

warm & inviting

Upgrade your fireplace with a custom-built mantel

BY DAN CARY

Don't let this mantel's refined appearance fool you. It's not difficult to build and it doesn't require a shop full of tools. You can also easily customize the design to better suit your décor.

PHOTOS BY DAN CARY; ILLUSTRATIONS BY TECH ART AND DESIGN; FIREPLACE COURTESY HEAT & GLO



Given our natural attraction to fire, it's no surprise that a fireplace almost always acts as the focal point of the room it occupies. Even when no fire is burning, mantels naturally draw attention.

Originally used as a convenient place to store cooking utensils and fire-tending tools, mantels today serve mainly decorative purposes, adding character to otherwise ubiquitous gas fireplaces. They typically fall into two basic categories, surrounds and shelves, with endless design variations ranging from rustic solid timbers to elaborate combinations of custom moldings.

Both types of mantel can be made to suit just about any style of room, but each offers characteristics can benefit a specific situation. For example, surround mantels, which traditionally feature a shelf and a pair of support posts (though some modern designs omit shelves in favor of simply framing the fireplace) are especially good at adding scale and impact to a plain wall.

A shelf mantel, on the other hand, provides an unobtrusive accent. This type of mantel has no posts; it mounts directly to the wall or is supported by corbels. It's a good choice when the wall features a distinctive surface that you don't want to cover, such as brick, stone or tile. It is also easier to design than a surround because it doesn't have to fit exactly around the firebox.

If you're planning to install a new fireplace or your existing one needs an update, building your own mantel is a rewarding project that can save you money. The level of difficulty depends on the design, but creating a beautiful mantel doesn't have to be dif-

ficult. We designed a versatile surround mantel that is easy to build and modify (see "Building a Mantel," p. 22). Using a combination of dimensional lumber, stock moldings and a basic set of woodworking tools, even a beginning woodworker can achieve great results.

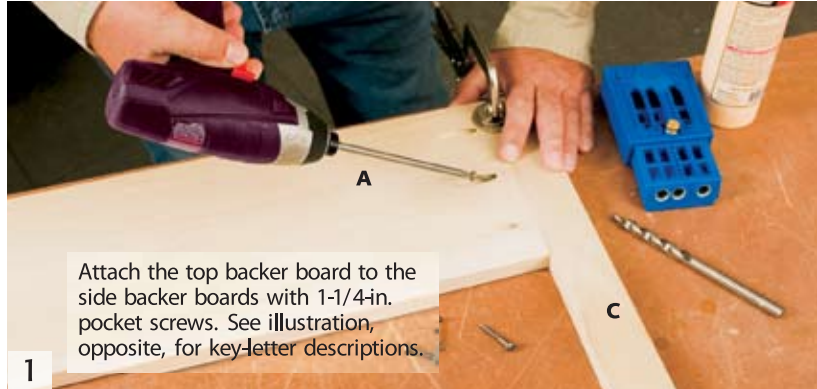
Design and construction

Once you've determined which type of mantel to build, you must calculate a few dimensions before you can begin drawing plans. The most important is the inside opening; all other dimensions are based on the height and width of this opening. Most mantels also incorporate a space for a non-combustible border, such as stone or tile, between the firebox and the mantel to comply with required clearances (see "Mantel Clearances," p. 22). The width of the tile area is typically 6 in. for gas fireplaces. Add the firebox-opening dimensions to the tile-space width to calculate the mantel's inside-opening dimensions.

The other important dimension to consider is the depth of the mantel. The deeper the shelf and posts, the farther they must be from the firebox. Most mantels built for fireplaces that are recessed in the wall are no more than 10 in. deep. If you are building a mantel to enclose an entire gas fireplace unit, you'll need to add the depth of the fireplace to the top and side dimensions of the mantel.

Choose your material based on the finished appearance you desire. A painted mantel will typically be less expensive and more forgiving because paint can hide a lot of imperfections. Another advantage is that you

BUILDING A MANTEL



1 Attach the top backer board to the side backer boards with 1-1/4-in. pocket screws. See illustration, opposite, for key-letter descriptions.



