



# Installing Interior Ladder

How to build and install the interior ladder.

Written By: Chris Reinhart



## Step 1 — Ladder



- Cut two 4x4's to 87" in length.
- Mark the first side with the square, then use that line to transfer the mark to the other sides.



## Step 2



- Mark 1/2" from the end of each 4x4.
- Transfer the line to two of the other sides in a similar manner to step 1.
- Set your circular saw blade to a 45 degree angle as seen in photo 2.
- Bevel 3 of the sides by using the angled blade to cut along the line. The result will look like photo 3.
- The fourth side does not get beveled because it lays flush against the wall.

### Step 3



- You will add 6 steps to the ladder.
- The bottom of each step falls on a multiple of 11".
- You will measure and make lines at the following measurements: 11" and 12.5", 22" and 23.5", 33" and 34.5", 44" and 45.5", 55" and 56.5", and 66" and 67.5".
- Use the circular saw to cut along each line and then make numerous cuts in between each pair of lines as seen in photo 1.
- Use a chisel to clean out these notches as seen in photo 2.

## Step 4



- Using an 8' long 2x6, cut 6 pieces that are 16" long each.

## Step 5



- Mark a radius on two corners on the same long side of the step.
- These rounded corners will keep people from getting gouged or snagged on the step edges.
- Use a jigsaw to cut the rounded corners, as seen in photo 2.
- Use a sander to sand the rounded corners smooth.



## Step 6



- Slide one step into the top and one step into the bottom of the side supports.
- Use a block to tap everything together snugly if the pieces are fitting tightly.
- Make sure that the assembly is square using your speed square, as shown in photo 2.
- Toe-screw from the underside each step.
- After you have done the top and the bottom step, repeat the process on the intermediate steps.

## Step 7



- Assemble the handrail for each side. Each bracket is made of a 3/4" x 1/2" elbow, a 3/4" nipple, and a 3/4" flange ring.
- Make 4 of these as seen in photo 2.
- Add the end brackets to the two pieces of 3' long 1/2" pipe. The finished rails look like photo 3.

## Step 8



- Paint the handrails with a metal-appropriate paint.
- At the same time, paint 4 small L-brackets with the same color, like in photo 2.
- The L-brackets will be used to attach the ladder to the wall in the MicroHouse.



## Step 9



- The top of the ladder is the side with extra space.
- Lay out one of the handrails so that the flange comes to rest just below the bevel. The other end with land right next to step.
- Make sure that the overlap of the flange is on the outside. This will keep people's clothes from catching on it as the go up and down.
- Screw the flanges as seen in photo 3 and repeat for the other side.

## Step 10



- Mount the ladder to the MicroHouse wall using the 4 L-brackets, two on the top and two on the bottom.



