



Building the MicroHouse 2 Door Module.

This guide will teach you how to cut and assemble the pieces to make the MicroHouse 2 Door Module.

Written By: Chris Reinhart



INTRODUCTION

Download the Sketchup (skp) file of the MH 2 Door Module here:

<http://opensourceecology.org/wiki/File:M...>

Use the scene tabs at the top in the model to see the various steps in the assembly, the full module, or the cut pieces.



TOOLS:

- [Table Saw](#) (1)
- [Circular Saw](#) (1)
- [Speed Square](#) (1)
- [Tape Measure](#) (1)



PARTS:

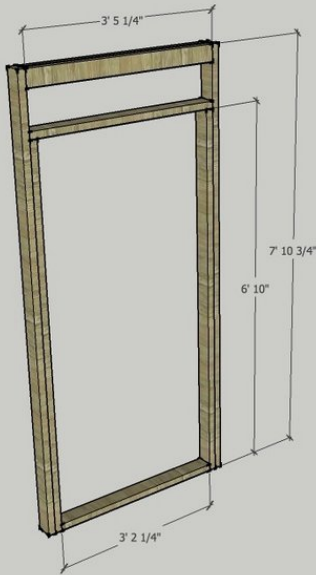
- [2x4, 8' long](#) (6)
- [5/8" plywood, 4'x8' sheet](#) (1)

Step 1 — MicroHouse 2 Door



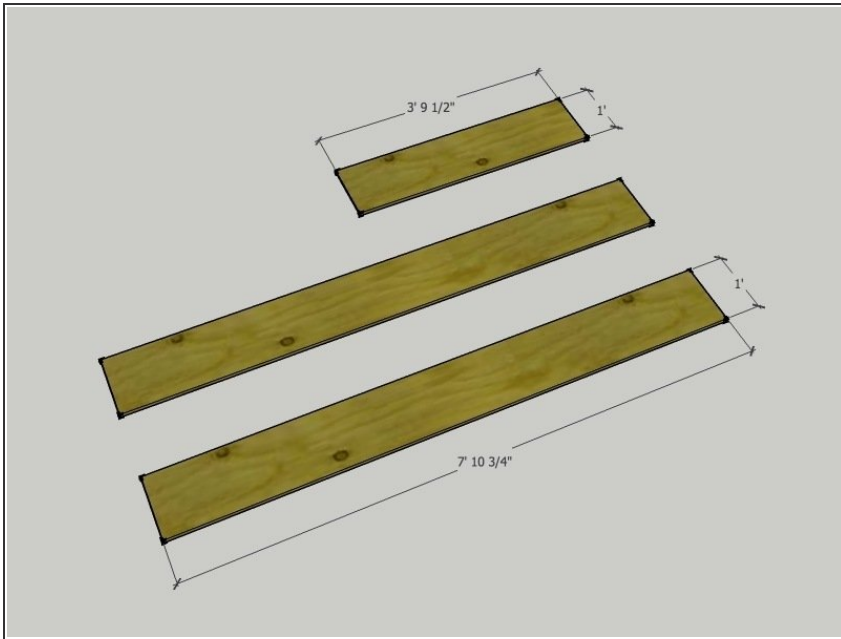
- The most important part of building any rough opening is to make certain that it is the proper size. **If you are not using exactly the same door that we specify, double-check the ROUGH OPENING size specified by the manufacturer. Note: This is different from the frame size.** Rough opening is abbreviated, "R.O."
- The R.O. for the door we are using is 38 1/4" W x 82" H. The image at left shows the door from MH 1. We are using the same door in MH 2, except that it has a right hand (RH) swing instead of a left hand (LH) swing.
- Estimated time 1 hr 40 mins for two people.

Step 2



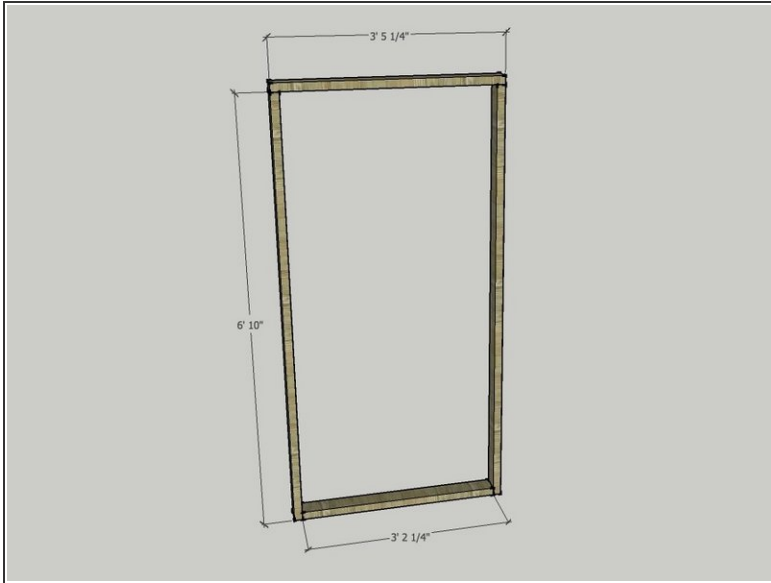
- The image shows the lengths of the 2x4s you will need to make the door module.
- **CUT LIST - NOTE DIFFERENCES BETWEEN IMAGE AND LIST - FOLLOW LIST, NOT IMAGE!**
 - 2 @ 8'
 - 2 @ 6' - 10"
 - 3 @ 3' - 5 1/4"
 - 1 @ 3' - 2 1/4"
 - 2 lengths of scrap for gussets approximately 2-4'
- You can also access the cutlist spreadsheet here:
<https://docs.google.com/a/opensourceecol...>

