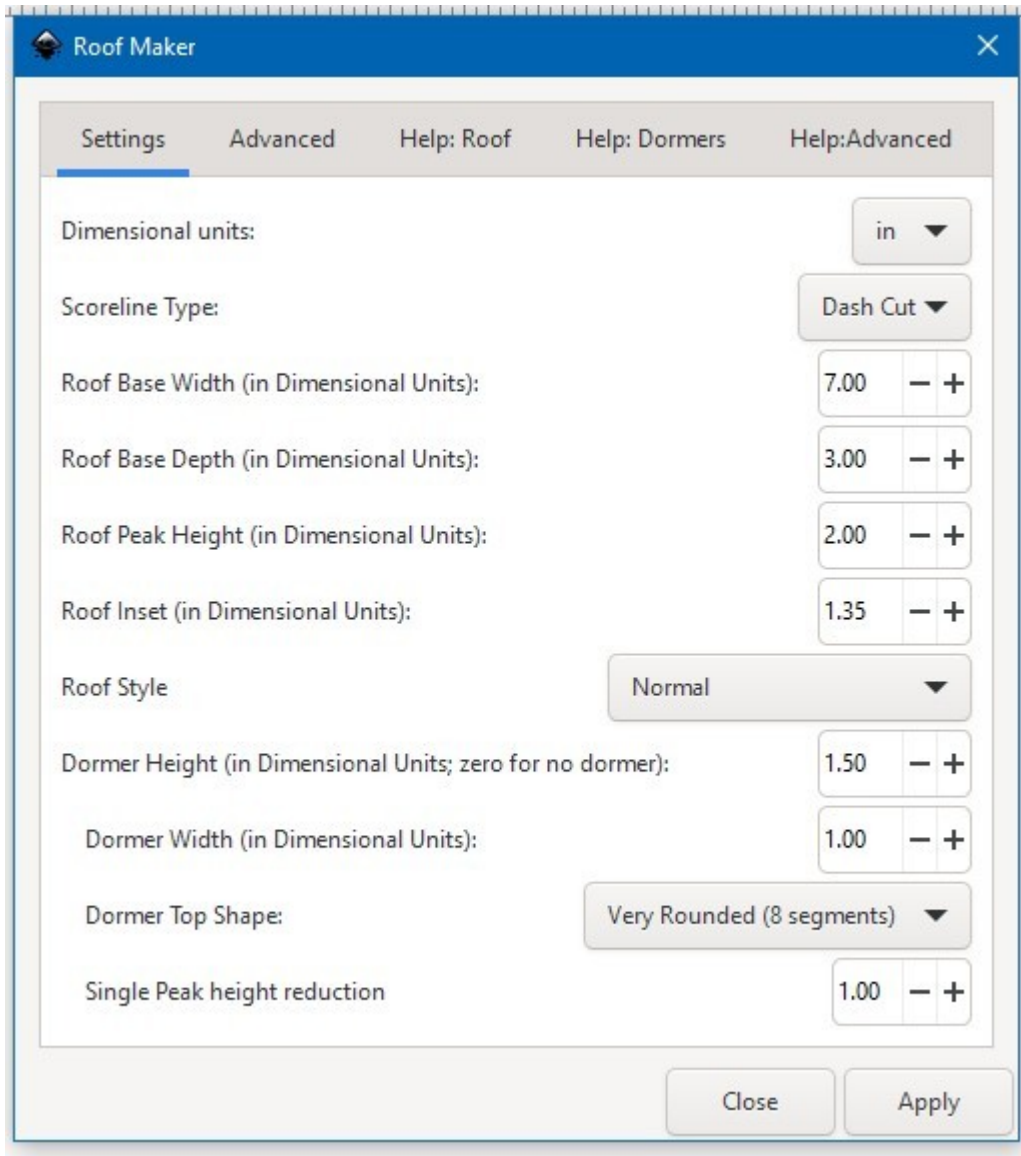


Roof Maker

This extension is designed to help make roof pieces for 3D papercraft designs. It also designs the pieces for dormer windows of several types.

The Options Panel: The most common parameters are in the Settings tab. Some advanced settings are under the Advanced tab.



