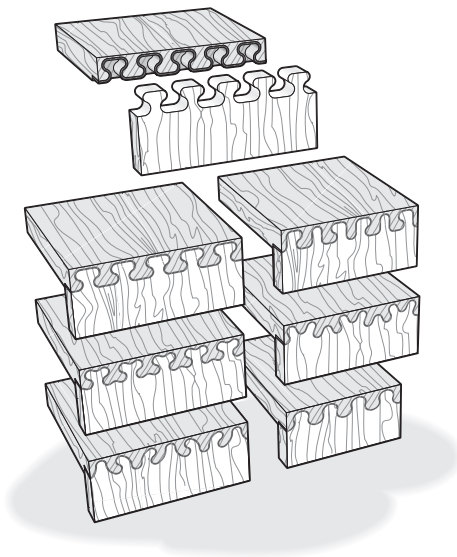


Inlaid Half-Blind Isoloc Joint Procedures

It's hard to describe Isoloc joints as plain, but all plain Isoloc joints are routed with a single bit; either $\frac{5}{16}$ " or 8mm diameter, as described in the previous chapters.

However, by using two different sized bits ($\frac{1}{4}$ " and $\frac{3}{8}$ ", or 6mm and 10mm), an even more unique effect can be produced: inlaid Isoloc joints.

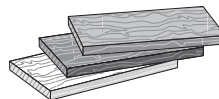
Isoloc Patterns



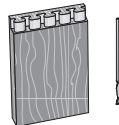
Cutting Inlaid Isoloc Joints



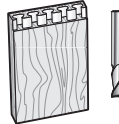
Use 2 bits and
1 guidebush



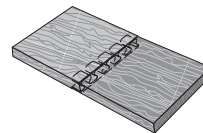
1 Pin board
1 Inlay board
1 Socket board



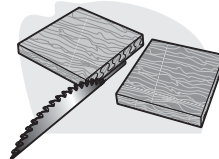
Rout Inlay board vertically
with small cutter.



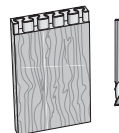
Rout Pin board vertically
with large cutter.



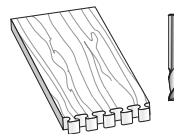
Glue Pin and Inlay boards
end-to-end.



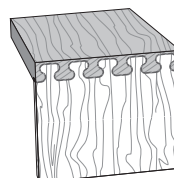
Saw Inlay board off flush
with Pin Board.



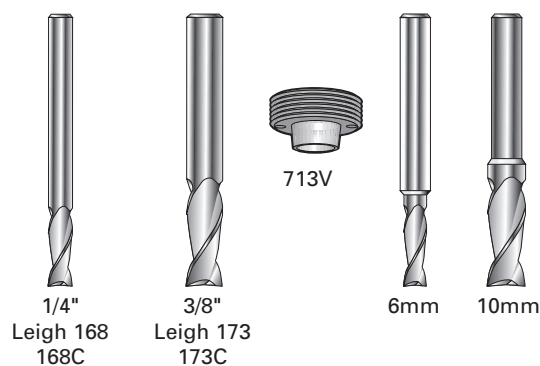
Re-rout inlaid Pin board in
original position with small
cutter.



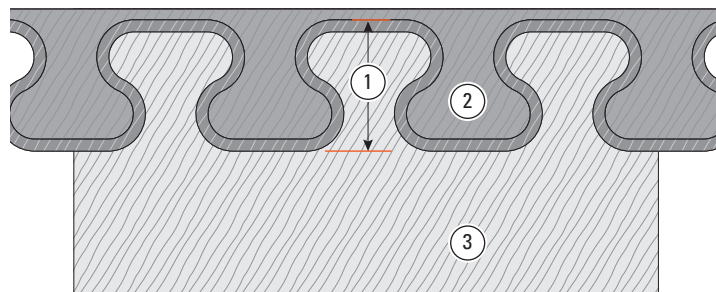
Rout Socket board
horizontally with large
cutter.



Glue and assemble in usual
way.



