



Wooden Toy Train Plans

Congratulations.

You have successfully downloaded your free plan from WoodworkingDownUnder.com.

[Go to Page 1](#)

More Wooden Toy Trains



[Free Print Ready PDF Download](#)

This is a little more than a toy train, featuring just a little more detail.

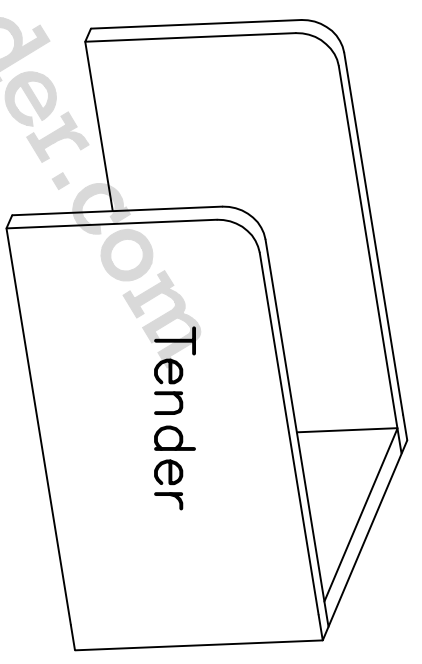
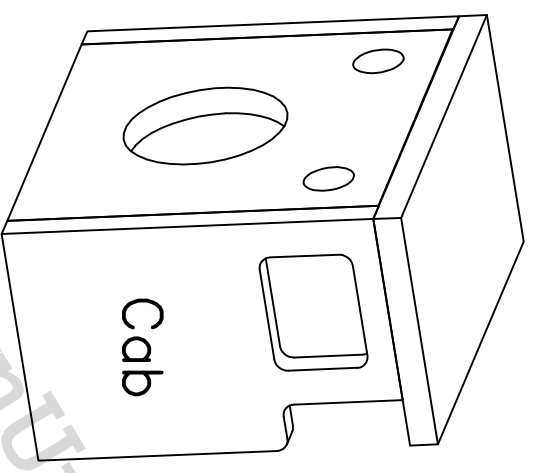
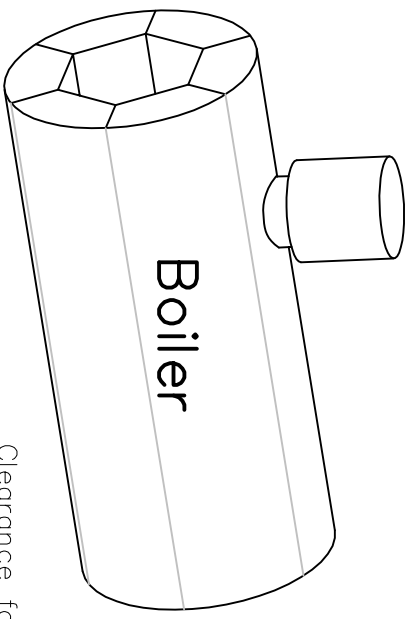
Designed by Alfred D. Slater for the beginner model maker.

[Free printer ready PDF download plans](#) includes detailed drawings.

