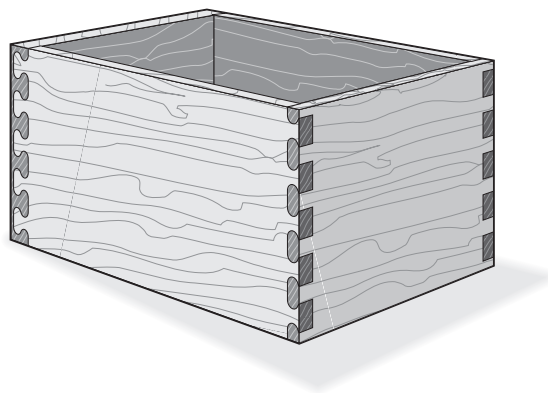
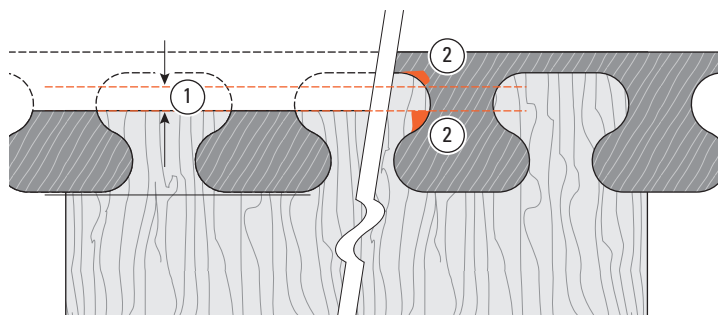


## Through Isoloc Joint Procedures

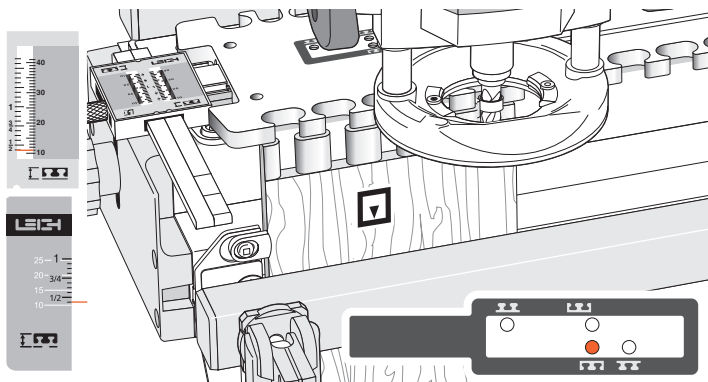
*These instructions are based on the assumption that you have mastered the routing of the basic Isoloc half blind joint, and are thoroughly familiar with those procedures. Also that you have read the Hints and Tips Chapter 11.*





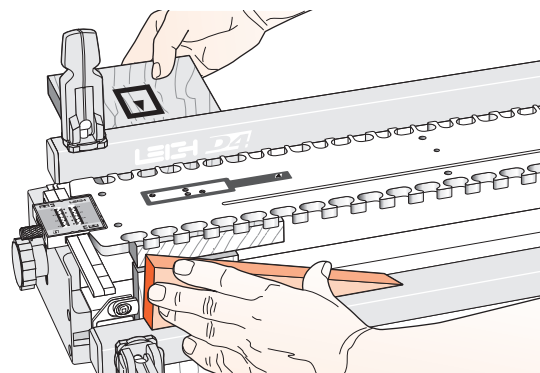
**9-1** Although intended primarily as a half-blind joint, the Isoloc can easily be used for attractive through joinery. This is particularly suitable on the rear corners of drawers where the same Isoloc pattern had been used on the drawer front.




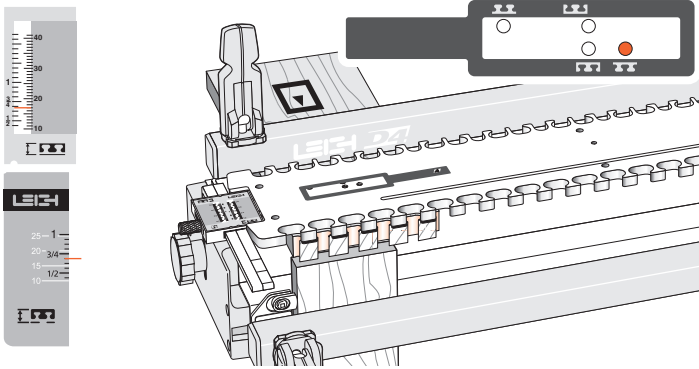
**9-2** The ideal thickness range for through Isoloc boards is  $\frac{7}{16}$ " [11mm] to  $\frac{9}{16}$ " [14mm] ①; perfect for drawer sides to drawer rears, or for small to medium boxes. Anything more or less than these thicknesses could cause tear-out problems at ②.