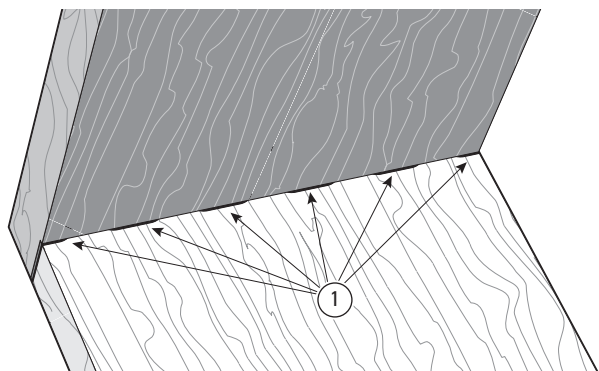
8-1 Inlaid Isoloc joints require two bits, either a $\frac{1}{4}$ " with $\frac{3}{8}$ ", or 6mm with 10mm. Only one variable bush (713V) is used.



8-2 The dark inlay boards should be $\frac{3}{4}$ " [19mm] thick ①. Any thinner may leave flat spots; any thicker wastes wood. (*exceptions see 8-19 and 8-20*)

⚠ However, scale settings will be set on $\frac{1}{32}$ " [1mm] less than inlay board thickness (see 8-5).

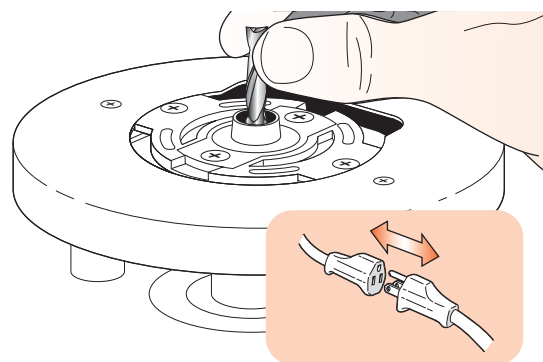
② is the Pin Board. ③ is the Socket Board.



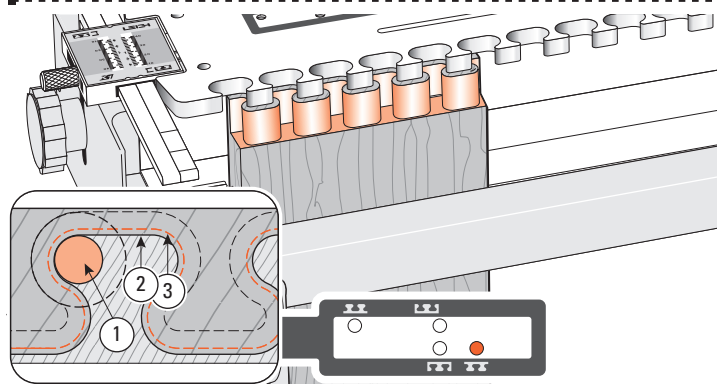
8-3 Inside Corner Exposed

Pin board material must be at least $\frac{13}{16}$ " [21mm] thick to ensure the inlay does not show inside the finished corner, as it does in this illustration ①.

⚠ However, scale settings will be set on $\frac{1}{16}$ " [2mm] less than pin board thickness (see 8-7).

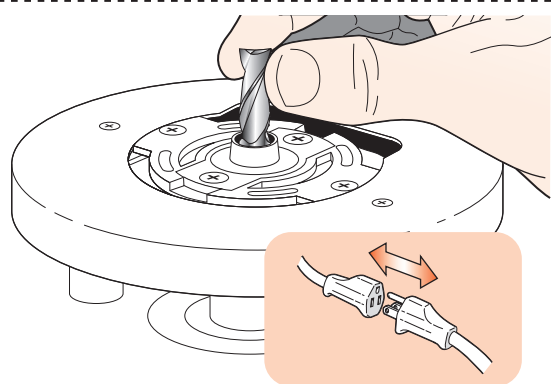


8-4 Set Up for Joint Fit This joint fit test is similar to the quick-fit test at 11-11 to 11-14, except two sizes of bit are used and test cuts are made on **two** vertical boards to join end-to-end. Depth of cut is not critical for testing. Best use the same wood species as the final project. For instructional clarity, we show a *medium* coloured pin board, *dark* inlay board, and *white* socket board. Start with the smaller bit in the router.