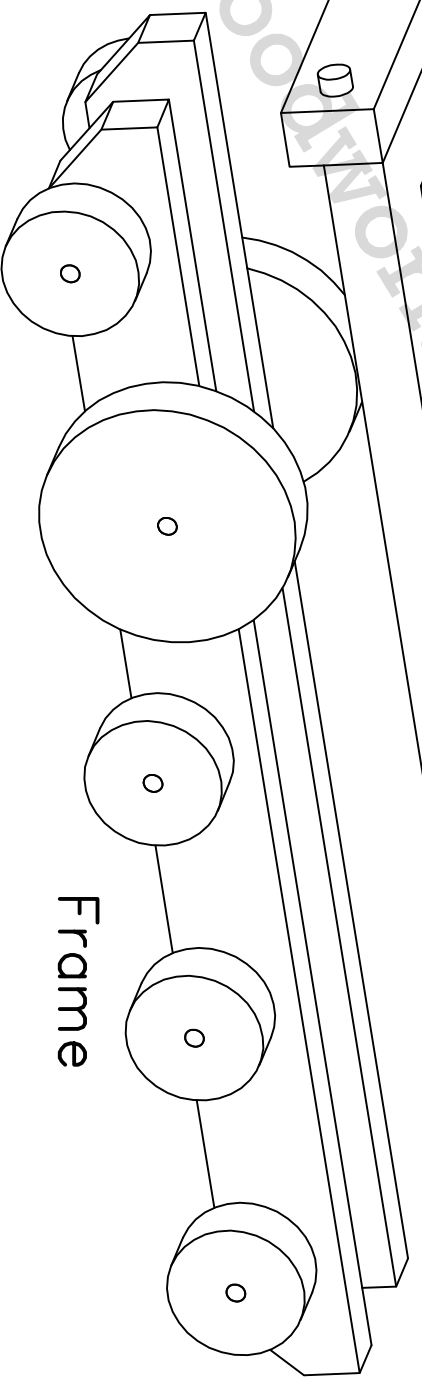
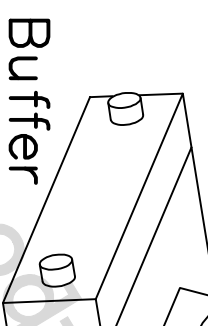
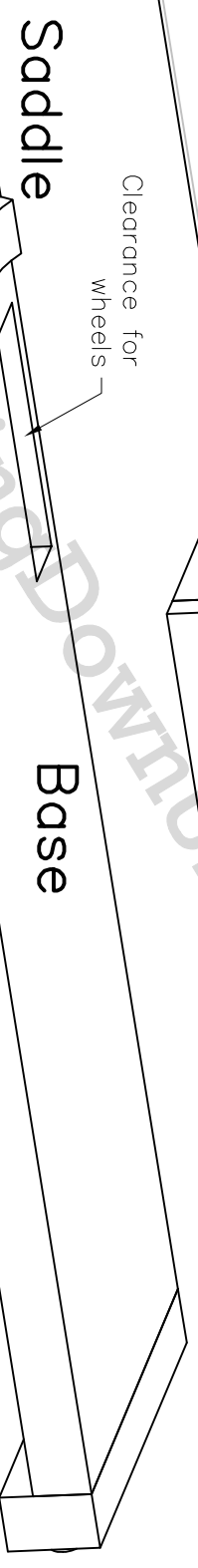


[Books on Toy Trains](#)

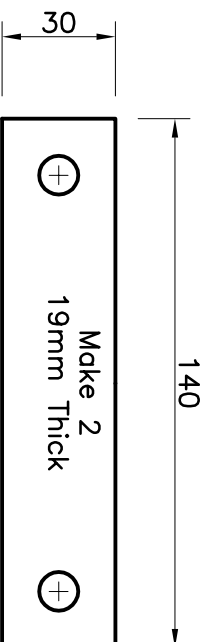
[Books on toy trains](#), this one by Norm Marshall.



