



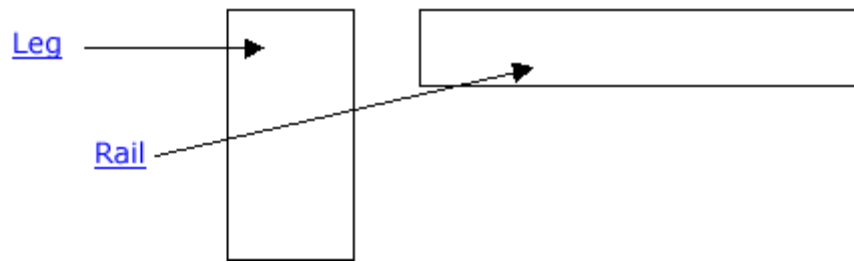
Tools needed

Mortise gauge
 Pencil
 Knife
 Set square
 Rip Saw & Tenon Saw
 Sash Clamps
 Mallet & Chisel or a Mortise Machine
 Router & a 6mm Straight Cutting bit

Cutting List

Job Title: Coffee Table (all dimensions in mm)

Member	Material	No/off	Size	
			L	T
Leg	Pine	4	450	
			60	60
End Rail	Pine	2	250	
			50	30
Side Rail	Pine	2	600	
			50	30
Top	Pine	2	460	
			55	30



Step One

You need to cut all the pieces to length. The two boards for the top need joining together (edge to edge) with glue.

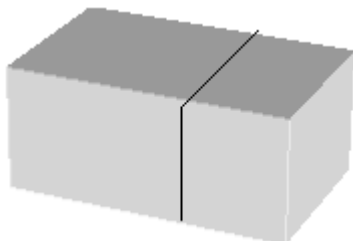
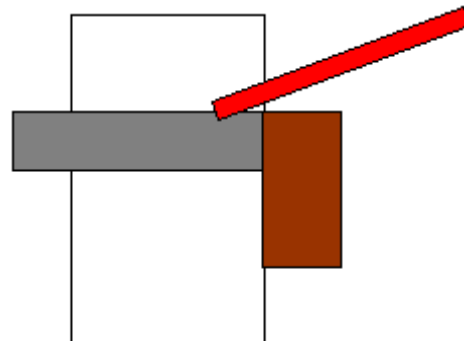
Note: The legs are turned, which we bought. If you have a lathe you can turn them yourself, if not you can just have plain legs.



Step Two

You need to find out the width needed on the legs. The best way to do that is to take the rail which you place up against top of the leg and make a mark at on the leg at the bottom of the rail.

Then take a set square and mark all the way around the leg from the mark you made from the bottom of the rail. Use a pencil but be careful to do it lightly.



Then you should have a leg that is marked on all 4 sides.

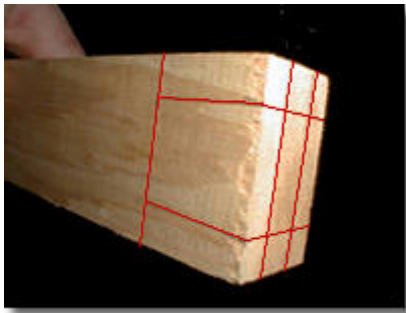
Step Three Marking out mortises on the legs.

Take your mortise gauge and set it to the width of your mortise bit in the mortise machine. After that has been done you begin to mark the mortises on the legs being careful not to go beyond the lines you made in step 2.

You can put the leg in a bench vice to mark the legs or you can just hold it as shown in the photo (right).



Step Four Marking out the tenons on the rails.

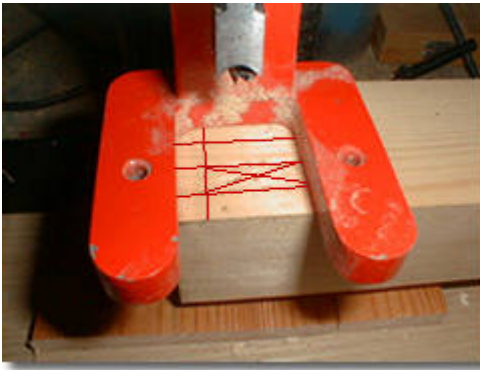


Using the mortise gauge you used to mark out the legs with, mark the end of the rails so you know the width of your tenons. Then measure the width of the leg and divide it into thirds. Then you measure 2 thirds of that measurement down on the rail so you that you know how deep your tenons need to be.

