

# All About Picture

Make professional-quality, custom frames at a fraction of the cost

**F**raming is something woodworkers tend to shy away from: It may be fear of damaging an irreplaceable piece of art or of putting less-than-perfect miter joints on display. Frames tend to get scrutinized because they are the vehicles for displaying art; and because art is critiqued up close, the frame will be, too.

The good news is that professional-quality frames are not hard to make. The techniques are mostly familiar to woodworkers, there is only a modest outlay on tools and jigs, and frame stock can be purchased ready-made or built from scratch in your shop.

## Artwork determines frame size and design

Art falls into two main categories when it comes to framing with and without glass: If the art is on paper,

you should consider using a backing board, a mat, and glass as well as a frame; paintings on canvas look best with just a frame. The backing board keeps the art flat and secure, the glass protects the art from damage, and the mat keeps the art and glass from contacting each other and sticking together.

When it comes to mats, wider is better. Mats cut narrower than 2½ in. do not add much to the appearance of the framing. Aim for a mat that is 3 in. to 4 in. wide. Another option is to use two layers of mats, known as double matting, to give the framing a greater depth.

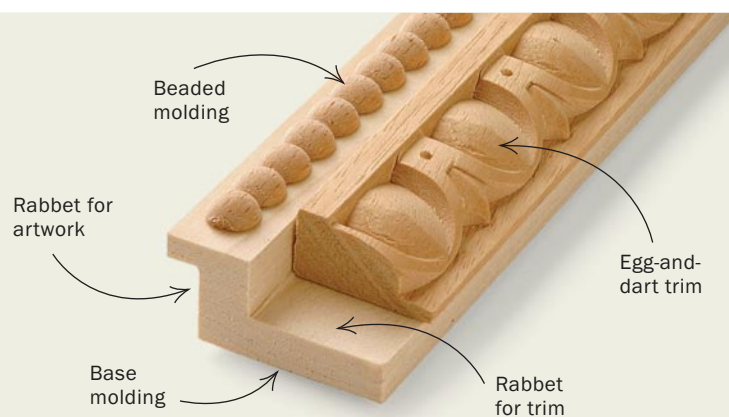
You need to visit a local picture-frame shop to select the mat, and to have it, the glass, and the backing board cut to size. Ask for acid-free materials in both

## Three options for frames

### BUILT-UP MOLDING FROM TRIM STOCK

Often a piece of ready-made molding will provide the inspiration for you to build a similar design from trim stock. Architectural trim moldings come in a large range of sizes and styles, but in most cases you will have to create a base and a rabbet. In this example, I started with a piece of poplar ¾ in. thick by 1¾ in. wide. I cut a rabbet ¾ in. wide by ½ in. deep on the tablesaw, and on the other side I routed a rabbet ¼ in. wide by ½ in. deep to hold the art. I then glued egg-and-dart trim to the wider rabbet and a strip of beading to the top surface.

Because the trim pieces may not match, paint is a better finishing option than stain. I sprayed a coat of gesso (a combination of plaster and glue) on this frame, followed by black and then bronze paint. After it dried, I rubbed the frame with 000 steel wool, then applied black wax to “age” it.



**Rabbet the base and attach the trim.** After cutting the rabbet for the egg-and-dart molding on the tablesaw (above left), mill the rabbet for the artwork on the router table (above right). Glue the egg-and-dart trim to the rabbeted base, then add the beaded molding.

# Framing

BY ROBERT HAMON

the mat and the backing board. The additional charge is worth the protection it affords your artwork. Once you have all of these pieces cut to size, only then can you calculate the frame's dimensions.

Frame size refers to the dimensions of the artwork, not the outer size of the frame itself. When determining the size of a frame, measure to the inside of the rabbet. To allow for wiggle room, add an extra  $\frac{1}{8}$  in. in each direction. For example, a 16-in. by 20-in. piece of art gets a frame sized  $16\frac{1}{8}$  in. by  $20\frac{1}{8}$  in. When cutting the molding to rough length, add twice the width of the frame molding plus an inch or two as a safety margin.

