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PICTURE FRAMES



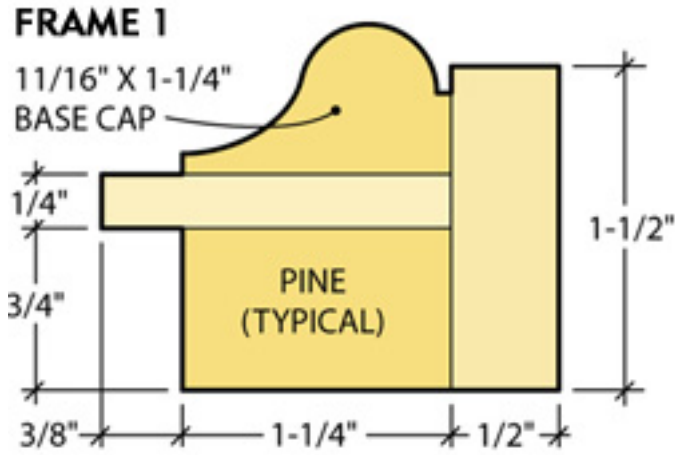
Painted Pine Frames

Our first two frames are made from pine and are great candidates for a paint finish. They feature standard moldings available at well-stocked home centers (below we give the molding's reference number in addition to its common name). For all the frames, it's best to cut the rough materials about 2 or 3 in. longer than necessary before ripping to width or machining.

Frame 1 uses base cap molding (No. WM 166) and flat pine stock. Rip four $3/4 \times 1-1/4$ -in. pine pieces and glue lengths of $1/4 \times 1-5/8$ -in. lath to each. Place them face to face with the edge of one piece flush with the adjoining piece. Use spring clamps to hold the assembly while the glue sets. Then, spread glue on the back of the molding and clamp it to the top of the lath (Photo 1). Make sure that the outer edge of the molding aligns with the flush edge of the flat-stock assembly.

Next, cut the four laminated frame members to size with a miter saw (Photo 2). Use a small brush to spread glue on the mitered ends and assemble the frame in a miter clamp (Photo 3). Check that all corner joints remain tight as you tighten the clamp. After the glue has cured, remove the frame from the clamp and drive small brads into the corners to reinforce the joints.

Next, rip pieces of 1×2 to $1/2$ in. thick and miter them to fit around the perimeter of the frame. Apply glue and clamp them to the frame with spring clamps (Photo 4).



After gluing a $1/4$ -in.-thick lath to a $3/4$ -in. backer, add the molding to the lath. Use spring clamps to apply pressure.



Use a miter saw to make the 45° cuts at both ends of each piece. Make sure opposite pieces are the same length.



Spread glue on the mating surfaces and assemble the sides in a frame clamp. Use brads to strengthen joints.

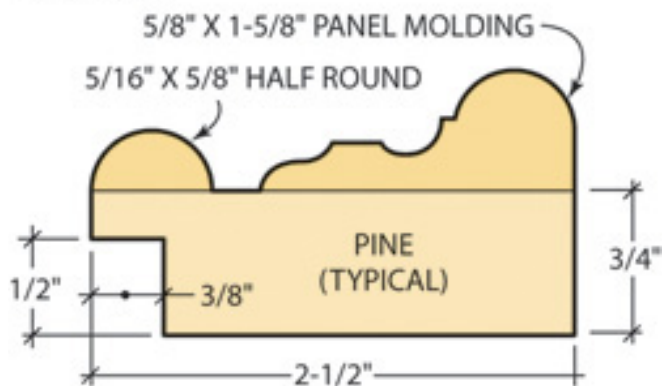


Cut banding strips of 1/2 x 1-1/2-in. pine to length with mitered ends. Glue these to the outside of the frame.

Frame 2 features a panel molding (No. WM 8174) and a 5/8-in. half round (No. WM 123), glued to 1 x 3 pine. After cutting the stock to rough length, spread glue on the back of the molding and use spring clamps to hold it to the 1 x 3 until the glue sets. Keep the panel molding flush to one edge and the half round flush to the opposite edge. When the glue is dry, use a dado blade in your table saw to cut the rabbet along the inner edge of the 1 x 3 (Photo 5). Then, miter the frame stock to exact length.

Since this frame is wider than the first, you can use No. 0 joining plates to reinforce the corners and eliminate the need for brads. Mark centerlines for the plate slots in the mitered ends of the frame stock and cut the

FRAME 2



slots (Photo 6). Spread glue on the mitered faces, in the plate slots and on the plates, and assemble the pieces in the frame clamp to pull the corners tight. After about 20 minutes, use a small chisel or putty knife to remove any glue that has squeezed from the joints.