Clearance for wheels

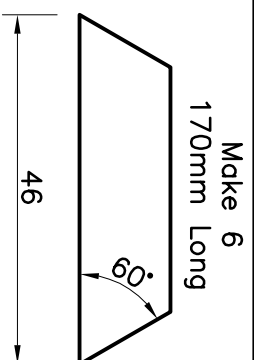


Buffer



Buffer

Scale 1:2



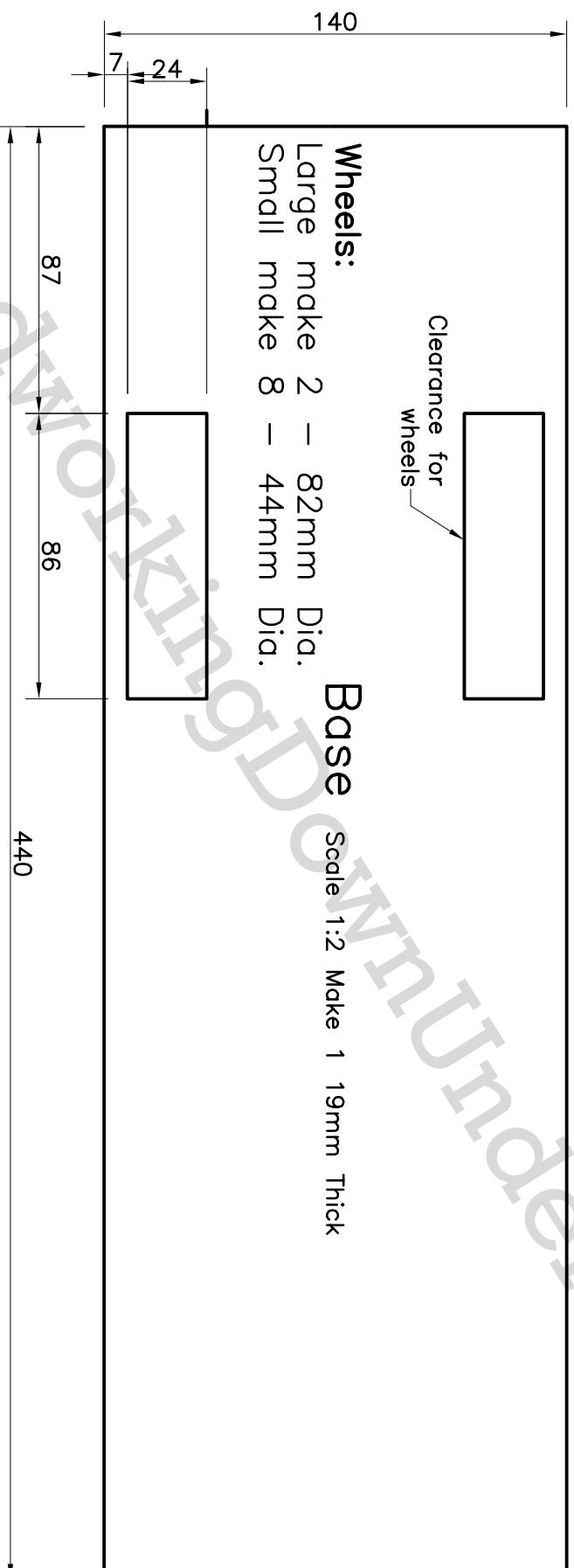
Boiler Profile

Scale 1:1



Saddle

Scale 1:1

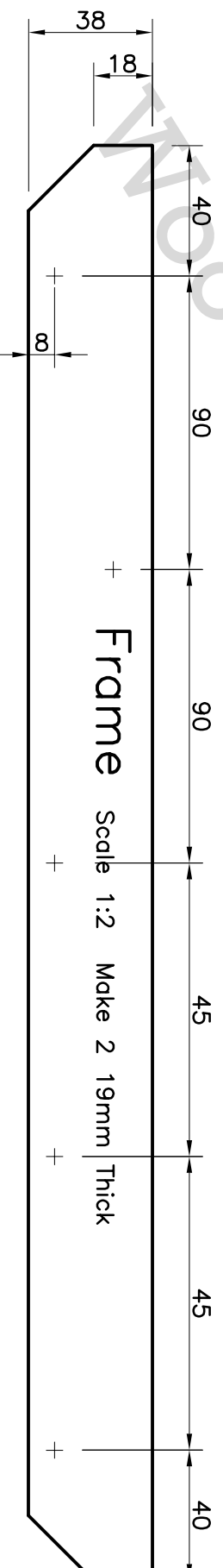


Wheels:

Large make 2 – 82mm Dia.
Small make 8 – 44mm Dia.