Your picture frame must have a rabbet deep enough to secure the thickness of what you intend to frame. Mat board is  $\frac{1}{16}$  in. thick, backing typically is  $\frac{3}{16}$  in.

thick, and glass is  $\frac{1}{8}$  in. thick. Most commercial frames have a rabbet depth of about  $\frac{1}{2}$  in. to allow for double mats and to leave enough space for fasteners to keep the contents in the frame. The standard width of the rabbet is  $\frac{1}{4}$  in.

## Miter corners on a special sled

Two factors are crucial for making mitered corners that fit perfectly. First, the  $45^\circ$  angles must be accurate. Second, the molding pieces that are opposite each other must be exactly the same length.

Cutting picture-frame miters on a tablesaw using a standard miter gauge is a real challenge. Problems include small amounts of play in the miter gauge and lack of support for the molding

## MOLDING FROM SCRATCH

Although a frame does not require the strength of a hardwood, if you do use one, keep the design simple to show the figure of the grain to its best advantage. To make a frame with curves, use a softwood instead. White pine, fir, and spruce are easy to work, but if you plan to stain the frame, select the wood carefully to avoid streaks that may distract from the artwork.

The molding can be cut on a shaper, a router table, or with a molding head on the tablesaw.



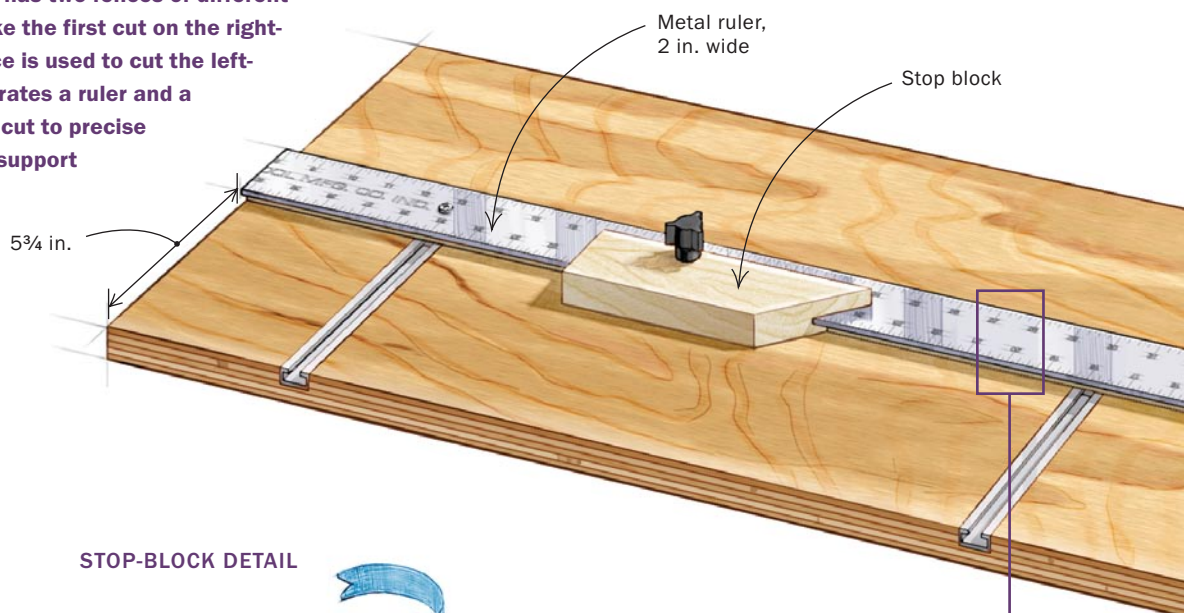
## READY-MADE MOLDING

You can get the same finished moldings—ranging from classical to contemporary—that are available to framing shops (see Sources of Supply on p. 72). Or you can purchase unfinished moldings if you want to stain or paint the frame to match the artwork. Avoid moldings that have rounded edges on the base or a deep curve in the back because it will be harder to clamp the frame when it is being glued together.

