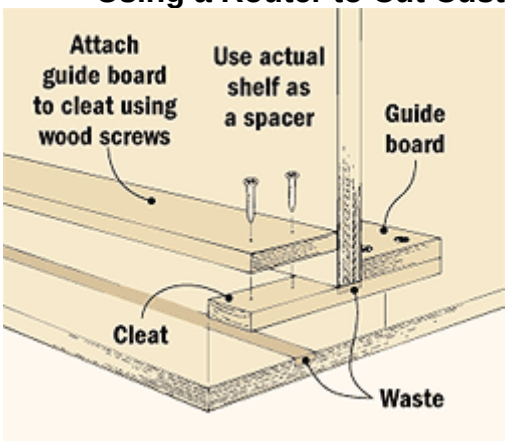
Using a Router to Cut Custom-Fit Dadoes



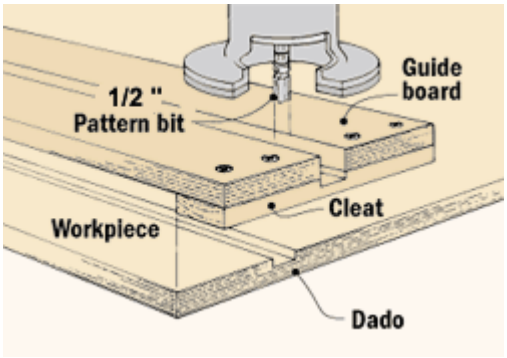
Most of the plywood that I use for my projects is slightly undersized. In fact the last time I bought a sheet of 3/4"-thick plywood, it actually measured 23/32" thick. And this was good. Sometimes it can be even thinner.

Dados that are cut to 3/4" would leave a sloppy fit. So I custom fit the dado to match the plywood. But, if you're like me, fiddling with shims and a dado set can get frustrating. So, instead I do it with a simple jig and a router equipped with a pattern bit

To make the jig, I start by cutting some 1x4 cleats that are about 12" long. Then I cut two 1x4 guide boards that are roughly 8" longer than the width of the piece getting the dado. Once the jig pieces are cut, I assemble it using the work piece for my projects.

To do this, I stand the work piece that will be the shelf (or mating piece) on edge on top of the cleats, see the drawing at right.

Then without moving the vertical piece, place a guide board on each side of it. Make sure the guides are resting snugly against the vertical piece and screw them to the cleats. When the guide boards are set at exactly the correct distance apart, you can remove the vertical piece.



Now you can use the jig to rout the dado. First, align the gap in the jig over the dado location. Equip your router with a 1/2" or 3/8" pattern bit. Then set the router on top of the guide boards at the edge of the work piece and adjust the bit to the proper depth.
All that's left is to rout the dado. Just guide the pilot bearing down the guide board and then cross over and come back down the other side, see the drawing and details below. You should end up with dadoes that are perfectly sized for the plywood you're using.