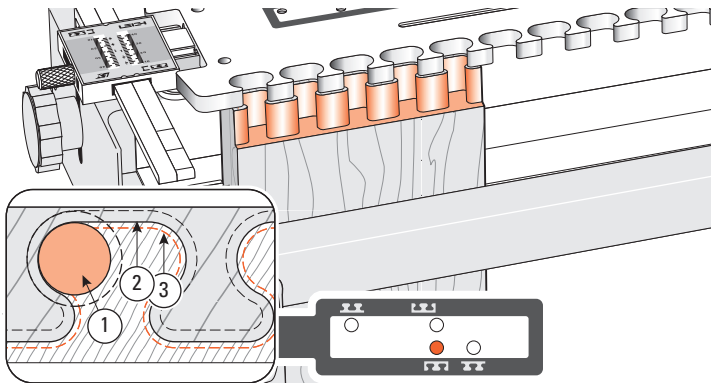


8-5 Move the template to the socket position . Set the scale on $\frac{1}{32}$ " [1mm] less than the inlay board thickness.

Rout the inlay board using the smaller bit ①. You will be removing $\frac{1}{32}$ " [1mm] ② less wood than with a "plain" ③ Isoloc joint.

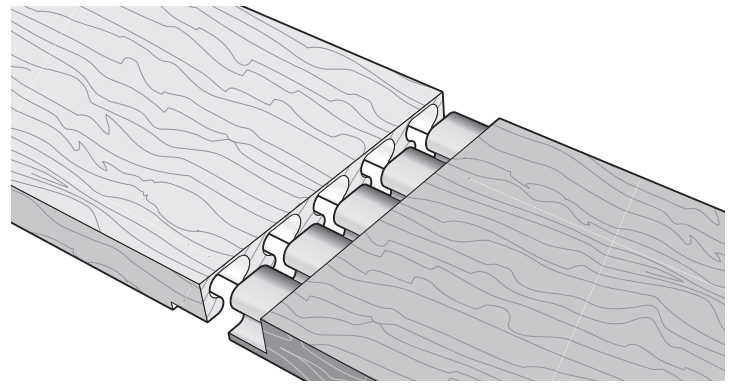


8-6 Fit the larger bit to the router.

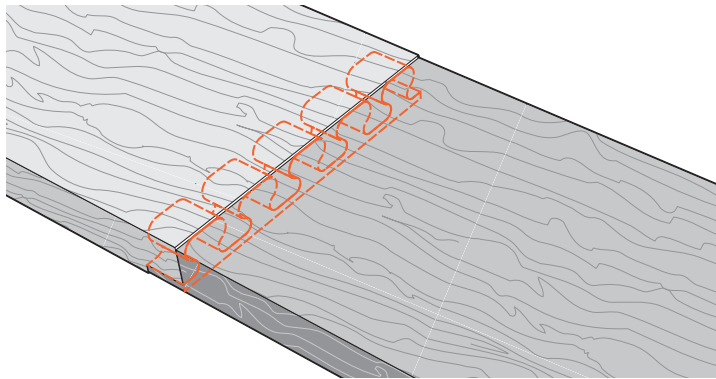


8-7 Move the template to the pin position . Set the scale on $\frac{1}{16}$ " [2mm] less than the pin board thickness. See step 8-2.

⚠ Do not change the scale setting on any of the following steps. This will ensure an even inlay band thickness on the finished joint. Rout the pin board using the larger bit ①. You will be removing $\frac{1}{32}$ " [1mm] ② more wood than with a "plain" ③ Isoloc joint.



8-8 Test the fit end-on-end between the pin board and inlay board. Make any necessary VGS adjustments to achieve the desired fit (See Chapter 4) and if necessary, repeat steps 8-4 through 8-7.

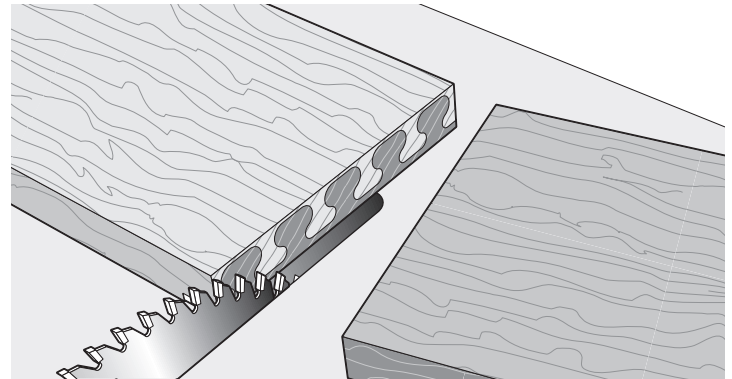


8-9 Having tested with scrap boards, now rout the working boards.