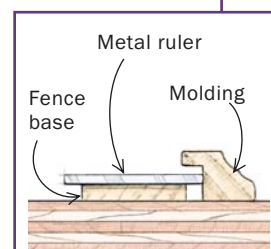
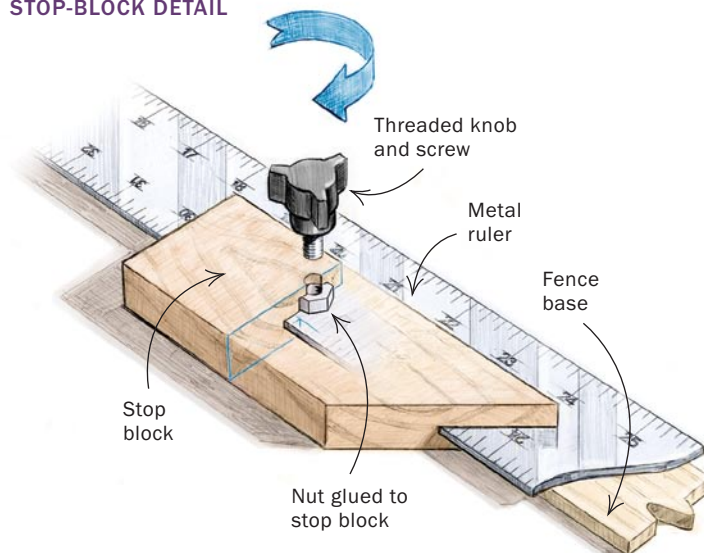


# Cut perfect miters on the tablesaw

Unlike most tablesaw sleds, this one has two fences of different lengths. A short fence is used to make the first cut on the right-hand side of the molding; a long fence is used to cut the left-hand miter. The longer fence incorporates a ruler and a stop block that allow moldings to be cut to precise and repeatable lengths. Hold-downs support stock over its entire length.



STOP-BLOCK DETAIL



## ACCURATE FRAME DIMENSIONS

The size of a frame is measured from the inside of the rabbet, so the jig and the stop block are designed to take this into account.

## MATCH THE FRAME TO THE ARTWORK

Art on paper usually is surrounded by one or more mats and protected with glass before being framed (top). Oil paintings or reproductions may look best with just a frame and no mat or glass (bottom).