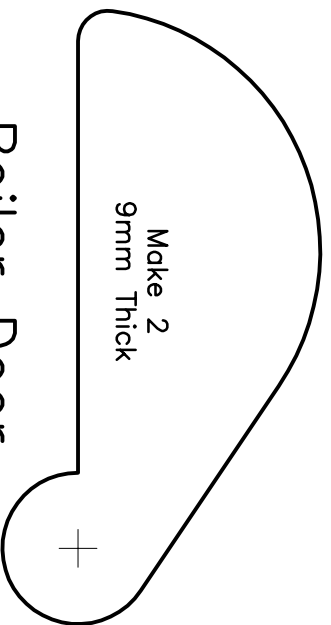
Base

Scale 1:2 Make 1 19mm Thick



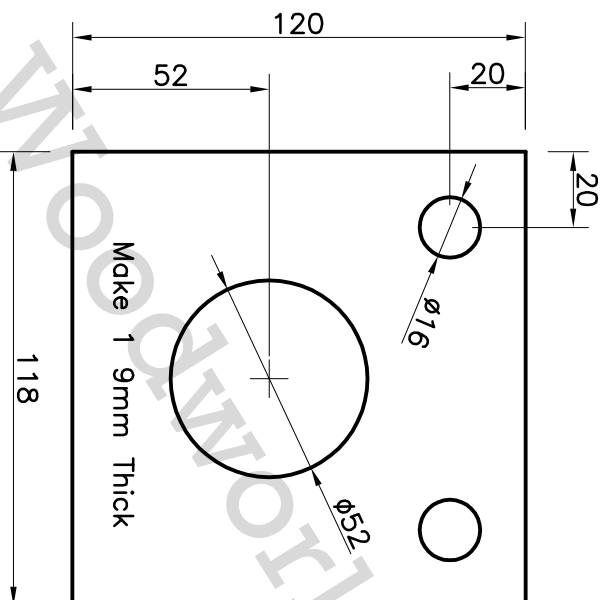
Frame

Scale 1:2 Make 2 19mm Thick



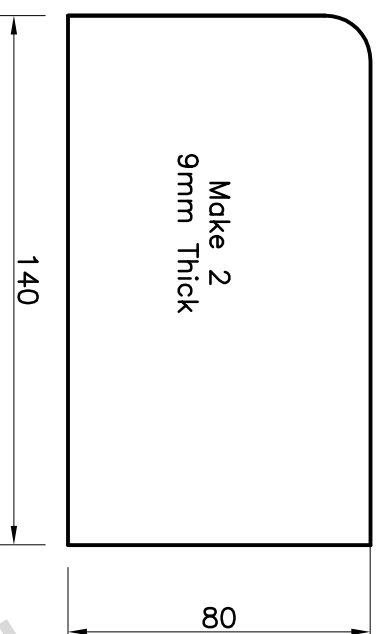
Boiler Door

Scale 1:1



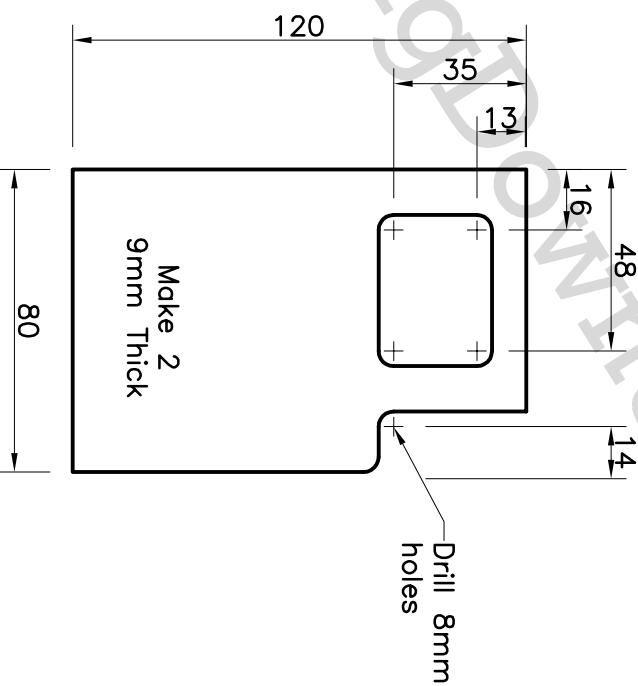
Cab Front

Scale 1:2



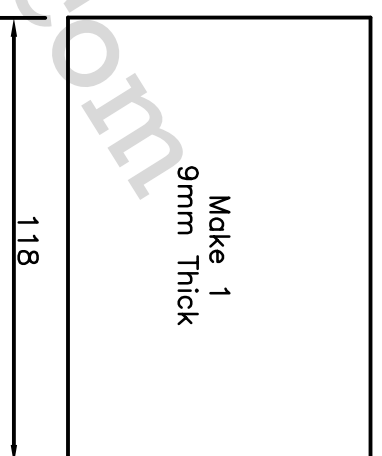
Tender Side

Scale 1:2



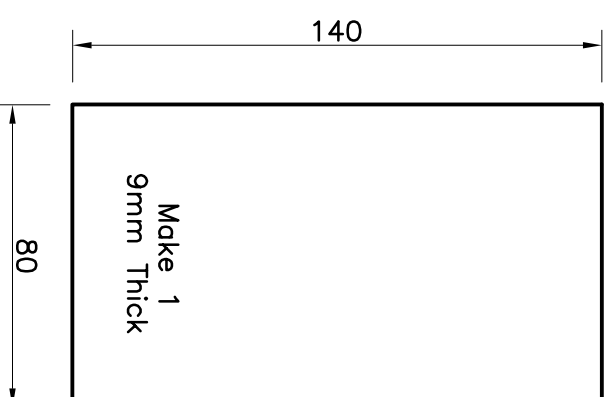
Cab Side

Scale 1:2



Tender Back

Scale 1:2



Cab Roof

Scale 1:2

Wooden Toy Train Plans



Barbie catching a train

Barbie dolls and wooden toy trains don't normally go together, but I was trying to show the scale of the toy train.

This set of toy train plans is inspired by sketches that I found on the internet. First published in *The Woodworker* in 1943, it measures 34 inches long, 7 inches wide and about 13 inches high.

The original is big enough for a small child to ride on. After giving the project due consideration, I thought it was just a little too big for my liking, so I decided to make a smaller version.

There are several reasons why I decided to make this project. One of them was the way the boiler was made, cooper style, which is to say the way beer barrels were made, you know, out of wood, in the old days.

If you have access to a lathe, making the boiler should be a lot easier than the way I made mine with a finishing plane. It does require a bit of patience and persistence, but it is worth it in the end.

Making Wooden Toy Wheels

How to make [wooden toy wheels](#) step by step instructions.

Making the boiler.



Step 1

Step 1

Start by cutting three strips just a tad longer than twice the length of the boiler as shown in the toy train plans. If you have a table saw, I would imagine it is easy enough to cut the three strips at an angle of 60 degrees. I cut the ones in the photo with a hand saw and trimmed to size with a Stanley No. 2 finishing plane.