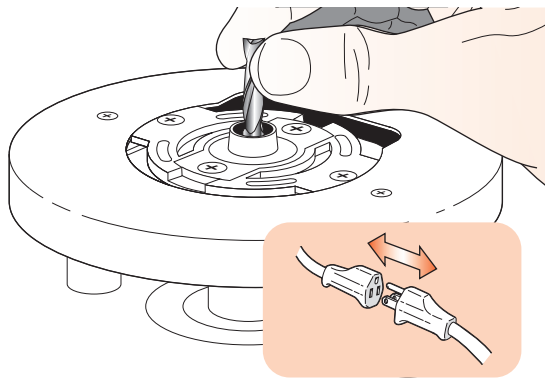
⚠ The depth of cut must be set to match the final socket board thickness.

Leave the scale setting exactly where it is.

Glue each inlay board to its pin board end-to-end.

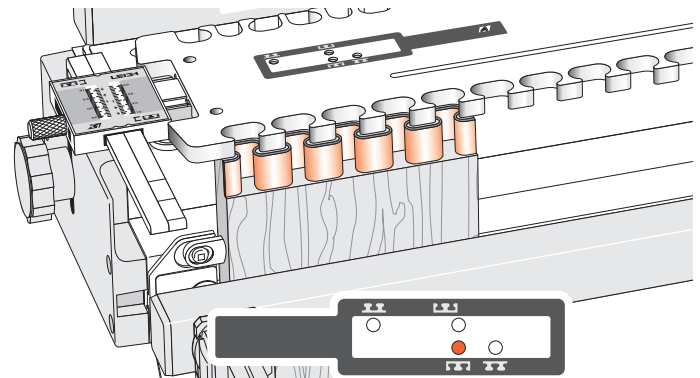



8-10 When the glue is set, saw off the inlay boards flush with the end of the pin boards. **⚠** You will be using two or more species of wood with differing grains and moisture contents. Do not delay the second routing of the inlaid pin boards. Any delay here could allow shrinkage and cause uneven inlay "strip" thickness in the final assembly. See 8-17.

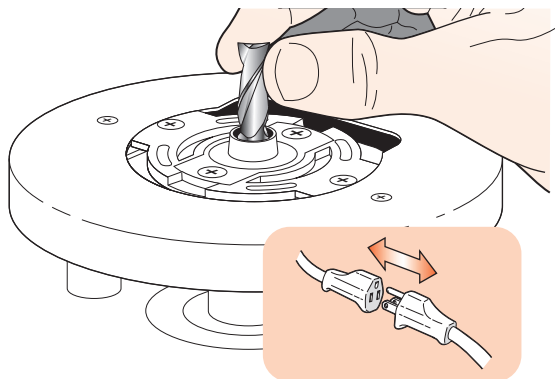


8-11 Re-fit the smaller bit to the router.

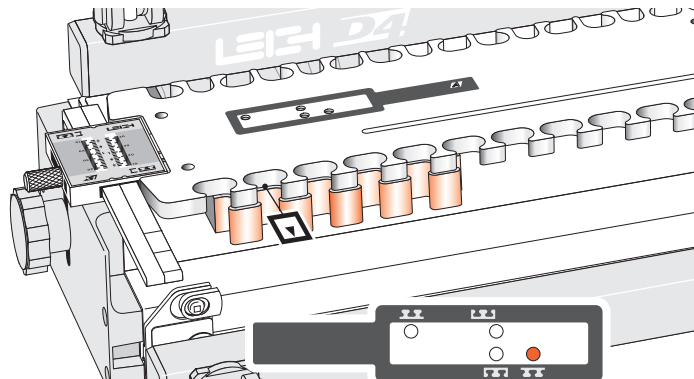
Note: For half-thickness inlays see 8-15.