As shown (left)

Step Five Cutting out the mortises on the legs.

Set up the mortise machine with a 20mm bit & set the depth two thirds the width of the leg. Take one of the legs and place it in the mortise machine. Then set the depth on the machine and clamp the leg down firmly. When you are using a mortise machine make sure you go down in a step formation with the cutter otherwise it will blunt the cutter. Once you have done one, repeat it to all the other legs.



Step Six Cutting the tenons.

Take one of the rails and place it in the vice at an angle. Then saw from corner to corner on each line, then loosen the vice and tilt the rail the other way and cut from corner to corner on each line. All that is left to do then is to cut out the waste in the middle.



Then you need to place the rail face up in the vice. Score the face line, because you need to cut along that line to remove each face of the tenon and it is cross grain, which is hard to cut. By scoring the line you make it easier to cut.

Step Seven Making a groove in the rail.

Clamp down each rail onto your workbench. Then take your router and set the guide fence to 6mm, set your router up with a 6mm straight cutting bit & then cut all the grooves on the topside of each rail.



Step Eight Assembling the rails and legs.

When assembling the frame you first assemble each end section

first, placing glue on all the face of the tenon on the rail before placing it in the mortise hole on the leg. Then you repeat that on the other end of the rail. You then place a clamp on the end section making sure you have scrap wood in between the clamp and the leg to stop it marking the end section.

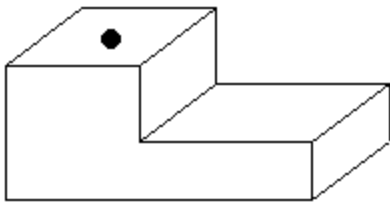
Step Nine Final assemble.

When both end sections are dry, place glue on all surfaces of the tenons on the side rails before placing them in the mortises on the legs. Then place on a flat surface and place clamps from end to end and leave to dry

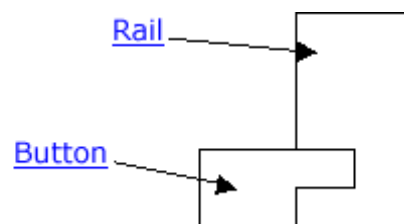


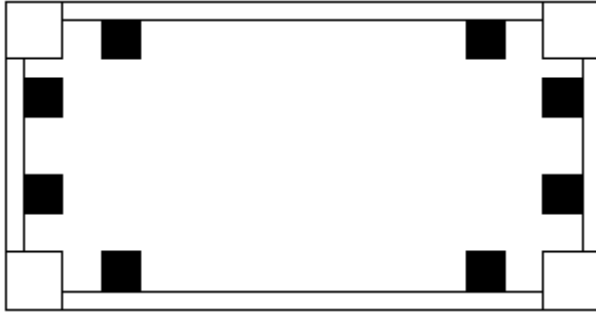
Step Ten Making buttons for the groove in the rail.

Take a small square piece of wood (6mm high, 3 mm wide and 12mm length) and cut out the shape below. Also drill a hole through the top of the button as indicated by the dot on the drawing. Repeat this 7 more time so you end up with 8 buttons



To fix the top on the frame you use the buttons, which just slide in the groove on the rails and are then screwed down to the top. Place two buttons on each rail. The drawing below will explain-





This diagram shows where the buttons need to be placed (the buttons are the black squares).

Step Eleven Finishing of the coffee table.



Once the coffee table is assembled, sand every surface with 25 grit sandpaper, finishing with a finer paper. Once every surface has been sanded, carefully wipe it down to remove any remaining dust. Take the coffee table to a dust free area and apply one layer of Danish oil to every surface with a foam brush. Once it has dried sand with 10 grit sandpaper then apply another layer of Danish oil. Repeat this process 4 times. When the final coat is dry apply a clear mat varnish to all surfaces to protect it from spills and scratches.