2 Assemble the post fronts, post sides, post tops and post bases with glue and 2-in. brad nails. Miter-cut the cove molding to fit the front and sides of the posts, and attach the cove molding with 1-1/4-in. brad nails.

can combine paint-grade materials, such as poplar and medium-density fiberboard (MDF). These materials are relatively free of blemishes such as knots and are easy to machine and sand smooth.

If you prefer the natural beauty of exposed wood, you must use the same species for all of the parts. This can be a challenge if you plan to use stock moldings, which at most home centers are limited to pine and red oak.

You can expand your options by milling your own moldings — a fun and creative way to customize any project. You can make most common moldings using a router table and a table saw. (To learn more about making your own moldings, see Web Extra.)

Installation

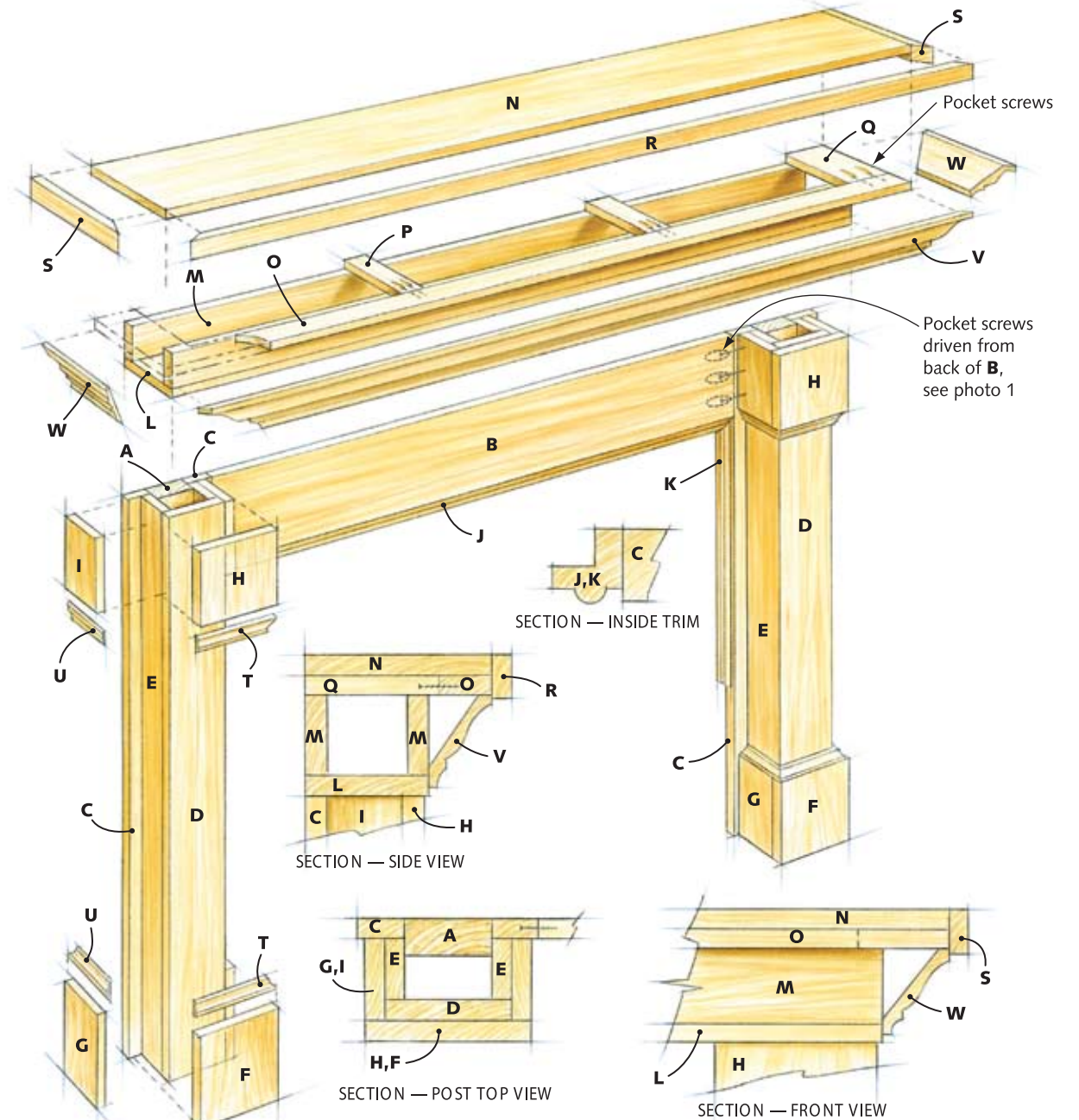
Installing a mantel is similar to installing any built-in cabinet — you must use fasteners designed to anchor into your specific wall surface or framing material. Despite their larger size, surround mantels are often easier to install than shelf mantels and don't require such strong fasteners because the posts support most the weight. The wall fasteners for most surround mantels simply hold the mantel in place and prevent it from tipping forward.