Step 2

Step 2

Cut each of the six pieces in half to length. Mark the grain direction with a pencil.



Step 3

Step 3

This is where I used a hot melt glue to make three pairs, but I suggest you make two halves. It would make it much easier to true up the final joints.



Step 4

Step 4

Drill a shallow hole to accommodate the smokestack. To help with creating a cylinder, I pasted a paper disc on either end.

Note the direction of the grain shown in pencil.

If you have access to a lathe, this step is much easier than the way I did it, with a finishing plane.



Step 5

Step 5

To create a dome effect on the front of the boiler – the photo shows one way to draw a pencil guide line about 4mm from the edge. Draw another line about 8mm from the edge as well.



Step 6

Step 6

Draw a circle of diameter 30mm on top. Using a sharp chisel, and a slicing action, carve away from the edge towards the centre. Remember to make small, shallow cuts.

Once that is complete, from the top this time, carve away at about 45 degrees towards the second line . You should have a barn roof type of profile, and it is a simple matter to carve away to achieve an elliptical profile.



Step 7

Step 7

Showing the final shape after rough sanding using 80 grit sandpaper.

Making The Chassis

Start by measuring and cutting out the base (part A) and two frames (part B.) Note that for the base, the wheel clearance cut-out will be made later.



Photo 1: Mark the position for the large wheel.

Measure and drill the holes for the axles for the four sets of smaller wheels. It is a good idea to clamp the two rails together and to use a drill press or a drill guide to ensure the axle holes are vertically aligned.

To make sure the large wheel is the same level as the rest, use the method shown in the photo above to mark the position.