The screenshot shows the 'Roof Maker' application window. It has a blue title bar with the text 'Roof Maker' and a close button. Below the title bar is a tabbed interface with five tabs: 'Settings' (selected), 'Advanced', 'Help: Roof', 'Help: Dormers', and 'Help: Advanced'. The 'Settings' tab contains the following controls:

- Dimensional units:** A dropdown menu set to 'in'.
- Scoreline Type:** A dropdown menu set to 'Dash Cut'.
- Roof Base Width (in Dimensional Units):** A numeric input field with '7.00' and minus/plus buttons.
- Roof Base Depth (in Dimensional Units):** A numeric input field with '3.00' and minus/plus buttons.
- Roof Peak Height (in Dimensional Units):** A numeric input field with '2.00' and minus/plus buttons.
- Roof Inset (in Dimensional Units):** A numeric input field with '1.35' and minus/plus buttons.
- Roof Style:** A dropdown menu set to 'Normal'.
- Dormer Height (in Dimensional Units; zero for no dormer):** A numeric input field with '1.50' and minus/plus buttons.
- Dormer Width (in Dimensional Units):** A numeric input field with '1.00' and minus/plus buttons.
- Dormer Top Shape:** A dropdown menu set to 'Very Rounded (8 segments)'.
- Single Peak height reduction:** A numeric input field with '1.00' and minus/plus buttons.

At the bottom right of the window are two buttons: 'Close' and 'Apply'.

Dimensional units: This parameter is the units that the user is using when entering the values below

Scoreline Type: Choose if you want solid scorelines or dashed/cut scorelines. If Solid, then the scorelines will be grouped with each piece. If dash-cut, then the scorelines will be part of the piece path. Groups are always used for the two main roof pieces to make it easier to add holes for the dormers.

Scorelines on groups will be green. Scorelines that are part of paths will be black.

Basic Roof Settings

Roof Base Width: From a front view, this is the left to right width of the roof

Roof Base Depth: From front to back at the base of the roof

Roof Peak Height: The vertical measure from the base of the roof to the peak

Roof Inset: If used, this will make your roof narrower at the top than the bottom . The inset refers to how much this is on each side. E.g. if you use .5", the top of the roof will be a total of 1" shorter than the base. This is ignored if the roof style is set to Barn

Roof Style:

Normal: One angle from base to peak.

Barn: The angle at near the top will change to tilt in more

Dormer Window Settings:

Dormer Height: The height of the dormer window. **If zero**, then no dormer windows will be drawn.

Dormer Width: The width of the dormer (from a front view)

Dormer Top Shape: Dormer windows are one of these types, the more segments, the more rounded the window top will be.

Most Rounded: 10 segments make top

Very Rounded: 8 segments make top

Mostly Round: 6 segments

Geometric: 4 segments

Single Peak: 2 segments; The top will come top a single center peak

Just the Base: The window will be rectangular, no top.

Single Peak height reduction: If the dormer is the Single Peak type, then this number can be used to lower the peak to a flatter profile. Dormer height will remain the same.

Advanced Settings:

Extend distance of dormer base from roof: Normally the bottom of the dormer will be flush to the roof. This setting can be used to allow your dormer base to be outset from the roof.

