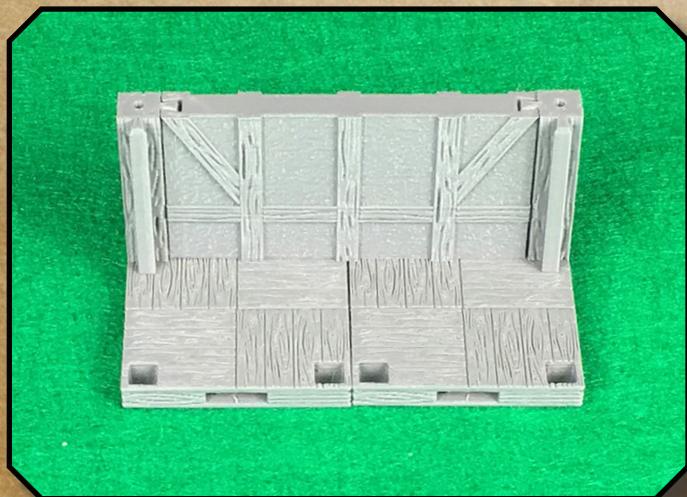
# DRAGON LOCK



Type 'B' walls are the next largest after type 'A', and are fit between two posts on the same tile (i.e., posts inserted into the corners of a single 2x2 tile.)

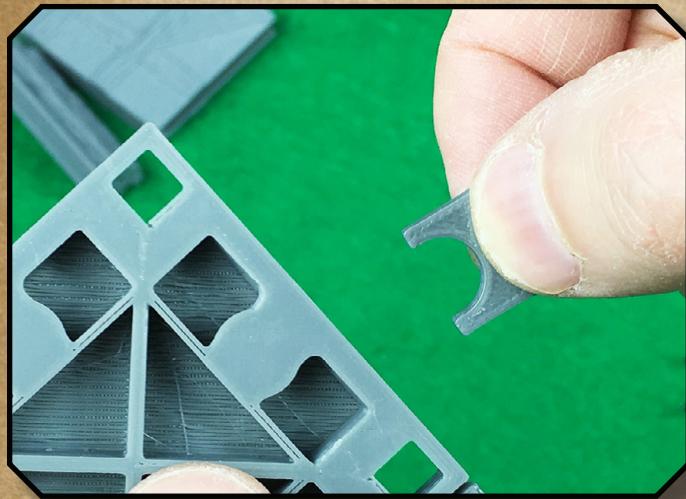


Type 'C' walls are larger than 'A' or 'B' walls, and fit between posts inserted into corresponding corners of adjoining tiles as shown in this image.

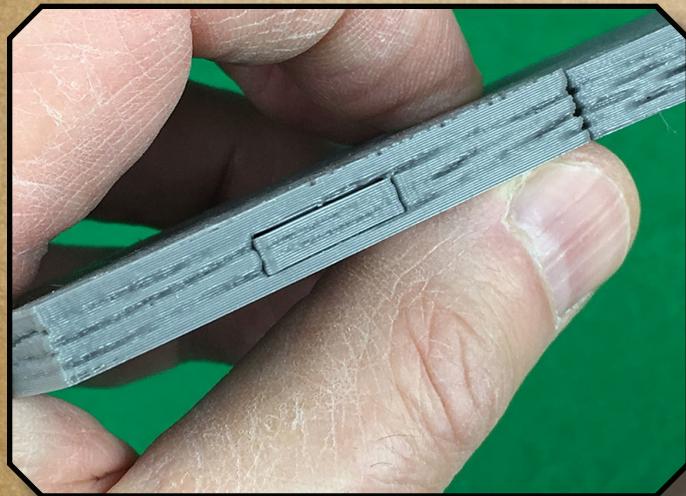


Type 'D' walls are the longest, and fit between two posts at opposite ends of two tiles.

