

A Beautiful Floor From Wood Scraps

Achieving the intricate geometry of a parquet floor doesn't require much more than a tablesaw, kraft paper, and wallpaper paste

BY CHARLES PETERSON

You could say I have a passion for parquet floors. They are one of my specialties as a wood-flooring contractor, and I also teach courses in parquet-floor installation. As president of the International Parquetry Historical Society (www.parquetry.org), I've been able to walk on some of the most elaborate parquet floors in the world.

Parquet flooring is a mosaic of wood pieces usually arranged in repeating squares. The geometric variations within this square or rectangular format are just about limitless (sidebar p. 77). Although you can purchase manufactured parquet squares, almost any parquet-floor pattern can be made from small pieces of scrap wood that otherwise might be thrown away. Because I am a flooring contractor, I have a readily available supply of flooring scraps, but any clear, kiln-dried lumber can be resawn to create an outstanding parquet pattern.

Resaw the lumber, and make a template

When you see the finished appearance of a parquet floor that has been cut, assembled, and installed one piece at a time, it's hard to believe how basic and efficient the process can be. But it is. Using a ripping blade on a



Paper keeps the pieces together.
A sheet of 40-lb. kraft paper glued to the parquet square holds the small pieces together during installation.

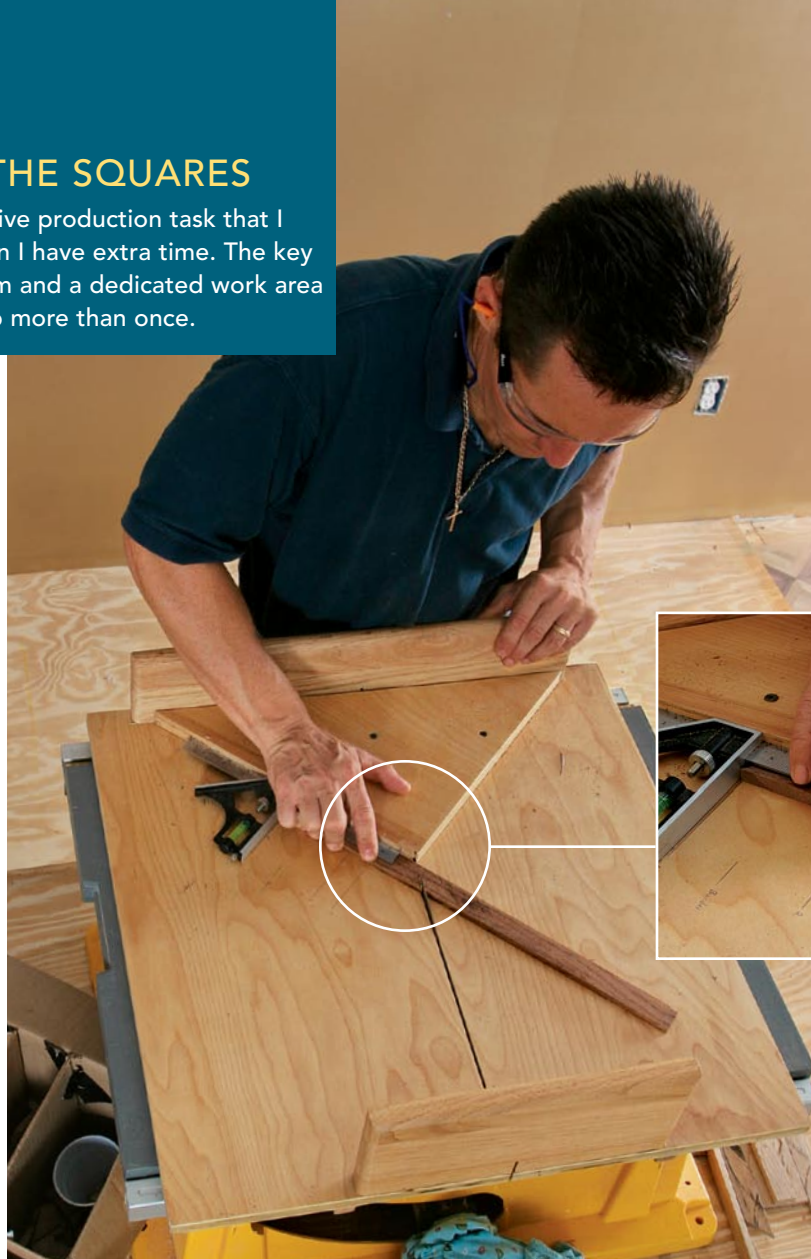
CUT THE PIECES, AND ASSEMBLE THE SQUARES

This work is a simple, repetitive production task that I can do in short sessions when I have extra time. The key is having an organized system and a dedicated work area so that I don't have to set up more than once.