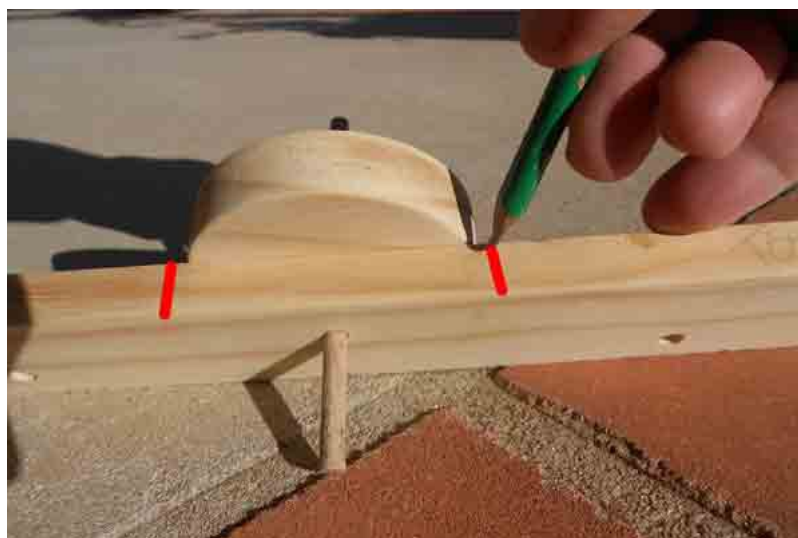


Photo 2: Mark the wheel clearance.

Drill the hole for the large wheel. With this wheel in position, mark the wheel clearance, as shown in red. We are going to use these marks to cut the wheel well in the base.

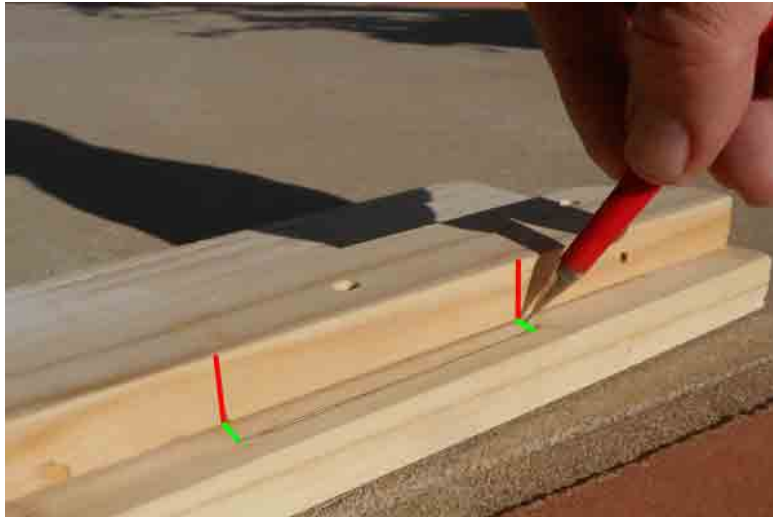


Photo 3: Transfer the marks.

Place the rails in position and transfer the marks onto the base board, shown green in the photo.

Mark the width of the cut-out to fit the thickness of the wheel, allowing for enough clearance. It is essential to use a mortise gauge to do this, the reason why will become clear later. Do the same for the other side, which is to say top and bottom.

To make the cut-outs, I used a scroll saw for one side, and a jigsaw for the other in order to prove to myself that either way would achieve the same result, which indeed it does.



Photo 4: Rough cut.

Photo 4 above shows the result of using a scroll saw on one side, and a jigsaw on the other. As you can see, there is no real difference.

Notice the grooves left by the mortise gauge. This will prove useful in the next step.



Photo 5: Clean up with a chisel.

The focus is a bit soft, but what I am trying to show is how to clean up with a sharp chisel. Instead of cutting perpendicular to the grain and banging away with a hammer, use a slicing action as shown in the photo above. The right hand provides the force, and the left hand (not shown for clarity) is for control. Make small light shavings with a scything action. Aim to make a shallow inverted V shape instead of trying to cut perpendicular. This will help to prevent tear out.

This is also where the groove made by the mortice gauge proves to be most useful, as you will no doubt discover as you try it for yourself.

Turn the piece around and do the same again, this time working towards making the inverted V shape shallower until it becomes perpendicular.

The corners will prove to be something of a challenge because of the end grain, and it becomes apparent why a sharp chisel is so important. Employ the same technique as before, this time with a bit more care. The idea here is to make sawdust instead of shavings. Aim to cut as little as possible without compressing the grain.

If this is your first time cutting cross grain with a chisel, I would suggest practising on a piece of scrap until you get the idea.

Trying to make joints in pine is not easy because it is so soft and the annular rings by contrast so much harder to cut, but it can be done to a relatively satisfactory degree with a little patience and a fair amount of practice. The idea is to cut as little as possible with tools that are really sharp.



Photo 5: An example of how not to do it.