Mantel shelves, on the other hand, must be held up by wall-mounted supports strong enough to bear the weight of

MANTEL CLEARANCES

Mantels made from combustible materials must be installed a safe distance from the fireplace opening. This distance depends on the type of fireplace and the projection of the mantel top and sides from the wall. For example, our fireplace manufacturer recommends that a mantel that projects 8 in. from the wall be installed at least 17 in. above the top of the fireplace opening. Check with your local building inspector or the fireplace manufacturer for clearance requirements specific to your fireplace.

FIREPLACE MANTEL



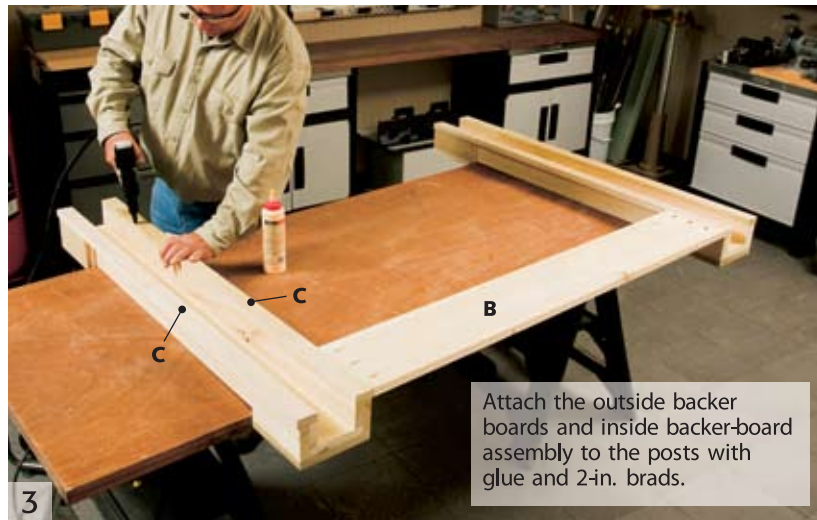
MATERIALS AND CUTTING LIST

KEY NO.	DESCRIPTION	SIZE	KEY NO.	DESCRIPTION	SIZE
A	2 Wall brackets	1-1/2 x 3-1/2 x 46-3/4 in.	O	1 Top front buildup	3/4 x 2 x 68-1/4 in.
B	1 Top backer board	3/4 x 7-1/2 x 49 in.	P	2 Top inside buildups	3/4 x 2 x 5-1/4 in.
C	4 Side backer boards	3/4 x 1-3/4 x 47-3/8 in.	Q	2 Top outside buildups	3/4 x 3-1/2 x 5-1/4 in.
D	2 Post fronts	3/4 x 5 x 47-3/8 in.	R	1 Mantel front trim	3/4 x 1-5/8 x 69-3/4 in.
E	4 Post sides	3/4 x 2-1/4 x 47-3/8 in.	S	2 Mantel side trim pieces	3/4 x 1-5/8 x 8 in.
F	2 Post base fronts	3/4 x 6-1/2 x 7-1/2 in.	T	4 Post cove fronts	11/16-in. cove x 6-3/8 in.
G	4 Post base sides	3/4 x 3 x 7-1/2 in.	U	8 Post cove sides	11/16-in. cove x 3-11/16 in.
H	2 Post top fronts	3/4 x 6-1/2 x 6-1/2 in.	V	1 Mantel crown front	4-1/2-in. crown x 68 in.
I	4 Post top sides	3/4 x 3 x 6-1/2 in.	W	2 Mantel crown sides	4-1/2-in. crown x 7-1/4 in.