Resaw to thickness. If I'm using $\frac{3}{4}$ -in. scraps, I can resaw them to $\frac{5}{16}$ in. thick and effectively double the amount of flooring I have. When resawing, make sure the scraps are long enough to handle safely on a tablesaw. Make the cut in two passes, cutting halfway through from each side. Always keep a push stick at hand.

Use a jig to make angled cuts. Using the left side of the triangular fence on a crosscut sled, make the first 45° cut. Move the piece to the right side, and using the stop, make the second cut. As I go, I put the pieces in separate bins to keep them organized.



Cut small parts precisely with a crosscut sled

One of the most useful accessories you can make for your tablesaw is a crosscut sled that rides on a pair of runners sized to fit the saw's miter-gauge grooves (see *FHB* #180, p. 108). Front and back

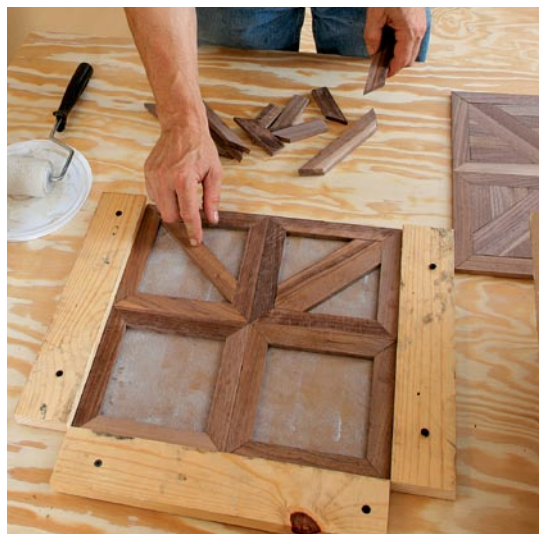
fences are fastened to the base at exactly 90° to the kerf made by the blade.

For 90° cuts, place the workpiece against the back fence. For 45° cuts, I attach a right-triangle piece of plywood to the sled with a few drywall screws.

You need an adjustable stop on one side of the triangular fence for cutting identical parts. To make one, I cut a small kerf in the right-hand side of the fence and use five-minute epoxy to secure the blade of an inexpensive combination square. The square's adjustable head becomes a lockable stop.



Roll on wallpaper glue. Water-soluble wallpaper glue is applied to a square of 40-lb. kraft paper that I cut to just less than the size of the parquet squares. I screw down 1x3 wood guide strips to form three sides of a square that is exactly the same size as the parquet pattern.



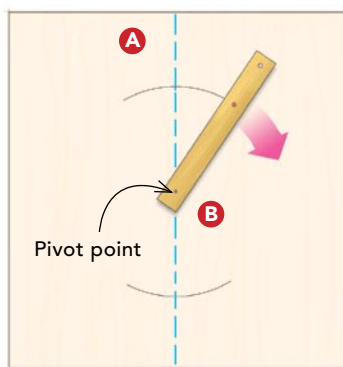
It's like putting together a puzzle. First, place the biggest pieces on the outside; then work inward. The smallest pieces go in last. I always keep a finished parquet tile close by as a reference. By the time all the pieces are in, the glue should be dry.

DIVIDE THE FLOOR, AND LAY THE PARQUET FROM THE CENTER

Once you've found the starting point, bisect it with two perpendicular lines. Along these lines, screw down 8-in.-wide plywood strips to act as backerboards. Start from the center, spreading only as much glue as can be covered in five minutes.

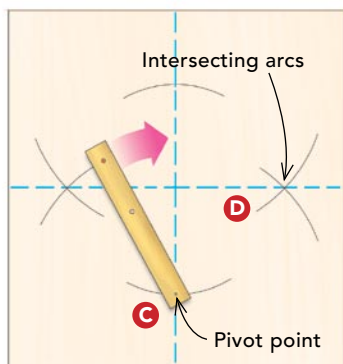
Use a trammel for layout

Made from a straight length of wood, a trammel enables you to establish perfectly perpendicular layout lines. The pivot point is a nail driven through the trammel and into the floor. Size the other holes to hold a pencil.



A. Mark a centerline, and find the center and pivot point.

B. Use the trammel to mark two arcs through the centerline, equidistant from the pivot point.



C. Move the trammel's pivot point to each point where the arcs cross the centerline, and mark the intersecting arcs as shown above.

D. When connected, the arc intersections make a second line perpendicular to the first and complete the layout lines for the plywood backerboards.



