

Blind Shelf Supports – CP0101

The shelf must be at least 1" thick or not less than 1-1/8" in order to fully conceal the baseplates. Anything thicker than 1-1/4" will make a needlessly heavy (and load robbing) shelf.

The shelf may be up to 8" deep, made with a solid piece or built-up from two pieces and laminated together. If using a solid piece, you will need a 7/16" drill bit capable of making holes 5-1/4" deep. Do not use a spade bit, as these often drill oversize holes. If using a built-up piece, you will need to rout blind grooves to accommodate the posts, then glue them together. Both methods are covered in step 5.

The shelf must be at least 18" long in order to span a pair of wall studs spaced 16" apart, but can be as long as you wish. Remember that load-bearing capacity can be increased on shelves longer than 34" by adding additional supports at each stud that the shelf overlaps.

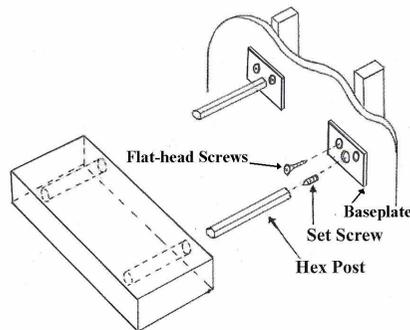


Figure 1

Note: For shelves narrower than 5-1/4", you will have to cut some of the non-threaded end of the hex post (with a hacksaw), so the posts are roughly 3/8" shorter than the shelf's depth.

1) Use a stud finder or rare-earth magnet over the approximate area where you wish to mount the shelf. Using a rare-earth magnet with a light touch, you will feel when the magnet picks up on a drywall screw. When it does, temporarily mark its position with a light pencil mark or piece of tape. Measure 16" over (or any multiple of), and again use the magnet to find a screw. Locating another at 16" (or any multiple thereof) from the first mark ensures that you have found the studs and not any errant screws.

If you are using only two shelf supports, mark two studs whose spacing is as close to the shelf length as possible, less 2".

Examples:

24" shelf: $24'' - 2'' = 22''$ → mark two studs 16" apart

36" shelf: $36'' - 2'' = 34''$ → mark two studs 32" apart

48" shelf: $48'' - 2'' = 46''$ → mark two studs 32" apart

2) Hold a baseplate centered over one of the marks, orienting it as shown in Figure 1. Drill a 1/8" pilot hole 1-1/4" to 1-1/2" deep for only one of the two mounting holes. Using this pilot hole, secure the baseplate using a #8 x 1-1/2" (or longer) flat-head screw. Tighten the screw so the baseplate is just free from rotating.

Note: If you have metal stud walls, it is recommended that you use #8 flat-head machine screws with toggle bolts.

Repeat for the baseplate that will support the opposite end of the shelf, ensuring that the pair form a level line.

Level both mounted baseplates. The easiest way to do this is to hold a straight edge that spans both, adjusting the baseplates so their long edge fully contacts the straight edge. Firmly tighten the installed screw in each. Now drill a similar pilot hole in the remaining open hole in each baseplate, and secure it with another screw.

If you are using more than two baseplates to increase load bearing capacity, install them now into the intermediate studs. Again use a straightedge spanning the two outermost baseplates so that they are installed at the correct height and level.

3) Install one setscrew in each baseplate, with the pointed end facing out. Screw them in fully so the amount projecting is equal.

4) If using a built-up shelf, temporarily clamp the two pieces together. Holding the clamped (or solid) shelf approximately level, and with the rear edge centered over the projecting points, press or tap the front edge so the points make an impression into the rear edge. For longer shelves, enlisting the help of a friend will ensure that the shelf remains centered over the points, and the marks properly imparted. Using a square, draw a perpendicular line at each mark as shown below.

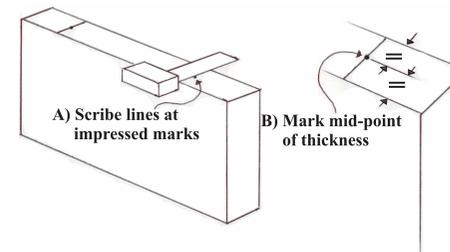


Figure 2

5) For a solid shelf:

If the impressed mark is not at the mid-point of the shelf's thickness, use an awl or other point tool to reimpress the marks at the mid-point. At these marks, drill 7/16" holes, 5-1/4" deep*. So the shelf will rest perpendicular to the wall, ensure these holes are parallel to the shelf's surface. Use a drill press with the shelf clamped vertically on edge, or with an electric drill fitted with a level.

**Note: For shelves narrower than 5-1/4", the depth of the hole should be to within 1/4" of the front edge.*

For a built-up shelf:

Make a mark on each piece identifying the outer faces. Unclamp the two pieces. On the centers of the lines marked on the rear edges, rout 1/2" wide grooves on the inner faces, 7/32" deep, extending 5-1/4" from the rear edge of the shelf, or to within 1/4" of the front edge for shelves narrower than 5-1/4".

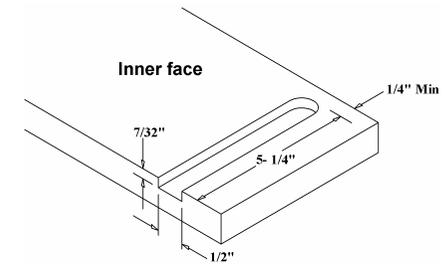
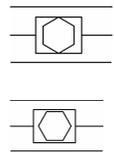


Figure 3

Dry fit the pieces together. Check that the posts slide into the pockets, even if they are oriented across corners. Rerout deeper if required.



Laminate the two pieces together, ensuring the rear edge and 1/2" wide routed grooves are aligned. Trim the shelf ends flush if required, and plane the front edge smooth.

6) In order for the shelf to fully conceal the baseplates, rout or dado a 1/8" deep x 1" wide x 2" long pocket centered about the holes, or, a 1" wide center groove along the entire rear edge of the shelf.

7) Fasten a hex post onto each projecting setscrew and firmly tighten. This tensions the setscrew, ensuring that the post will remain square to the baseplate.

8) Slide the shelf evenly over the hex posts until the back edge contacts the wall.