The photo above shows the results of how not to cut a mortise. Note the rather large tear out in the end grain and along the edges. It behoves me to say that I was able to repair it with wood filler in case it happens to you as well.



Photo 6: A selection of files.

The photo above Photo 6 shows a small selection of files that could be useful in giving the final finish.

1. Square file about 9mm
2. Half round
3. Flat file about 2.5mm thick
4. Another flat file about 6mm thick

You will not need all of these tools, only one or two, perhaps No. 2 the half round would be the most useful all rounder.

Making The Cab And Tender



Photo 6: Making the cab

Making the cab by temporarily fixing the sides together. You can use double sided tape here. Drill holes in the corners using an 8mm brad point drill bit. The centre points are indicated by the red dots in the photo.



Photo 7: Cutting the windows

Once the holes are drilled, with a steel ruler and a marking knife, make a shallow groove tangent to each hole, shown by the red lines in the photo above. Cut out the windows with a jigsaw or scroll saw, or even a fret saw.

Using a sharp chisel, place it in the groove formed by the cutting knife, and push down vertically. This is somewhat surprising as to how little force is needed to cut through MDF.



Photo 8: Attach one side

For the cab and the tender, glue one side in place to form an L-shape. Photo 8 shows one way to do this, with a block of wood on one side and a square on the other. In this instance, I am using a type of wood glue that does not need clamping, and it does set quite quickly.



Photo 9: Pre-paint the cab assembly

Make the doors using the full size templates. The small knobs are made by rounding over a piece of 8mm dowel on either end and cutting each end about 10mm long. Using an 8mm brad point drill bit, drill a shallow hole into each door to fit the knobs.

The photo shows the inside of the cab pre-painted with the doors held in place with small nails. Note the red lines – this is to indicate a small clearance to prevent the doors jamming when they are rotated open.

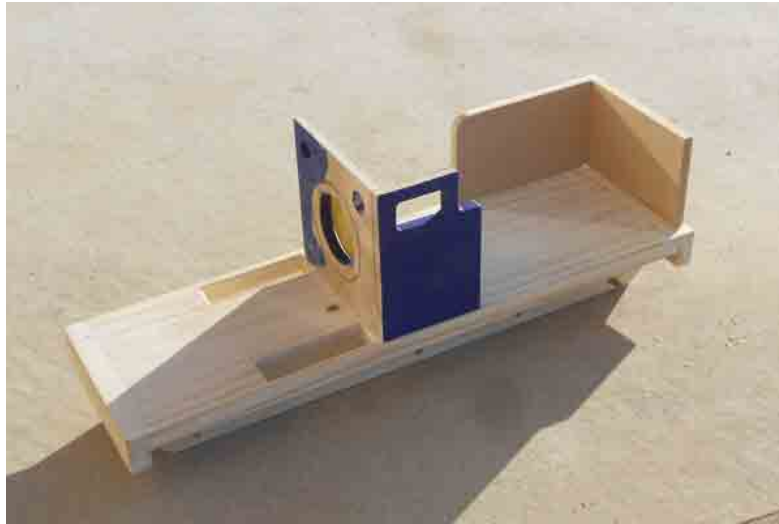


Photo 10: Fixing the cab and tender

The frames and the buffers are fixed in place, and the L-shape of the cab and tender are glued in place. Note the small offset from the edge of the base, this is called a shadow line.



Photo 11: Boiler in place

The boiler fitted with the saddle in place, the nails for the doors driven home, and the rest of the cab and tender are glued in place.



Photo 12: Making the smokestack

The smokestack is made up of two parts: the stub is a 19mm dowel (same size as a broomstick) and the cap is a 32mm dowel, which happens to be the same size as a wooden curtain rod.

Drill a hole about half of the height of the cap, and glue the assembly in place on to the boiler.



Photo 13: Ready for painting

Painting and Finishing

The toy is complete and ready for painting in colours of your choice. It's best to remove the wheels and glue them in place once the paint has dried.

Make a set of plastic washers using a hollow punch to stop the wheels rubbing on the sides.

Conclusion

I hope you have fun making this wooden toy train.

Visit the [woodworkers gallery](#) page to share photos of your project.

If you have any questions please use this [contact me form](#).

If you feel you would like to help, I am happy to accept [donations](#).