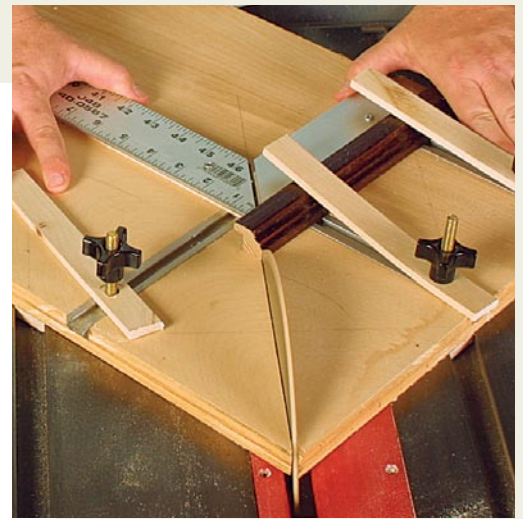
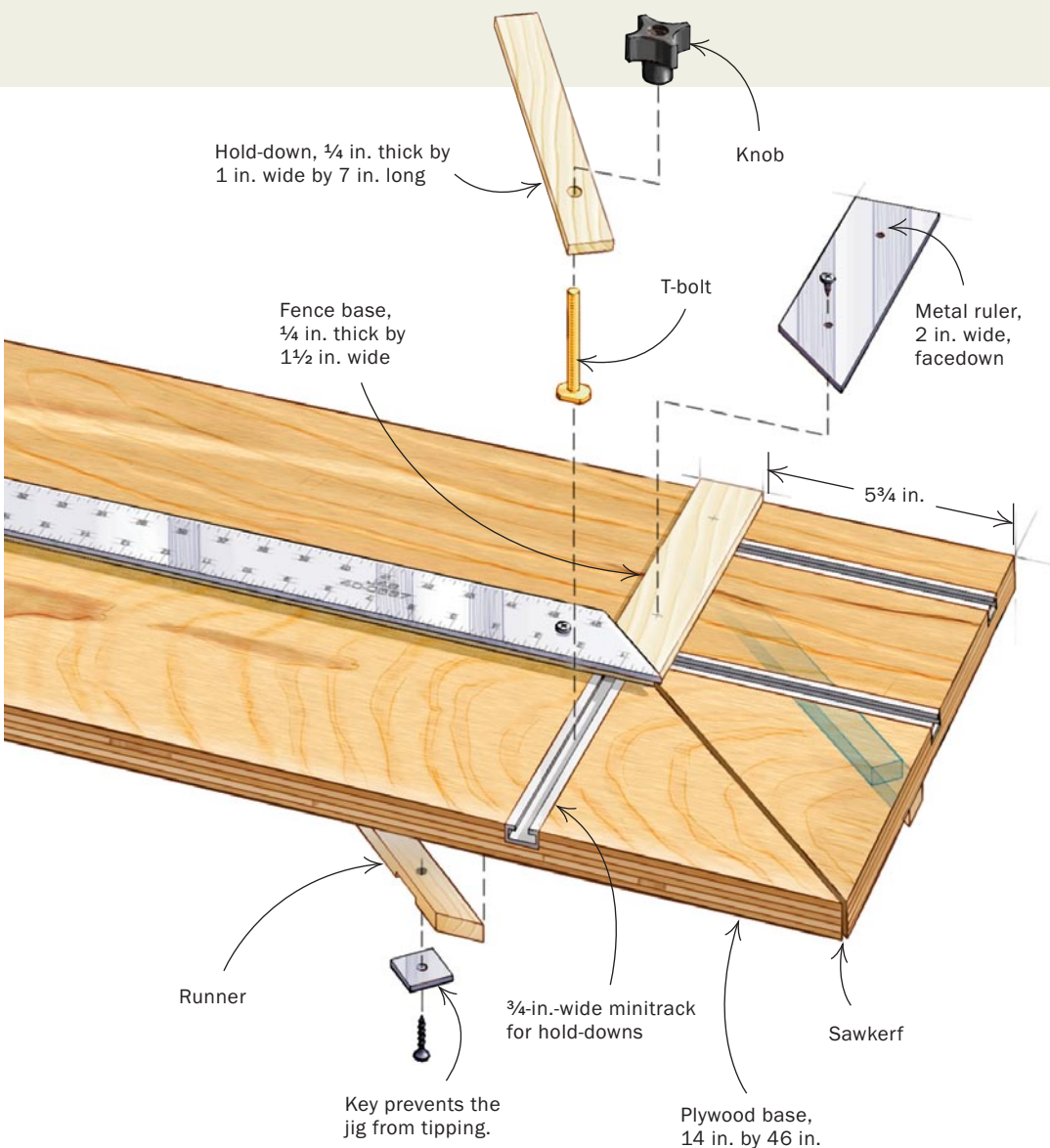
near the blade. The traditional solution has been to build a miter sled or a sliding miter jig that eliminates any movement and supports the full length of the workpiece up to the blade. Clamps or hold-downs add to the jig's accuracy. You may have a jig already, but to cut picture-frame molding, you need a jig with two further attributes: It must provide an accurate way to measure and cut the lengths of molding so that the opposing sides are exactly the same, and it must be designed to cut the outside edge of the molding first to eliminate splintering on the most visible edge of the frame.

My jig (see the drawings above) is designed to miter picture frames. Rather than the typical square board, it is a rectangle, aligned to the miter-gauge slots at a 45° angle. Instead of two fences of equal length, one is short

for making the first cut on each section of molding, while the fence for the second cut is 36 in. long—the practical limit for cutting frames on a tablesaw. Each fence consists of a base with a ruler attached to it. The ruler on the long fence allows you to measure each piece accurately before it is cut. An adjustable stop helps make accurate duplicate pieces.

When cutting frame molding, always cut the longer sides first. If you should err, you still will be able to cut the longer piece into a shorter side. With your rough-cut section of molding secured to the short fence, miter the right-hand end. Move the molding to the long fence, using the ruler to establish the desired length. Clamp the molding and set the adjustable stop at the end of the molding. Cut the left-hand miter. The parallel section of molding is cut in the same way,





**The first miter cut.** Clamp the piece of molding, rough-cut to length, to the short fence of the jig to cut the right-hand miter.