J	1 Inside top trim	3/4 x 3/4 x 49 in.			
K	2 Inside side trim pieces	3/4 x 3/4 x 39-1/2 in.			
L	1 Mantel bottom	3/4 x 4-3/4 x 63 in.			
M	2 Mantel front and back	3/4 x 3 x 63 in.			
N	1 Mantel top	3/4 x 7-1/4 x 68-1/4 in.			

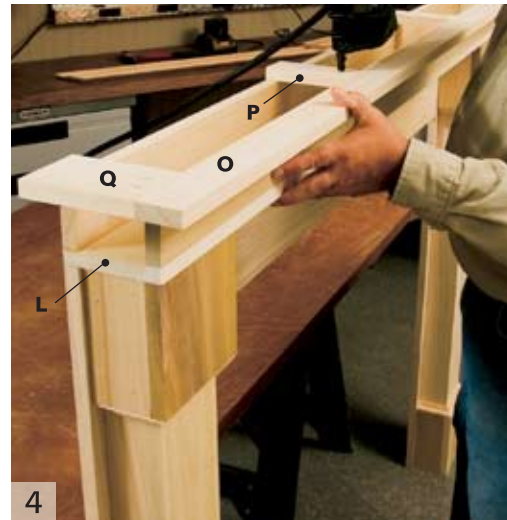
SHOPPING LIST

1x8 x 8 ft. (2)	11/16 x 5-ft. cove molding
1x6 x 8 ft. (6)	1-1/4-in. pocket screws
4-1/2-in. x 8-ft. crown molding	2-in. and 1-1/4-in. brad nails

BUILDING A MANTEL



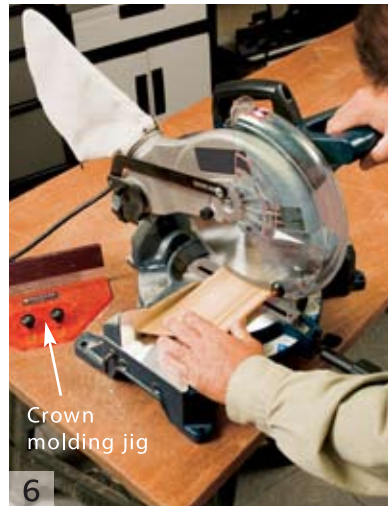
Attach the outside backer boards and inside backer-board assembly to the posts with glue and 2-in. brads.



Attach the mantel bottom, front and back to the post assembly. Next, assemble the buildup frame with pocket screws and attach it to the top of the mantel front and back with 2-in. brads.



When cutting the side crown molding pieces, first make the 45-degree miter cut in a longer piece. (For additional safety and accuracy, we also used a jig that holds the molding in position.) Then cut the mitered crown molding to length.



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Attach the crown molding to the mantel with glue and 1-1/4-in. brad nails.



We milled the inside trim molding. Cut the molding profiles on the router table using a straight bit to cut the rabbet and a 1/8-in.-radius edge-beading bit to cut the edge bead.



The inside trim molding conceals the outside edge of the tile border. Miter the inside corners of this molding and attach it to the inside edge of the backer boards with 1-1/4-in. brad nails.