Step 3



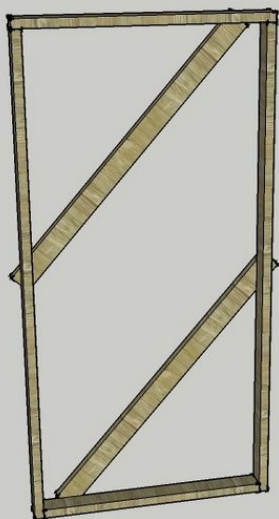
- The image shows the plywood pieces needed to make the door module.
- **CUT LIST - NOTE DIFFERENCES BETWEEN IMAGE AND LIST - FOLLOW LIST, NOT IMAGE!**
 - 2 @ 11 3/8" wide x 8' long
 - 1 @ 11 3/8" wide x 3' 9 1/2" long
- First, rip the plywood into 12" wide strips using the table saw.
- Then, measure and mark the lengths onto the 12" wide strips.
- Cut the strips to length with your circular saw.

Step 4



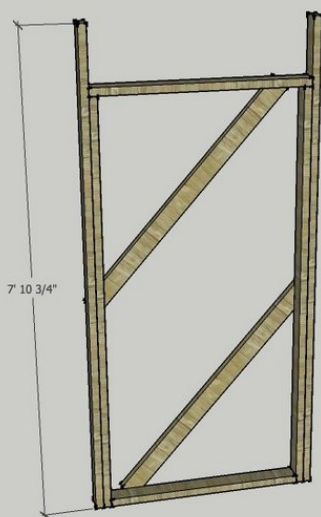
- The first part of assembly is to create the frame as seen in the image on left.
- **Pay special attention to how the pieces come together on the corners.**
- You will screw down through the top pieces into the side pieces. Pre-drill two holes on each side for these attachments. Make sure to keep the boards flush with each other other you make the connections. Use 3" screws for these connections.
- On the bottom, you will screw through the sides of the long pieces and into the bottom piece. Again, you will use 3" screws for these connections.

Step 5



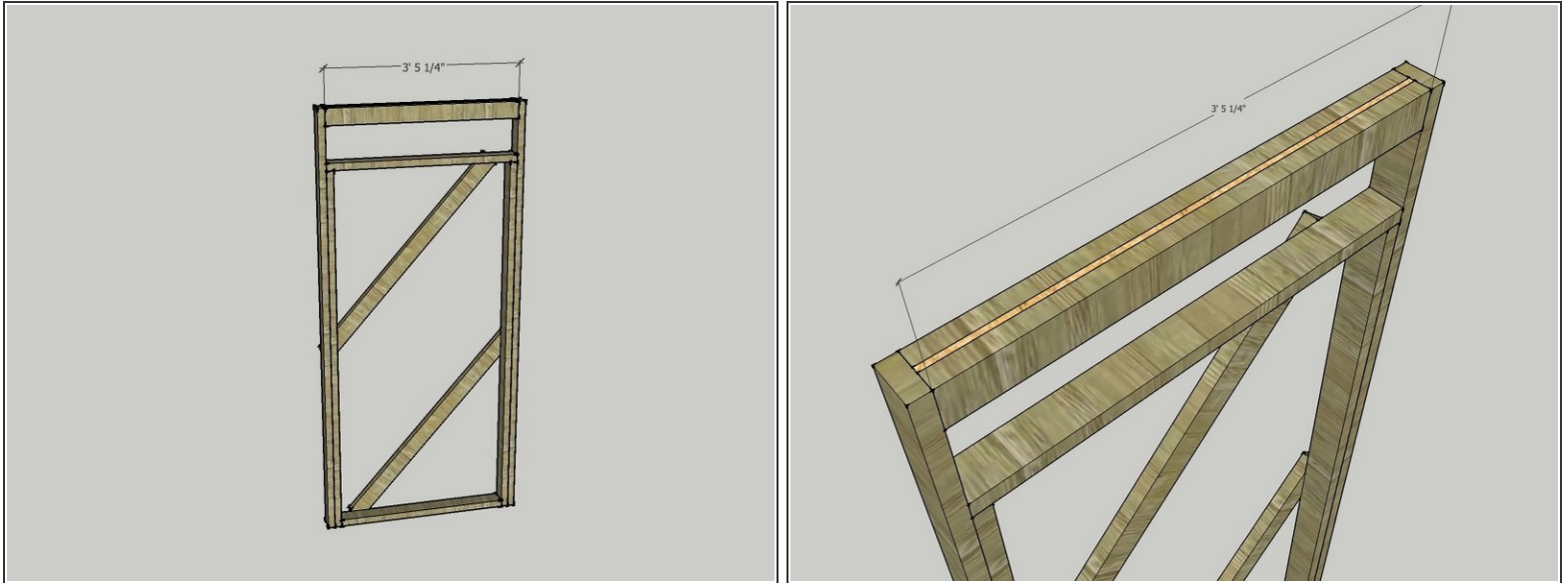
- Measure the diagonals of the frame you just made and make adjustments until they are equal to square the frame.
- Attach two diagonal pieces to hold the frame square.
- Double-check your diagonals to make sure that the frame did not come out of square as you attached your braces.