To finish these painted frames, first lightly sand with 150- and 220-grit sandpaper. Then apply an aerosol spray finish, following the manufacturer's instructions. We used Rust-Oleum Hammered Gold (No. 7210) and Hammered Silver (No. 7213) for our frames.



Frame 2 uses two moldings glued to 1 x 3 stock. Cut the frame rabbet with a dado blade and table saw.



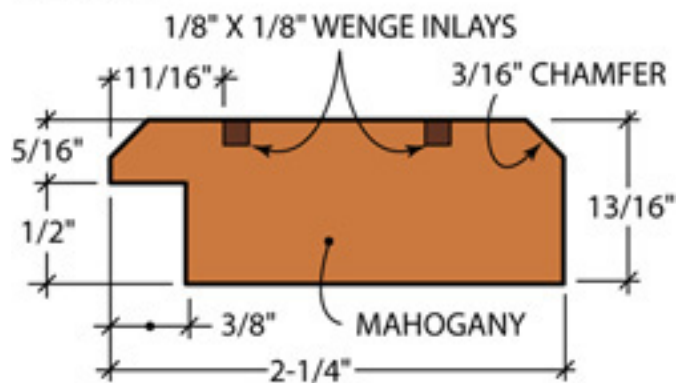
Reinforce the corners of wider frames with plate joints. Mark the centerlines and cut slots for No. 0 plates.

Hardwood Frames

Another approach to building frames is to use hardwood with either a clear or stained finish. In each of the following designs, we've combined different woods and textures. After building four oversize pieces of frame stock for each design, use a dado blade or router table to cut the 3/8-in.-wide frame rabbet on the inner edge of each piece. Then, use a miter saw to cut the pieces to precise length and join the corners with plate joints.

Frame 3 is constructed of mahogany with wenge inlay. Begin by ripping 13/16-in. mahogany to 2-1/4 in. wide. Crosscut the stock to rough length, then readjust the saw blade and cut two 1/8-in.-deep kerfs in the face of each piece. Use a band saw to rip 1/8 x 1/4-in. inlay strips of wenge. Run a bead of glue into each saw kerf and press the inlay

FRAME 3



strips into place. Use spring clamps to hold them while the glue cures (Photo 7). When the glue is dry, use a plane or sharp cabinet scraper to trim the wenge flush to the mahogany surface. Then, install a chamfer bit in your router table and bevel the two top edges of the frame stock.

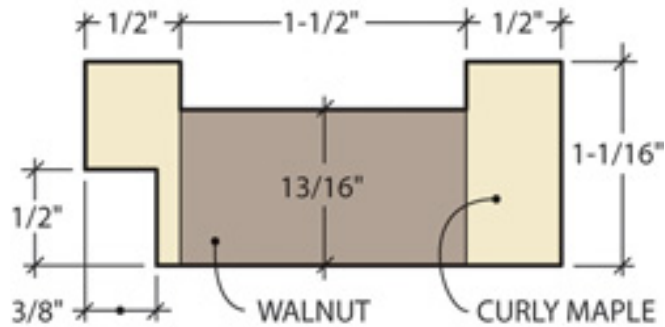


Frame 3 has two inlaid strips. Cut the slots on a table saw. Glue the strips in place and rout a chamfer on the edges.

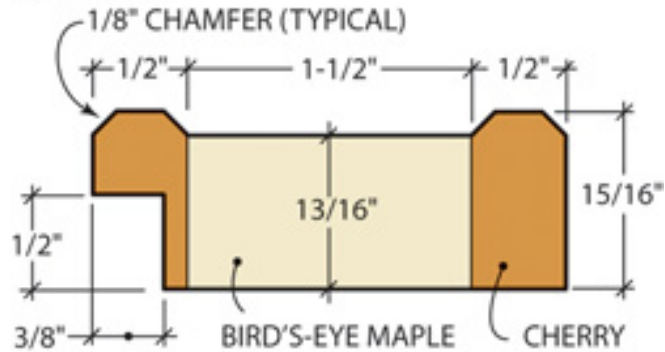
Frames 4 and 5 are variations on the same theme. For the first design, rip curly maple strips to $1/2 \times 1-1/16$ in. and glue them to the edges of a $13/16 \times 1-1/2$ -in. walnut field (Photo 8). Keep all pieces flush on the back side of the frame.