Mark the outside edges of the posts on the wall, measure in 1-3/4 in. from those marks and attach the wall brackets to the wall. Then slide the mantel over the brackets and attach it with 2-in. brad nails. Next, attach the middle of the mantel back to the wall. Finally, attach the top with 2-in. brads (inset).

The cleats are secured to the mantel and the wall so that the bevel draws the mantel toward the wall.

You can also use wood brackets without bevels (similar to the vertical wall brackets that we used to secure the surround-mantel posts shown in this article). Construct the mantel with a space in the back so that it slides over the bracket and can be secured with screws or nails. It's common in new construction to attach the bracket to the wall before installing the surrounding wall materials, especially if you plan to use an irregular surface such as stone veneer that makes accessing the wall framing and mounting a bracket flush on the wall more difficult.

Exposed brackets and corbels provide support as well as an additional decorative element. Whenever possible, run these supports through the wall's surface material and mount them directly to the

sides of the wall framing. Support brackets or corbels should extend out at least two-thirds of the width of the shelf.

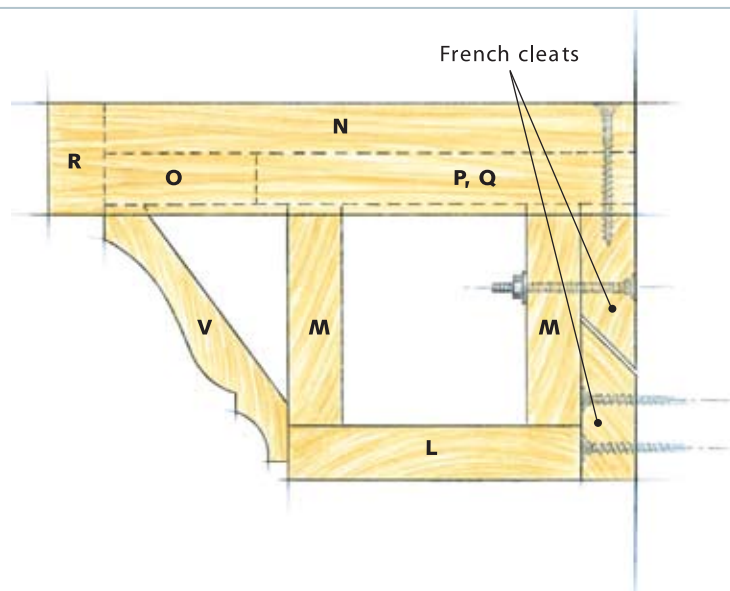
Some support brackets may only appear to be structural. In these cases the mantel shelf is mounted to the wall using concealed supports, and the exposed brackets are simply decorative.

No matter what type of fireplace you have, the right mantel is the perfect accent. A unique design can make even the most common fireplace look distinctive, and the architectural character it adds to the room will draw attention like moths to a flame. ♦

MAKE IT FLOAT

You can easily modify the plans for the surround mantel to make a mantel shelf that floats, meaning that it is supported by concealed French cleats.

To make room for the cleats, reduce the width of the mantel bottom (L) to 4 in. Then rip a 3/4 x 3-3/4 x 63-in. board in half, using a table saw with the blade tilted to cut a 45-degree angle. This leaves two 63-in.-long French cleats that are about 2 in. wide on the widest side. Attach one cleat to the mantel, with the narrow side of the cleat against the mantel. Drive 2-in. wood screws through the top of the mantel and into the top edge of the cleat. Also fasten the cleat to the mantel back with 1/8 x 2-in. flathead machine screws. Attach the other cleat to the wall (with the narrow side of the cleat against the wall) using the appropriate fasteners. — DC



WEB EXTRAS

For more mantel plans and techniques to make your own custom moldings, go to www.HandymanClub.com/FromHandy

SOURCES ONLINE

For online information, go to www.HandymanClub.com/FromHandy and click on SOURCES ONLINE.

Heat & Glo (model SI-750TRS fireplace)
888-427-3973

Rockler (pocket screws and crown molding jig, No. 67626), 800-279-4441