8-12 Move the template to the pin position . Reset the pin boards back in the jig, touching the side stop. Make sure the smaller bit is in the router. **The scale settings and cutting depth must be exactly as they were for the original pinboard cuts. Now rout all the pin ends using the smaller bit.** This leaves the $\frac{1}{16}$ " [2mm] inlay attached to the pins.

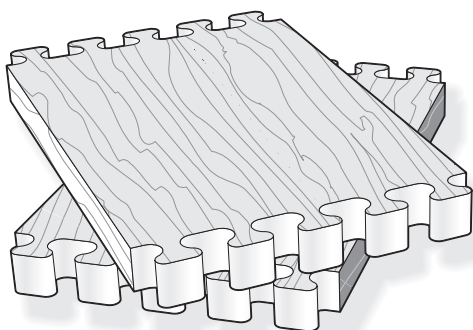


8-13 Re-fit the larger bit to the router.



8-14 Move the template to socket position .

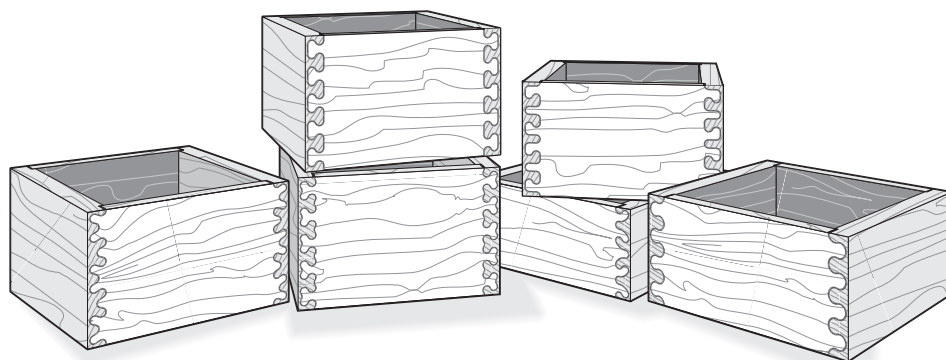
Wood routed horizontally may behave differently from vertical grain, so rout a test socket board using the larger bit. Use the same wood species as the final project board. Test and adjust the final fit if necessary. If any VGS adjustment is needed, it will be very small.




8-15 When the fit is satisfactory, rout all socket boards with the larger bit.

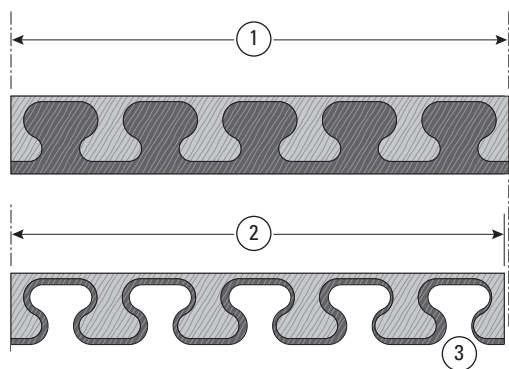
Half-Thickness Inlays

It's just as easy to make inlays half the thickness. *If you use a 5/16" [8mm] bit through steps 8-11 to 8-14 the inlay strip would be only half as thick i.e. 1/32" [1mm].*

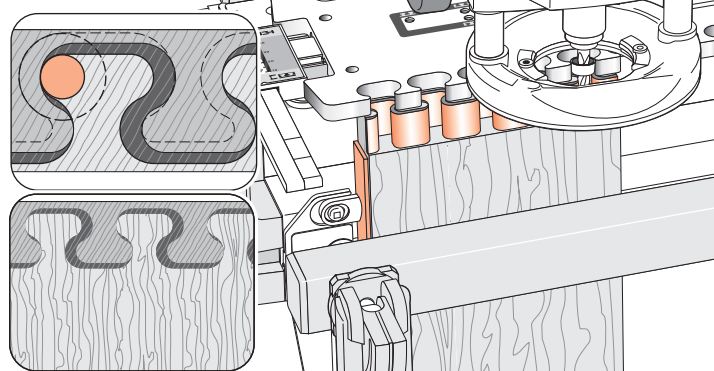


8-16 Glue, assemble, and finish in the usual way.