Spread the glue, and install the squares paper side up. Use the notched trowel recommended by the manufacturer to spread adhesive evenly over the subfloor. Gently work the parquet squares back and forth to be sure that they adhere properly.

Moisten, then peel. After a few tiles are installed, wet the paper on the parquet squares sparingly with a sponge or spray bottle. After about 20 seconds, pull the paper off the parquet. Wipe up any excess moisture.



tablesaw, I resaw scrap pieces of $\frac{3}{4}$ -in.-thick strip flooring (walnut here) to create $\frac{5}{16}$ -in.-thick parquet stock. This material then can be ripped to finished width. At this point, I cull any pieces with knots, splits, or other imperfections. To make precise square or miter cuts in the parquet pieces, I use a crosscut sled on a tablesaw (center photo, p. 75).

Any parquet-flooring project starts with the pattern. Once I've decided on a design and made a full-scale drawing, I cut all the pieces to fit in that drawing. These pieces then become templates to establish the stop settings on a crosscut sled and its miter-cutting jig.

When I have cut enough pieces to assemble a run of parquet squares, I jig up for that process as well. The 1x3s that I screw to a plywood worksurface form a perfect square, and they serve as guide strips. As shown in the



I can expect to need at the intersections with walls.

Installed around the outside of a room, a border or an apron of strip flooring does a nice job of framing a parquet floor and serves as a transition from the decorative floor to the walls. Strip flooring also helps to de-emphasize walls that are not straight, to reduce the number of parquet squares that need to be made, and to help the transition into another room.

With parquet squares laid down along the layout lines, I can decide how wide I want to make the border, and then I can make any adjustments to the starting point.

Lay down the squares a few at a time

I like urethane adhesives for parquet flooring. Urethane is flexible enough to withstand the natural expansion and contraction of panels without losing its adhesive qualities.

No matter what glue is used, it always should be applied according to the manufacturer's instructions. I pay particular attention to open working time.

When I start gluing down the squares, I spread just enough glue that can be covered with parquet in about five minutes. □

Charles Peterson lives in Gales Ferry, Conn. Photos by John Ross, except where noted.

photos on p. 75, I glue the parquet pieces to a square piece of kraft paper, assembling from the outside in.

If I have a dedicated space to work, I can cut and assemble pieces as time allows. I once cut an entire floor during the half-times of college-football games.

Find the floor's center, then the starting point

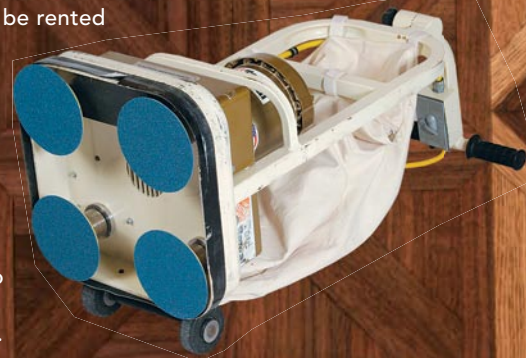
Once I've made all the parquet squares (plus a few extras) but before I glue down anything, I establish the layout. Keeping the parquet squares symmetrical with the walls is standard practice, but sometimes, the squares might need to line up with a focal point in the room, such as a stairway or a fireplace. Once I've found the exact center of the room (sidebar facing page), I dry-lay enough parquet squares to go across the room in both directions. This test layout tells me what kind of a partial square

MAKE FINAL ADJUSTMENTS, AND FILL THE GAPS

For up to an hour after the squares have been set, they can be adjusted by hand. I do this as I work along, trying to get the floor as tight and as straight as possible. You can use a small hammer and a beater board to tighten the floor from the edges.

I don't walk on the floor for at least eight hours. When I can, I look carefully for gaps between pieces. These gaps can be filled with slivers of flooring material. Just glue the wood sliver in place, then shave off the excess with a razor blade.

Sanding is an essential step when installing a parquet floor, just as it is with other wood floors. But the different grain orientations in a parquet floor call for a special floor sander. I prefer to use a U-Sand machine (www.u-sand.com), which can be rented at many home centers. The machine is basically four large random-orbit sanders working in one device. These machines work well but are slow. To avoid scratches and to improve sanding effectiveness, be sure to remove dirt and debris, including loose sawdust.



Famous floors

Parquet patterns are named after the places where they were installed, such as the Monticello design that graces Thomas Jefferson's home or the Louvre pattern named after the French national museum of art. Patterns also are named after places where they were thought to originate, such as Saxony and Brittany. For more information, go to www.woodflooringedu.org.



Louvre



Saxony



Brittany



Monticello