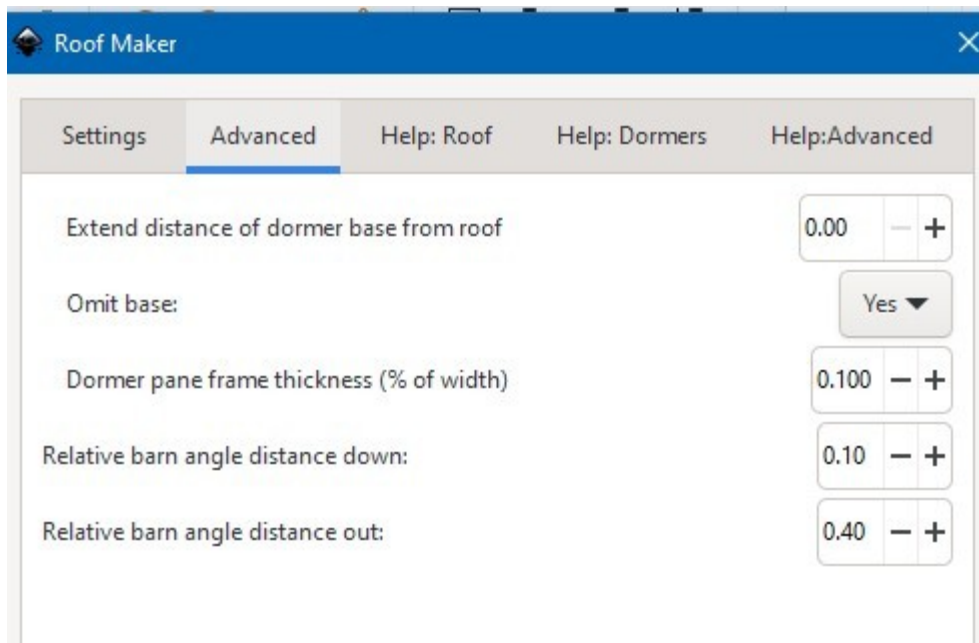
Omit base: If using a dormer type other than Just the Base, then you can opt to use only the top shape of the window. This will limit your dormer height to the shape of the top of the dormer. (The calculated height of the dormer top is normally equal to half the width of your dormer.) Note: if you omit the base and have a dormer type of "Just the Base" no dormers will be constructed, because I have no idea what that would look like.

Dormer pane frame thickness % : This is how thick you want the "frame" area around the dormer window "glass" pane. Increase this to have more room for trim, for instance.

Relative barn angle distance down: On barn type roofs, this affects where the change in the roof angle occurs, as a percentage (downward) of the roof peak height. Smaller numbers will result in the roof angle change occurring higher. *

Relative barn angle distance out: On barn type roofs, this affects where the change in the roof angle occurs, as a percentage (outward from center) of the roof depth/2. Smaller numbers will result in the roof angle change occurring closer to the middle. *

*To more easily preview the shape of the resulting settings, look at the roof side decorative piece.



Usage and notes:

After installing, the extension can be found in "Extensions->Papercraft"

Basic usage: Just fill out the setting options and apply. Your pieces will be created.

