

## MORTISE AND TENON

There are many types of M & T joints used in frame constructions, leg-and-rail constructions, and many other types of assembly. The most common is the Simple, or Blind M & T. It is used extensively for tables (leg-and-rail) and frame-and-panel (doors) construction. It is extremely strong and durable and not difficult to produce.

Generally, the tenon is  $\frac{1}{3}$  the thickness of the stock. This makes the tenon itself strong, and leaves enough wood on each side of the mortise to make it strong also. The tenon usually has a shoulder on all 4 sides to cover the mortise. When the joint is at the end of the stock (as in panel doors), leave approximately  $\frac{1}{2}$ " shoulder on the outer edge so the mortise does not split out.

When you have a wide M & T, such as a table leg/rail or a sideboard, make 2 or more smaller tenons with a "bridge" between them. This "bridge" makes the mortise much stronger. As a general rule, any tenon 5" or longer should be made into 2 tenons with a "bridge".

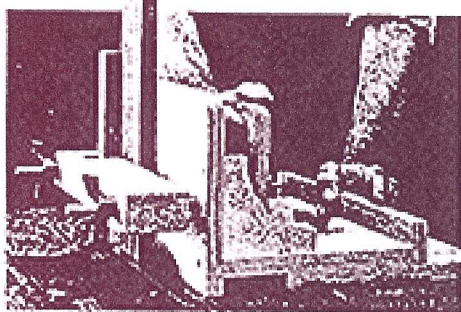
I usually cut the mortise first. This allows me to "adjust" the position of the tenon to give the proper fit. A hollow chisel mortiser attached to the drill press makes the best mortise. It gives square corners and flat bottoms. However, the drill press and router will work fine. Use an up spiral bit for best results. Make the mortise slightly deeper ( $\frac{1}{16}$ ) than the tenon for some clearance.

The tenon also can be cut several ways, probably best and easiest with the table saw. Cut the shoulder first, then use a jig that holds the stock vertically to cut the cheeks. Chamfer the end of the tenon to aid assembly.

### Mortise and Tenon Joinery

Here are two ways to help you be successful at making expert mortise and tenon joints.


You can cut tenons on your table saw with this double-stop Tenoning Jig. The

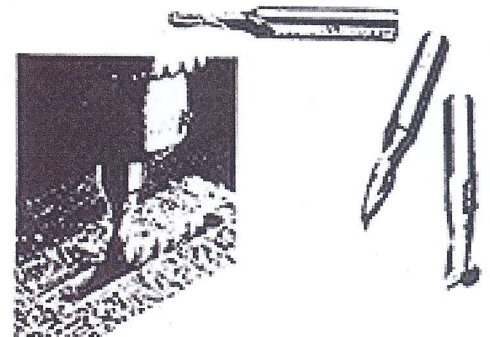


double-stop system allows you to cut both cheeks of the tenon without removing the workpiece from the jig.

We've included all of the hardware (not the wood) you'll need to build the Tenoning Jig for your shop. We've even included detailed instructions.

Making an accurate mortise with your drill press is just a matter of having these Spiral End Mill Bits. You can drill overlapping holes to rough out the mortise without the bit wandering, then move it left to right to finish boring out a smooth mortise. (See bits at right.)

Tenoning Jig Hardware Kit   
6806-500..... \$10.95



Spiral End Mill Bits

$\frac{1}{4}$ " 1503-658 .....	\$12.95
$\frac{3}{8}$ " 1503-664 .....	\$14.95
$\frac{1}{2}$ " 1503-667 .....	\$15.95
Set of 3 (767-275).....	\$39.95