 To avoid shrinkage problems noted earlier, do not delay between routing parts and gluing up, particularly on wide boards. See below.

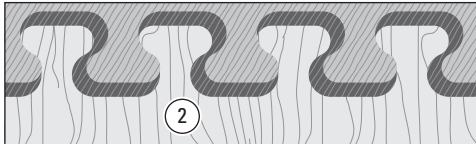
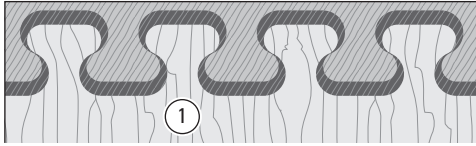


8-17 This is how the shrinkage of an inlaid board can cause uneven inlay thickness. The original pin board and inlay wood ① glued together and put aside may contract across the grain ②. The template does not change size, so the difference to inlay thickness is progressively greater as the router moves to the right ③.



8-18 "Shadow" Inlaid Joints

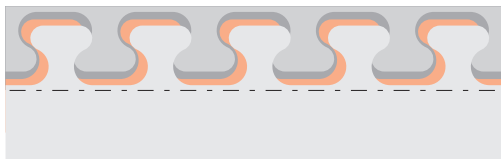
Imagine you deliberately offset the inlaid pin board in the jig; for example, you blocked it away from the side stop by 1/16" [2mm], as shown here. This will produce spectacular shadow effects. *Make sure you also block the socket board away by the same distance to ensure board alignment*



8-19 You can also use a different scale setting for a shadow effect. Example ① shows the result of a $\frac{1}{16}$ " [2mm] higher scale setting.

Combining blocking and offset scale settings results in effects similar to ②.

Make sure your inlay and pin boards have sufficient thickness for this, as indicated by the dotted lines on illustration 8-20.



8-20 For even more spectacular “double inlay” effects, try this: After gluing the first inlay material...

...offset and re-rout the inlaid pin board with the small bit.

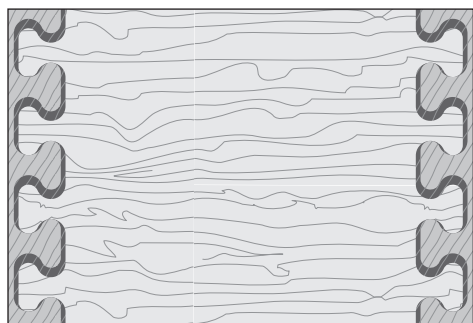
Now rout a second, contrasting inlay board, **but with the large bit**. Glue this into the inlaid pin board and saw off as before.

Offset and re-rout this double-inlaid pin board with the small bit.

Rout the final socket board with the large bit, glue and assemble.

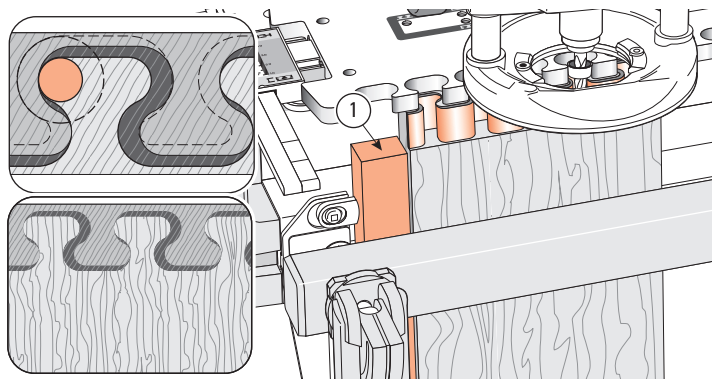
The potential range of effects is limitless.

Have fun!



8-21 "Shadow" Joint Symmetry

Here's how to make the shadow joint on the other end of the socket board match.



8-22 You cannot move pieces to the left of the side stop, so use a spacer block ① equal to one whole joint pattern pitch, **minus** the desired offset. In our example, we made the spacer block one pitch minus $\frac{1}{16}$ " [2mm]. This will give the matching side to side result shown in 8-18 and 8-21.

Note: Also see Chapter 10 on joint symmetry and asymmetry. ■