For the second variation, rip $1/2$ -in.-thick cherry stock to $2-1/2$ in. wide. Use a router table with a chamfer bit to shape all four edges of the cherry, then rip the molded stock into $15/16$ -in. strips (Photo 9). Glue these strips to both edges of a bird's-eye maple field.

FRAME 4



FRAME 5





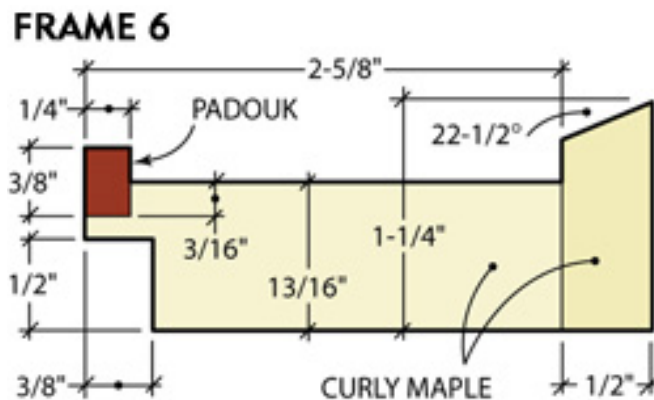
Clamp maple strips to both edges of a walnut field to form Frame 4. Make sure the pieces are flush on the back.



After routing chamfered edges on cherry stock, rip two strips. Glue them to the edges of a maple field for Frame 5.

For Frame 6, we've chosen curly maple for the field and raised outer band, with a padauk inlay that accents the inner edge. After ripping the maple stock to width, use a dado blade or router table to cut a 3/16-in.-deep x 1/4-in.-wide rabbet along one edge of each of the four frame pieces. Then, cut pieces of padauk to fit the rabbet in each piece. Glue the inlays in place, securing them with strips of masking tape until the glue sets (Photo 10).

To make the outer band, rip a 22-1/2° angle on the edge of a 1/2-in.-thick piece of maple. Re-adjust your saw to 90° and rip this beveled strip from the board. With four band strips made, glue each to the outer edge of the maple field pieces (Photo 11).



After sanding to 220 grit, we finished our

hardwood frames with clear shellac. This finish is easy to apply, it dries quickly, and it won't react with delicate artwork and mounting materials. Brush on a light coat with a good-quality bristle brush and let dry for at least 2 hours. Lightly sand with 320-grit paper to remove any roughness, and dust off. Apply one or two additional coats as needed. When the last coat is dry, rub it with 4/0 steel wool for a warm, satin gloss.



For Frame 6, glue padauk strips in a rabbet on the edge of a maple field. Use masking tape instead of clamps.



Glue the angled band strips to the outside of the maple frame pieces. Be sure that the strips are flush on the back.

Mounting Equipment

Now that you have your wooden frames ready, it's time to gather the materials for mounting. You can buy what you need at any well-stocked art supply store.

Photos and prints are typically mounted within a broad mat-board window that highlights the artwork. Mat board is available in a variety of colors and a few textures as well. Make sure to get acidfree, or archival, mat board to protect the artwork from deterioration. This same material can be used as the mounting board behind the artwork. You'll also need archival mounting tape. This tape is made of linen cloth and is activated by wetting its glued surface. Backing board, installed behind the mounting board to keep it flat, can be either stiff corrugated cardboard or foam core stock. After the backing board, you'll need kraft paper to act as a dust cover over the back of the frame--a glue stick is a convenient way to attach the paper to the frame.

Most artwork requires a pane of glass to protect it from dirt and changes in humidity. In most cases, normal window glass will work, although a special ultraviolet-protective glass is available to help prevent fading. Nonglare glass is also used for framing. However, this type has a slightly dull appearance. Acrylic sheet can be a practical alternative to glass--especially if weight is an issue. But acrylic scratches easily, attracts dust and doesn't have the same degree of transparency as glass.

As for special tools, you'll need a straightedge and a mat cutter. Mat cutters come in a variety of configurations, ranging from basic \$15 models to professional versions costing a few hundred dollars. We achieved good results with a medium-priced Logan Model 3000 Pro-Am mat cutter and Adapt-A-Rule straightedge and ruler.

Mounting The Artwork

Measure and mark the size of your mat and mounting boards. It's best to work from the back of the boards to prevent soiling the face. Place the boards on a piece of scrap cardboard and use a utility knife and straightedge to cut both pieces to size.