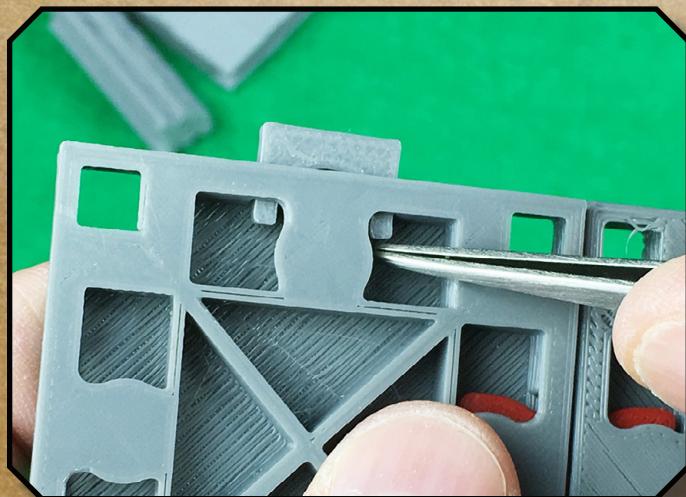
# DRAGONLOCK



The clip slots on the sides of tiles can be filled with a plug when not in use. Simply insert the plug as shown.

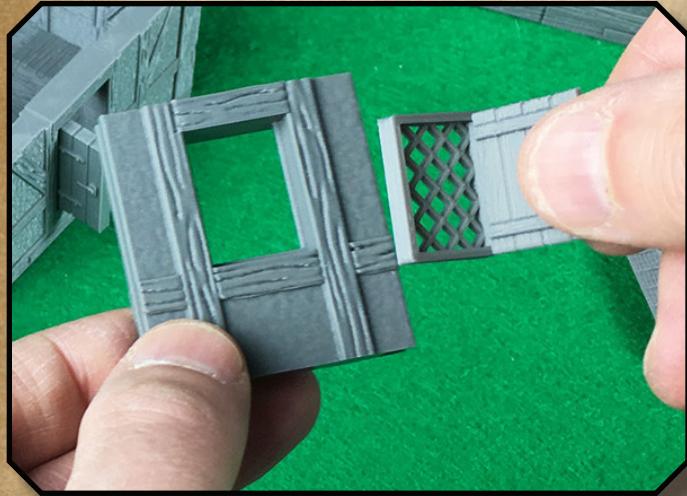


The plugs come in both smooth and woodgrain versions.

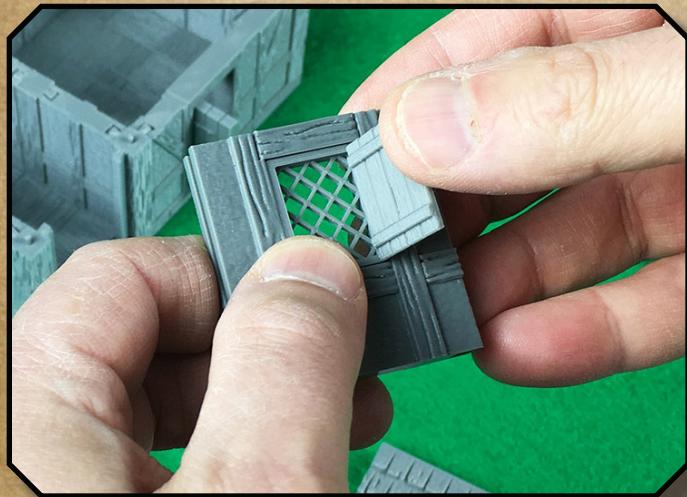


To remove a plug, insert a thin tool (like tweezers) behind it and gently push forward.

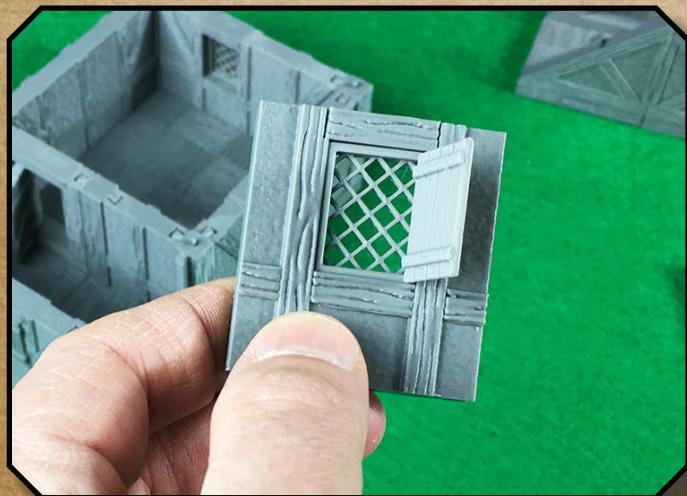
# DRAGONLOCK



Windows are designed to pressure fit in place, and be swapped out as desired.

