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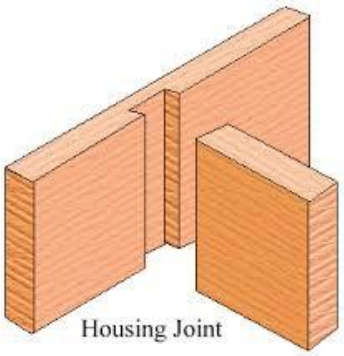
Irvine Royal Academy—Technical Department

S3/S4 Design & Manufacture

Through Housing Joint



Through Housing Joint

This joint is traditionally used for making shelves, or steps on wooden ladders, etc. It is a strong joint that allows heavy things, like books, to be well supported

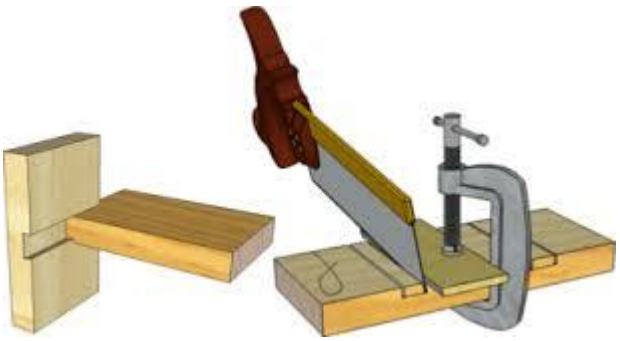
Marking Out

Decide where the joint has to be on your wood and use a **Try Square** to mark a line across the face. Mark the line down the two edges, front and back.

Use the second piece of wood, or an accurate measurement using a **Steel Rule**, and mark the second line across the face of the wood, using a try square.

Set your **Marking Gauge** to the depth of the housing joint. This is usually something between one third and one half of the thickness of the first piece of wood.

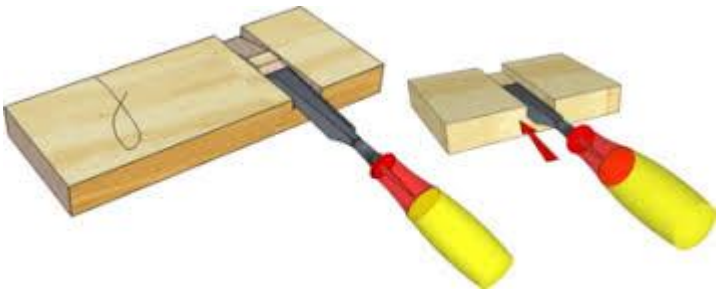
Mark across the two edges of the wood the depth of the joint using the marking gauge.



Cutting

Use a **Tenon Saw** to cut down on the **Waste Wood** side of the lines. Make sure you stop at the correct depth, and that the sawcut is at the same depth all of the way through. The timber should either be held on a **Sawing Board** or else clamped to the bench with a **G-Clamp** as shown here.

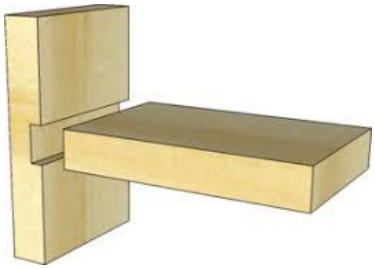
Chiselling



Make sure the wood is well clamped or held in a vice. Start at one side, using a **Bevel Edged Chisel** that is slightly narrower than the joint, and chisel part of the way down the joint, in an uphill direction. Work down to the groove made by the marking gauge, and don't go below it.

Turn round the timber and repeat from the other side. You should end up with a hump or roof shape in the middle.

Now level off your chisel and remove the middle hump. Never chisel in a downhill direction.



Assemble Joint

If your joint is accurately marked out and cut, it should now fit together.

You can watch this YouTube video on how to do it:

https://www.youtube.com/watch?v=AfKbYcS4RXo