Step 6



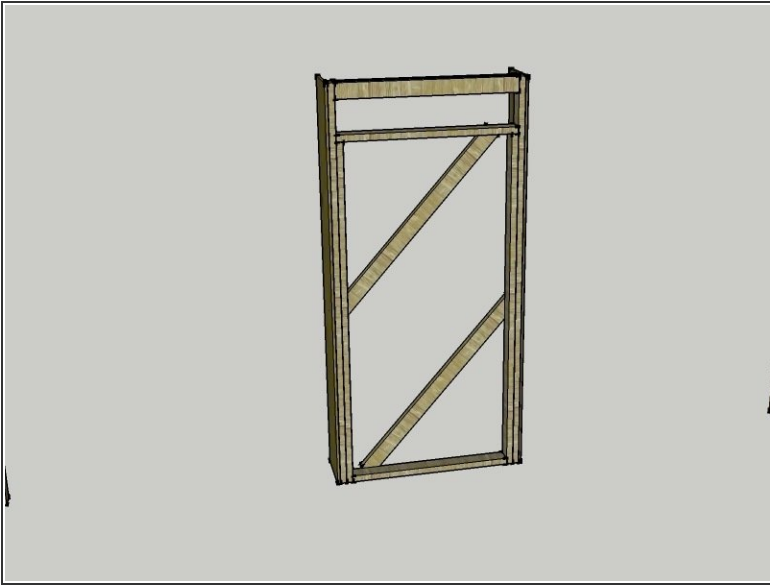
- Attach your long 2x4s to each side of the frame that you have made.
- **Pay special attention to which end of the frame the board lines up with and which end it projects past.**
- Attach with pairs of 3" screws at the bottom, the top, and at two places in between.

Step 7



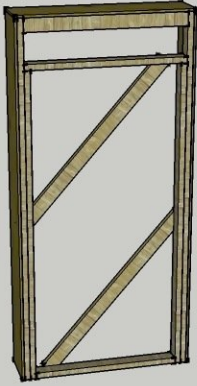
- In this step you will build and insert the header at the top of the frame.
- The header is made of two 2x4s with 1/2" sheet material sandwiched in between them. See image 2 for a close-up of the header.
- First, fit the pieces together so that they are all flush with each other. Use clamps or a partner to hold them in place.
- Screw them together with pairs of 3" screws - one pair on each end and one pair in the middle.

Step 8



- Add the long plywood sides to the 2x4 frame.
- Keep the edge of the plywood flush with the 2x4s, and make sure the bottom is flush, too.
- Use 1 1/2" screws to attach the plywood - attach it at the top, the bottom, and about every 16" in between.

Step 9



- Add the plywood top to the frame.
- The long edge will be flush with the front of the frame, and the short sides will be flush the long plywood sides.
- Screw this into place with 1 1/2" screws - put one on each end and two evenly spaced in between. Make sure these screws are going into the 2x4 framing, not the other plywood.
- Once you have the plywood screwed in, use 6d or similar nails to tack the edges of the plywood together. Hold them flush as you do this. Pre-drilling holes is helpful for those with less experience.

Step 10



- Finish the front with 2 pieces of plywood on the sides and one up the top. Each sheet of ply should be 5/8" thick.
- Fit the frame onto the the foundation, ensuring it is vertical with a level.

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