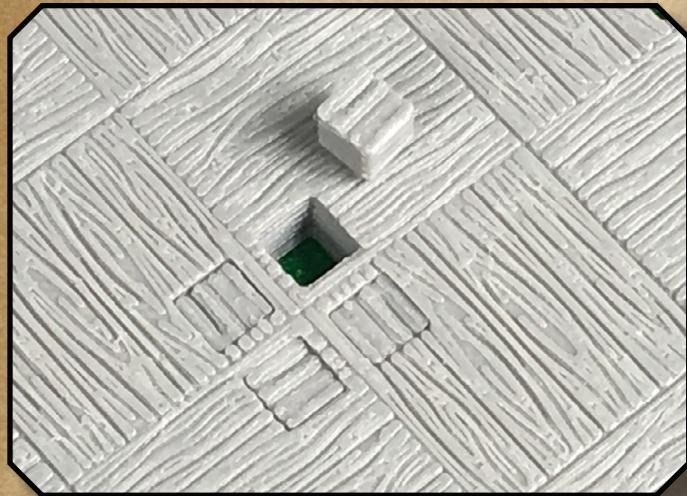


Press all four corners into the frame opening as far as they will go. The window should be tight enough not to fall out.

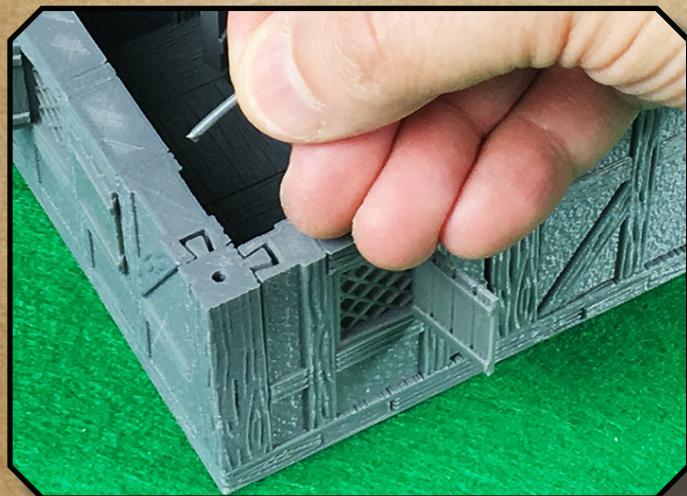


The window in place.

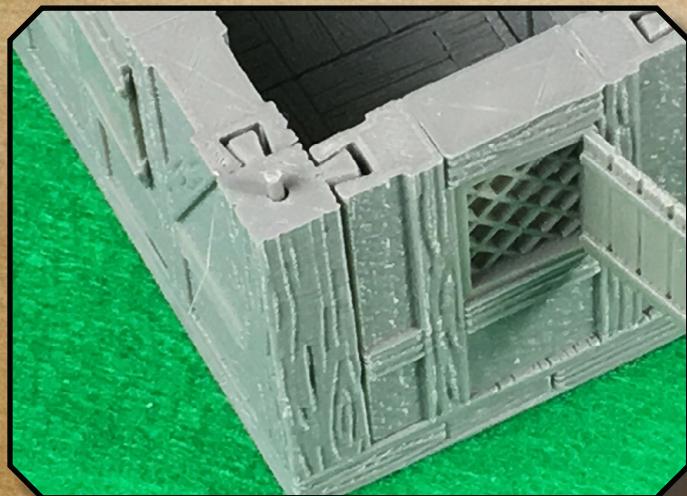
# DRAGONLOCK



Unused floor holes can be filled with plugs to make them unobtrusive during play.