Position the artwork on the mounting board and mark the corners with light pencil marks. Rip two 1-1/2-in.-long pieces of linen mounting tape and moisten about 1/2-in. of each piece. Adhere the tape to the back side of the artwork, along the top edge so that about 1 in. extends beyond the top. When the glue dries, turn the piece face side up and position it on the mounting board. Rip two more strips of tape, each about 3 in. long, and moisten them. Apply them across the extending tape strips so the artwork is hinged to the mounting board (Photo 12). This system allows the print to expand and contract with changes in humidity, without wrinkling.

Mark the cutlines for the opening, or window, on the back side of the mat board. Typically, a mat extends over the image by no more than 1/4 in. on each edge. Use the straightedge and mat cutter to make the cuts (Photo 13). It's a good idea to practice on scrap board to learn how to start and stop the cuts exactly at the corners.

Place the cut mat over the mounted print (Photo 14). It's not necessary to attach the mat since the whole assembly will be sandwiched in the frame.



Use linen tape to attach photos and prints to the mounting board. Hinge the artwork at the top edge.



To cut the mat opening, mark cutlines on the back side of the mat board and use a mat cutter to make the cuts.



Place the mat over the print and mounting board. It's not necessary to fasten the two boards together.

Turn the frame upside down and install the glass. Then place the matted print into the frame (Photo 15). Cut the backing board to size and place it over the mounting board. Use framer's points to hold the back in place (Photo 16). You can use a special driving tool or a flat-blade screwdriver to install the points. On hardwood frames, the driving tool is worthwhile since the points are a bit harder to install.

Cut a piece of kraft paper slightly larger than the overall frame size. Rub a glue stick on the back side of the frame and apply the paper, letting it overhang on all edges. Press the paper to the frame to get a good bond and use a straightedge and utility knife to trim it 1/8 in. in from each edge. The simplest method of hanging a frame is to use a sawtooth-type hanger. Center the hanger on the back of the top rail of the frame and drive brads to hold it in place (Photo 17). On a hardwood frame, use an awl or bore small pilot holes for the brads.

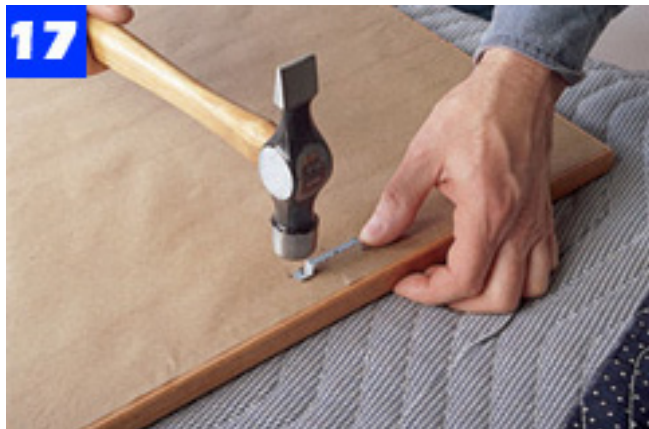
Large or heavy frames are best hung with picture wire. Bore pilot holes, and install screweyes or D-ring hangers in the side frame rails about 3 or 4 in. from the top edge of the frame. String a length of picture wire between the hangers, leaving about 1-1/2 in. of slack. Twist the wire together to lock it to the hangers (Photo 18).



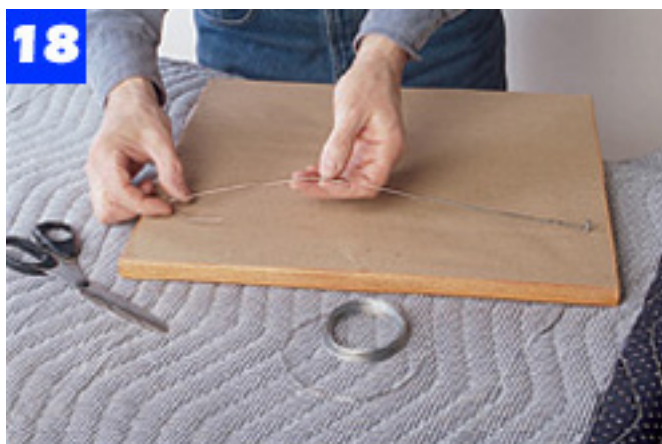
With the frame lying face side down, install the glass panel. Then, place the mounted artwork in the frame.



Place a corrugated or rigid foam backing board over the mounting board and hold it in place with framer's points.



A sawtooth hanger is fine for supporting light frames. Use brads to secure it to the center of the frame.



Hang heavy frames with picture wire. Install screweyes or D-ring hangers and string picture wire between them.