**The second cut.** Clamp the molding to the long fence and set the stop block at the correct distance from the blade (above). Then cut the left-hand miter (below).

but now you have a stop, making the two sections identical in length.

### Glue and strengthen the frame

With all four sides cut, you're now ready to assemble the frame. Most of the strength in the miter joint comes from the glue but only if the pieces are clamped together firmly and accurately. My favorite clamping method is a miter vise, but other methods include a strap clamp, especially with the use of corner blocks, and a four-corner clamp that uses threaded rods.

Nails can be added to reinforce the joint. Most framers drill a hole using a slightly smaller nail chucked in an electric drill. Nails can be added while the frame is secured in a miter clamp, or with the frame braced to absorb the blows of the hammer. To lessen the chance





## Two options for gluing miters

**The best clamp.** An old-fashioned heavy-duty miter clamp works best to glue frames together (right). A pair of clamps allows you to glue a frame in two steps. For smaller frames, threaded rods and corner blocks are the clamping method of choice (below).



OR



**Reinforce the miter joint.** Use a nail to drill a hole horizontally in each corner of the frame. Then hammer in a nail slightly larger than the hole. A miter clamp lets you nail the joint while the glue dries.



of splitting the wood, make sure the nail is driven with the dominant edge perpendicular to the grain.

### Fit the artwork into the frame

Your framing project is not done until it is hanging on the wall. A painting on canvas will require fastening only into the rabbet from the back of the frame. Picture framers call this “fitting.” Fitting items with mats and glass is slightly different: Lay the glass, mat, picture, and backing board faceup while you clean the glass. Spray a nonammonia cleaner onto a section of folded paper towel and wipe the glass from the center toward your other hand that is holding the edge of the package to prevent movement. Turn over the glass by the edges and repeat until it is free of specks. Then place the frame over the package, slide it to the edge of the table, grip the whole thing, and flip it over.

Fastening everything into the frame is easiest with a point driver, especially if it is a hardwood frame. The hand tool looks like a staple gun, but it shoots a 5/8-in.-long point out the front into the inside of the rabbet. Alternative methods include using a brad setter, glazing points, or S-clips (see the left photos on the facing page).

Seal the back with gummed-paper box tape to prevent insects and dust from getting into the frame enclosure. Moisten the tape, press it into place, and trim any excess. Do not use self-adhesive tape because the oils soak into the frame and backing board, and the tape eventually comes off.

To wire the back of the frame, use two screw eyelets and twisted picture wire. Hardware stores sell these in packages rated for different picture weights. About a quarter to a third of the way from the top of the frame, puncture the back with an awl. Start the eyelet in the hole and then, using the awl inserted into the eye, turn the eyelet into the frame until it is secure. In softer woods, screw the eyelet all the way down. Loop the wire through the eye twice and wrap the small excess around the wire. The other end gets the same treatment, after the wire is pulled tight to eliminate slack. You have the correct tension if only two of your fingers can fit between the wire and the back of the frame. Now you are ready to hang your work for all to enjoy. □

*Robert Hamon is a professional picture framer in Mission, Kan.*

### SOURCES OF SUPPLY

Dick Blick  
800-828-4548  
[www.dickblick.com](http://www.dickblick.com)

Lee Valley Tools Ltd.  
800-871-8158; [www.leevalley.com](http://www.leevalley.com)

Van Dyke's Restorers  
800-558-1234; [www.vandykes.com](http://www.vandykes.com)

Woodworker's Supply  
800-645-9292; [www.woodworker.com](http://www.woodworker.com)