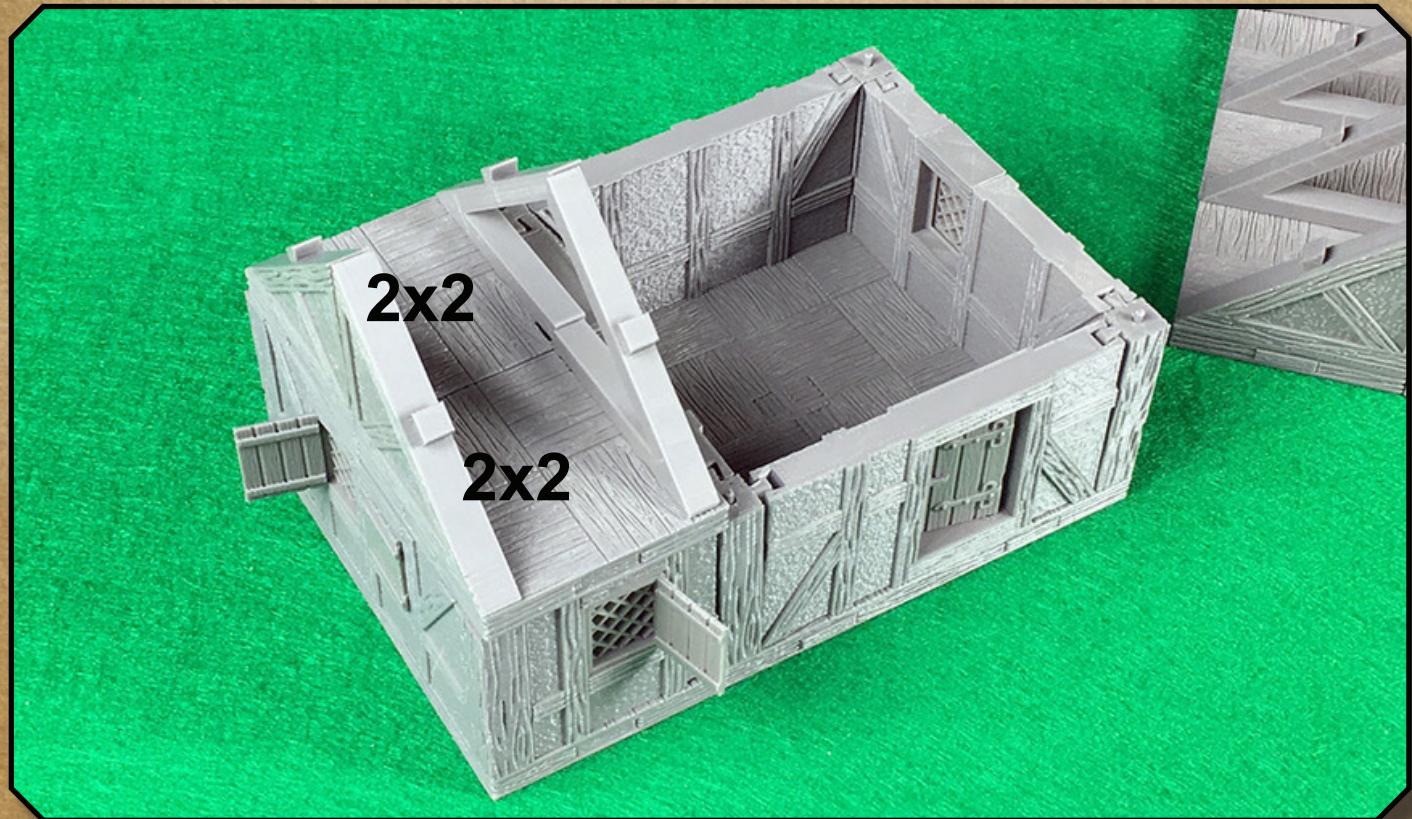
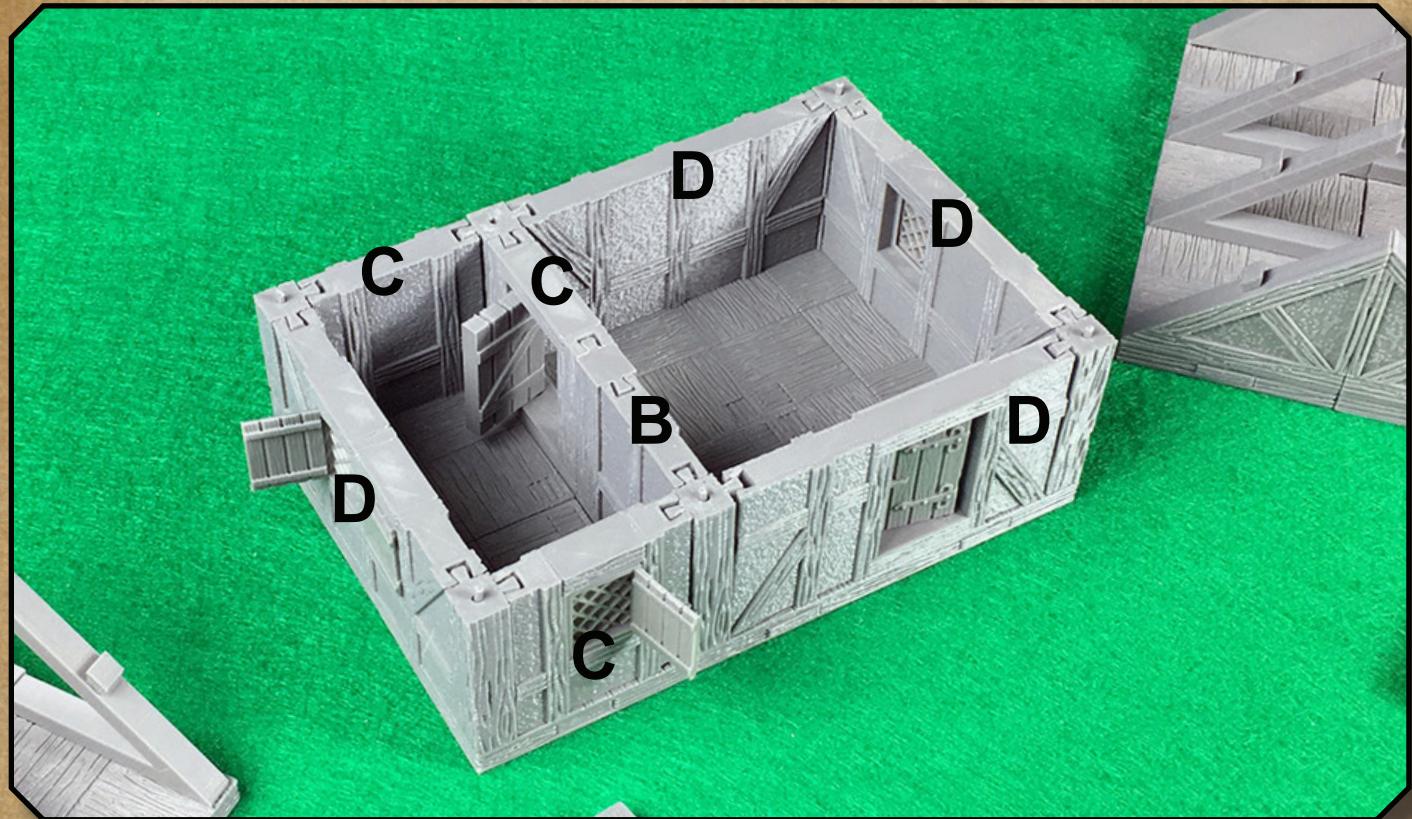
To keep building levels from shifting, insert small pieces of filament (1.75mm diameter), or thin pieces of aluminum or plastic rod, into the holes on top of posts.