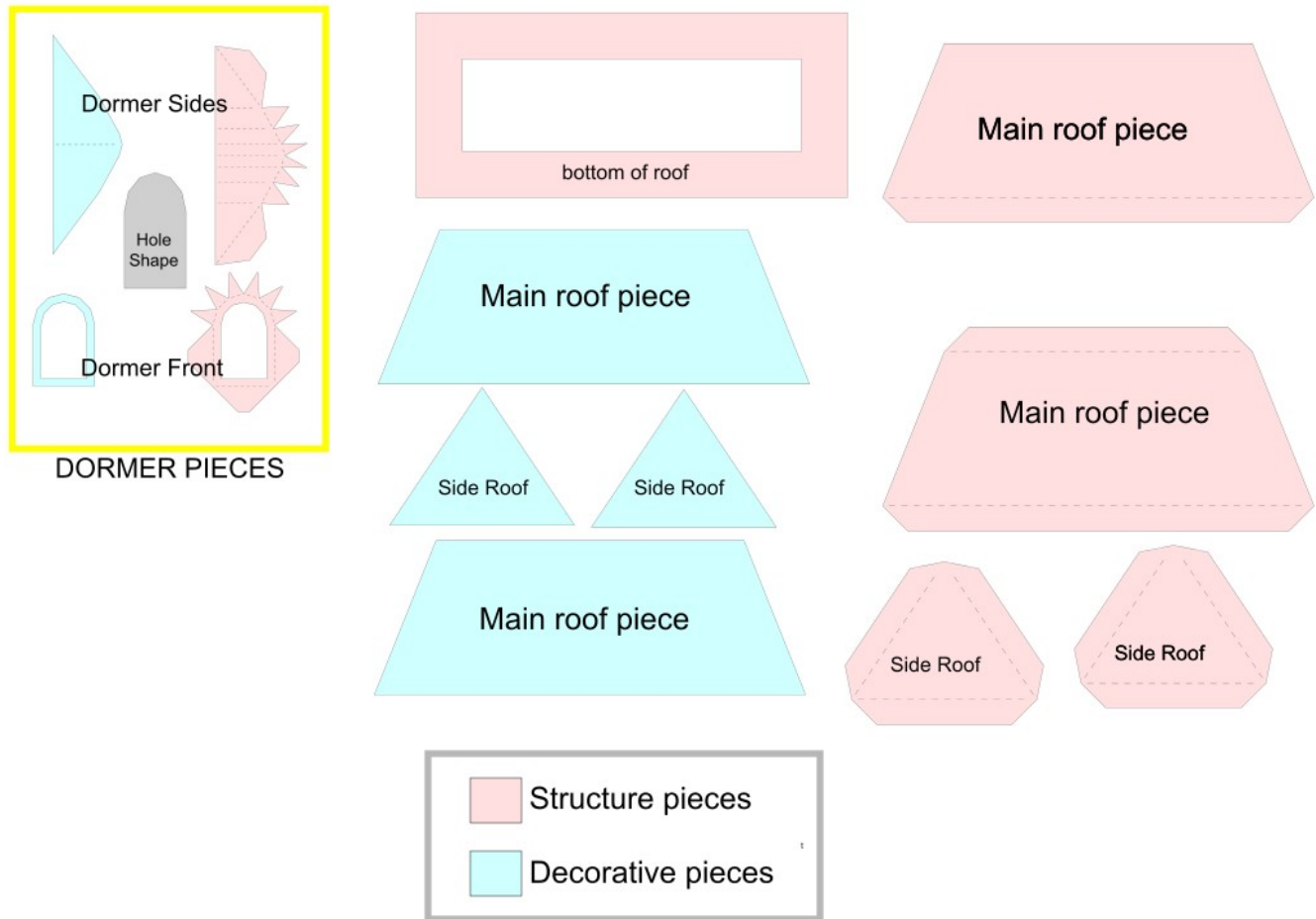


Figure 1: Pieces that the extension creates

Some of the pieces created will be positioned on top of each other. Just move them apart. Most are single paths. The only exception to this is the main roof pieces, which are grouped with their scorelines. This was done to make it a little easier to add the dormers (explained below). Following is an example of the pieces created. Yours will likely look different depending on the parameters you use.

Dormers Placement:

You will need to decide how many dormer windows you want, and where to position them in your roof, if using them. Duplicate the dormer pieces as needed.

Here are the steps for doing that (this will go very quickly once you've done it a couple of times):

1. Move the decorative roof main piece over the roof piece. You will want to cut holes in the decorative piece in exactly the same place as on the structure piece. If you are putting windows on the backside as well, you can stack all the roof pieces and decorative pieces at this point.
2. Ungroup the decorative piece if it is grouped with scorelines (barn style)
3. Drag one or more duplicates of your hole shape onto the decorative piece.
4. Once you have your hole shape(s) in position, select them all and combine (ctl k) into a single hole path
5. DUPLICATE (ctl-d) THIS PATH and leave the duplicate selected (if doing both sides of the roof duplicate 3x)
6. If the decorative piece is grouped with scorelines, ungroup it. (ctl shift g)
7. Shift-click decorative piece and difference with the holes (ctl shift -) to make a new roof path
8. Select the scorelines (if present) and roof piece and combine (ctl-k) You will now have a single path that incorporates your decorative roof panel and the roof.
9. Move the decorative roof piece aside. You should still have the a holes path and the structure piece in place. Follow the same steps as above to place holes into the structure piece. If you are doing both sides of the roof, just repeat steps 6-8.
10. Be sure to duplicate the four dormer pieces so you have the pieces you need for any additional dormers.
11. You can delete the hole piece once you are finished.

Other changes you might want to make:

Roof decorative pieces: you might want to extend the height and/or width of these so they will overhang your roof a bit, or you might want to create shingle cuts in them for interest.

About the extension: The guts of the extension were written by me (Obzerving's wife a.k.a. The Serial Crafter) with a whole giant heap of Obzerving's routines for adding tabs and scorelines, as well as his much needed assistance with turning it into an extension. Hopefully it will be helpful to anyone trying to make houses and buildings in 3D papercraft. I'll post links to any videos on TheSerialCrafter.com