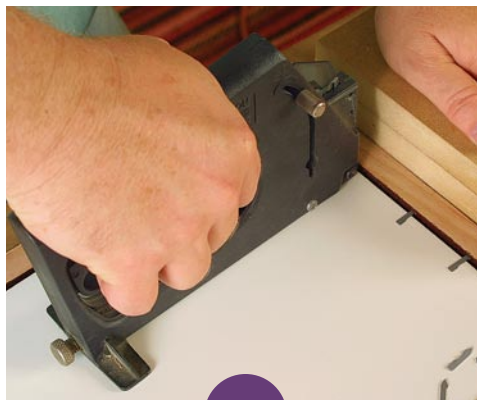


# Secure the artwork in the frame

## FOUR WAYS TO FASTEN EVERYTHING INSIDE



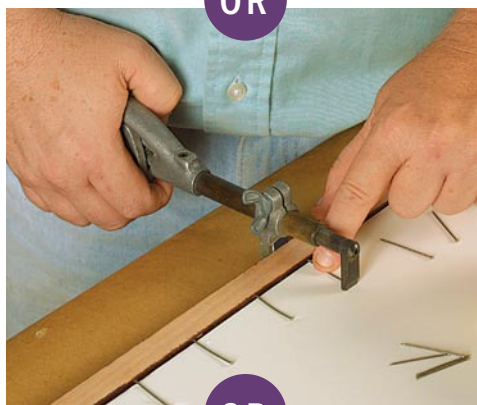
**Points.** The easiest way to fasten the art is to use a point driver, which inserts arrow-headed points into the frame.



OR



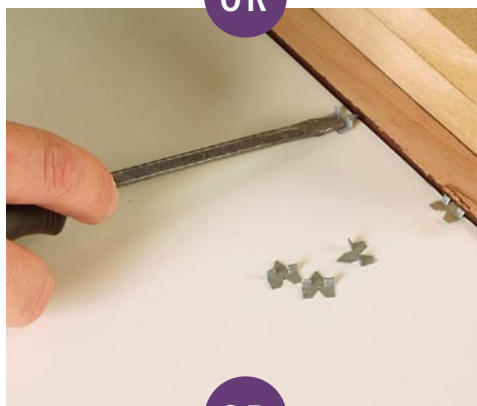
**Brads.** Using a brad setter rather than a hammer lessens the chances of damaging the frame.



OR



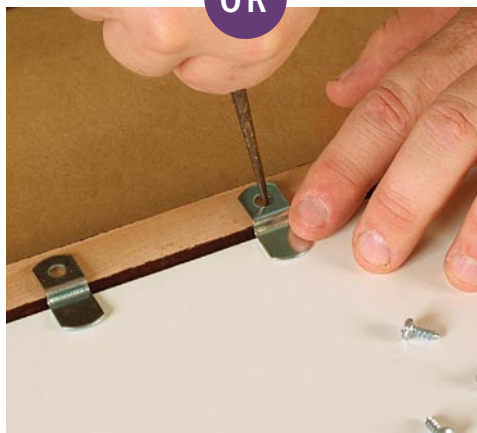
**Glazing points.** Drive glazing points into the frame with a broad-tipped screwdriver. A block braces the pressure on the frame.



OR



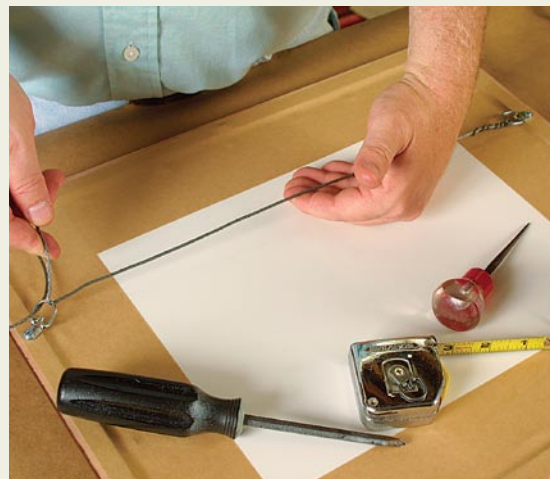
**S-clips.** These clips are available in different sizes to match the distance the artwork is below the back of the frame.



**First, clean the glass.** Clean both sides of the glass with nonammonia-based glass cleaner. Then lower the frame onto the art package. Slide the art-and-frame combination to the edge of the table and flip it over to add the fasteners (left).



**Then seal in the artwork.** Attach gummed-paper box tape to the back of the frame to prevent dust or insects from getting into the framing.



**Now hang it by a wire.** The picture is hung using eye-lets and twisted picture wire. Tension the wire until you can just fit two fingers under it.