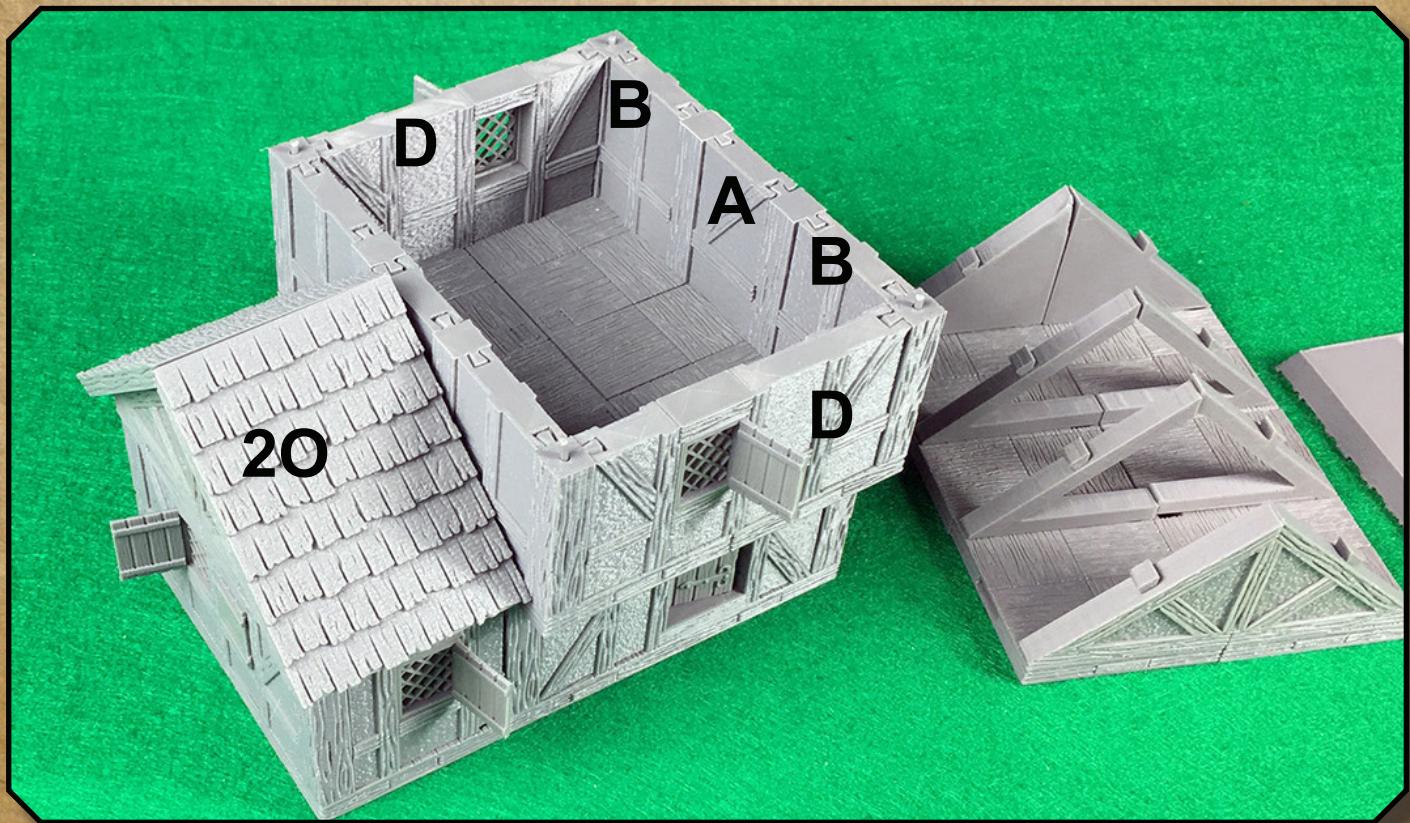
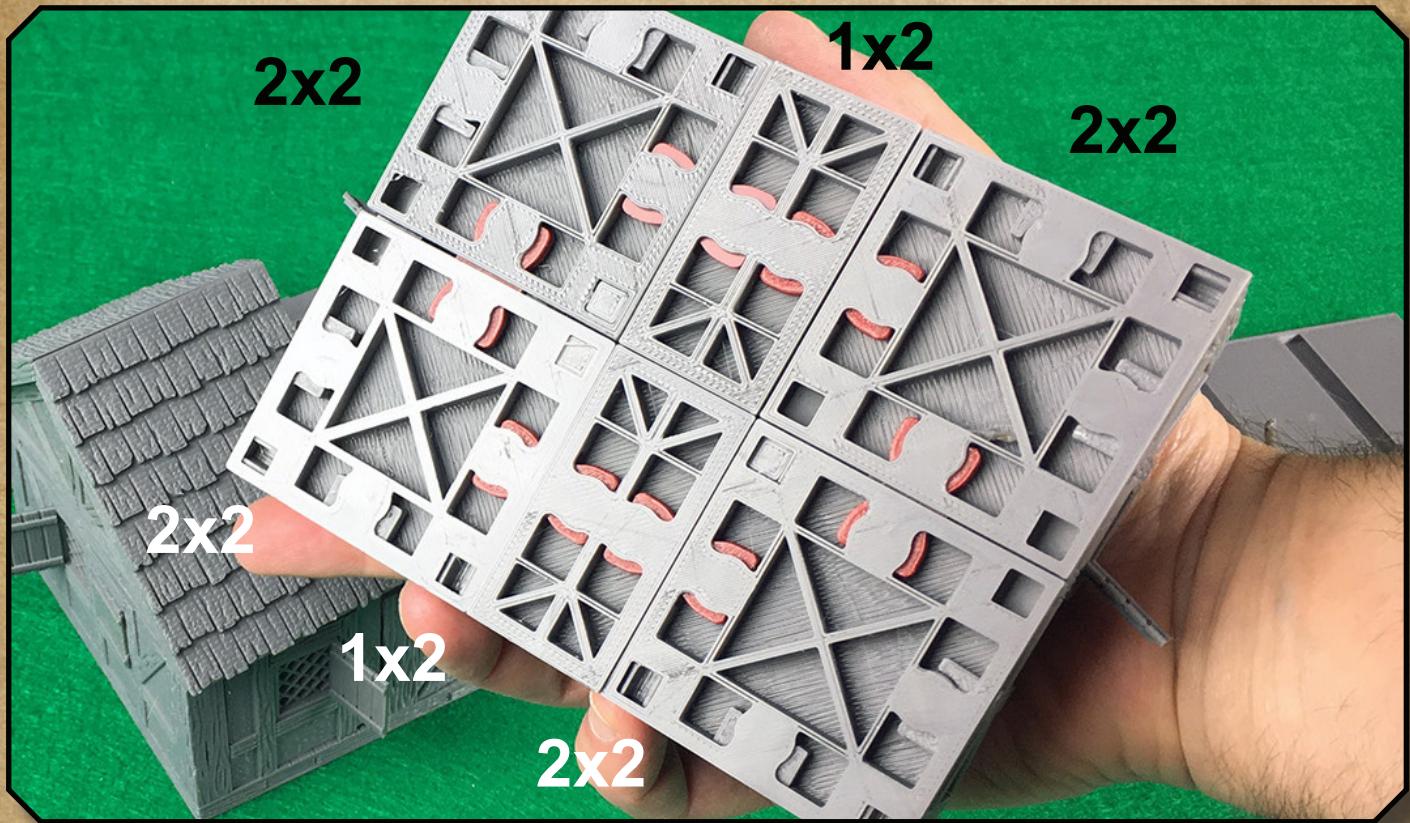
Just a very small amount protruding from the hole in each corner post will keep upper levels in place during play.

# DRAGONLOCK

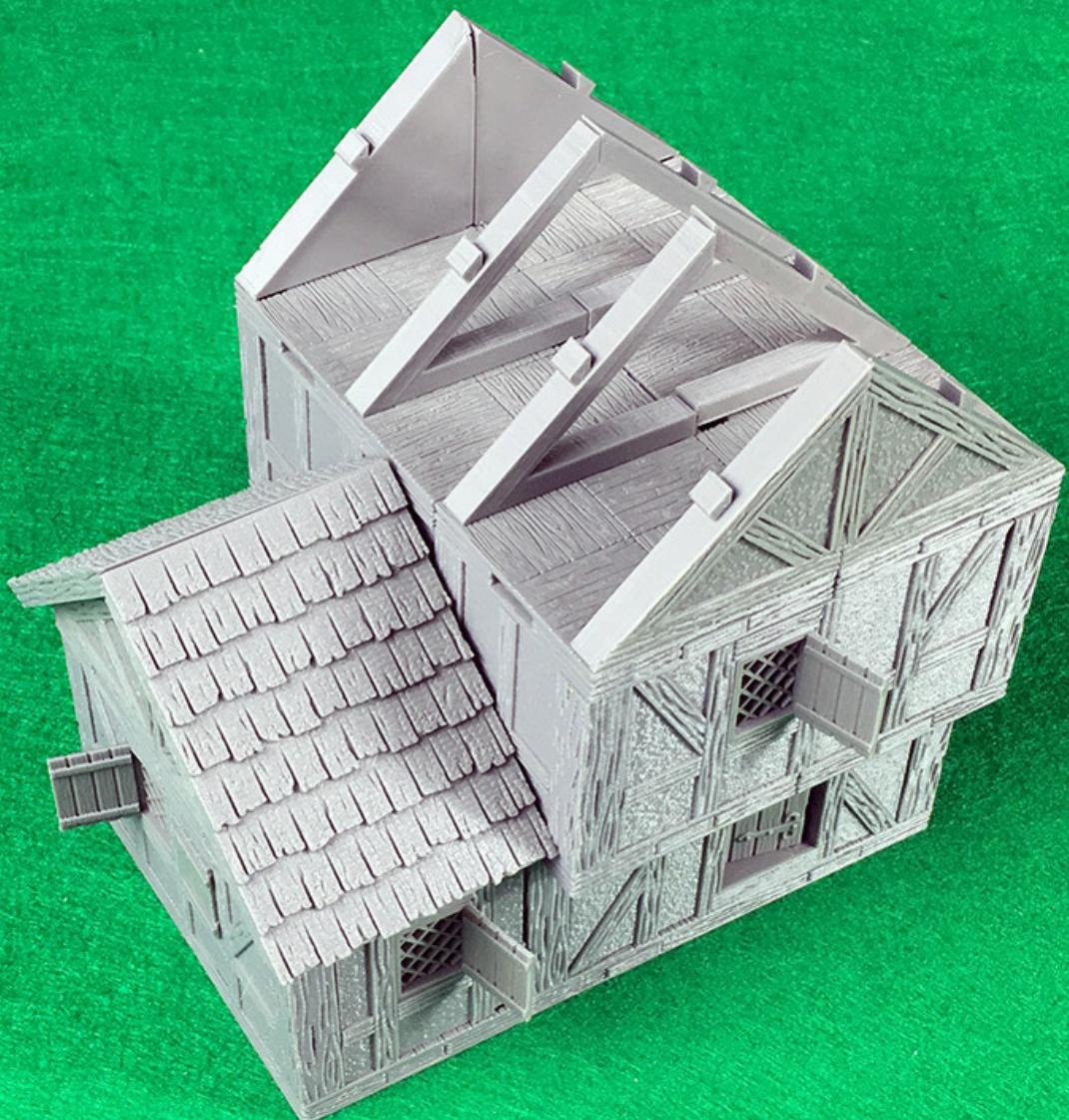
Below are photos showing a sample house design, with key components identified.



# DRAGONLOCK



# DRAGONLOCK



# DRAGONLOCK



Three roof widths are provided, a 2" (2), 2" with end overhang (2O), and a 3" with end overhang (3O). Overhang pieces are ones that go on the ends of buildings, so the roof properly juts out from the wall side. The 2" wall is a filler piece, used only for sections that are not on the ends of buildings.



# Printing info:

## Filament:

- We recommend using PLA (we use Protoparadigm and Hatchbox in the FDG office)

## Layer Height:

- All clips and wall models: 150 micron/.15mm recommended (200 micron/.2mm works great as well)

## Top/Bottom layers:

- 6 layers or .9mm

## Side layers/shells:

- 2 shells (.8mm with a .4mm nozzle)

**OPTIONAL POST SHELLS/PERIMETERS:** If your PLA is brittle once printed and you have concerns about the post claws snapping off during use, you can print your posts with 3 perimeters (1.2mm with a .4mm nozzle) to increase strength.

## Infill:

Walls, floors: 0%

Roofs, gables, and trusses: 15%

Posts: 0-20% infill

## Rafts & Brim:

**4x4 Floor:** if your printer has issues with curling, then use a raft for this.

**Posts:** These print best with a small brim to ensure they do not tip over and break free during printing. All other models, no brim or raft required.