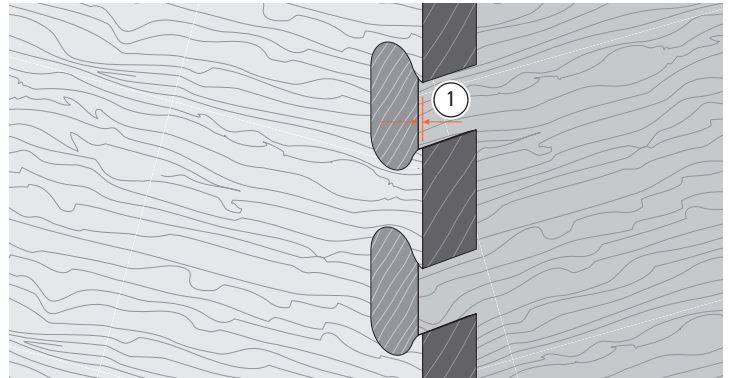
**9-3** Routing the through pins is straight forward. Set the template on the pin  icon and the scale on the **actual pin board thickness** (shown here at  $\frac{7}{16}$ " [11mm]). The inside face  of the board is away from the jig body as before.



**9-4** Mount a scrap piece of **exactly the same thickness** as the pin board in the front clamp, slightly below the top surface. Remove the spacer board. Clamp the through socket board horizontally in the rear clamp, inside face  of the board away from the jig body and the **end edge flush with the outer edge of the vertical scrap board**. Lower the template flush and level onto the socket board.



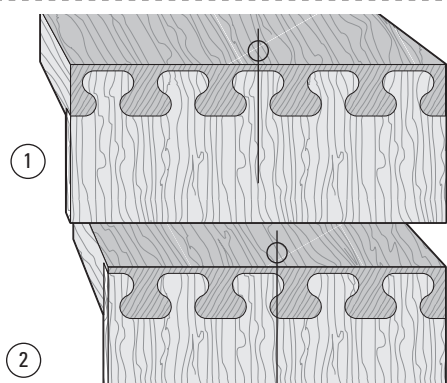
**9-5** Set the template on the socket  icon. Set the scale on 17mm (there is no precise equivalent setting on the inch scale). Now rout a test socket board.



**9-6** The ends of the socket board should slightly project through the pins ① for cleanup after gluing. Move the template in for more socket board projection; out for less projection. The 17mm scale setting works for all through pin board thicknesses. ■

## ISOLOC - CHAPTER 10

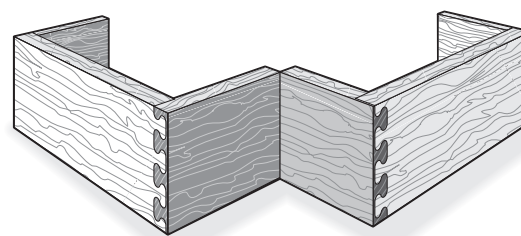
# Isoloc Joint Symmetry and Asymmetry



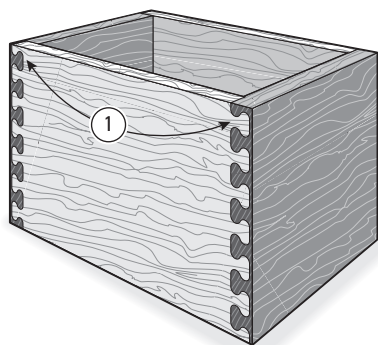
**10-1** Isoloc joints are template-made joints, but they are only symmetrical if the pattern appears to be even about the board centreline.

Pattern ① is symmetrical.

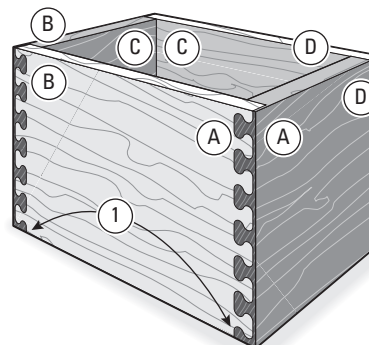
The pattern in the more narrow joint ② is asymmetrical.



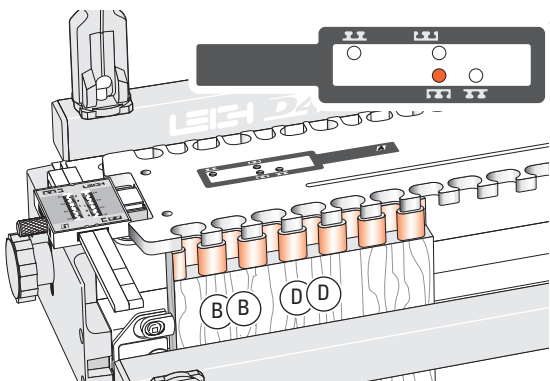
**10-2** Symmetry is not critical when only one corner can be seen at one time; as in this “split” drawing of a typical drawer front and sides.



**10-3** However, on this box, while it's okay to have asymmetrical joints, the corner patterns are both visible and do not mirror one another as they should ①.

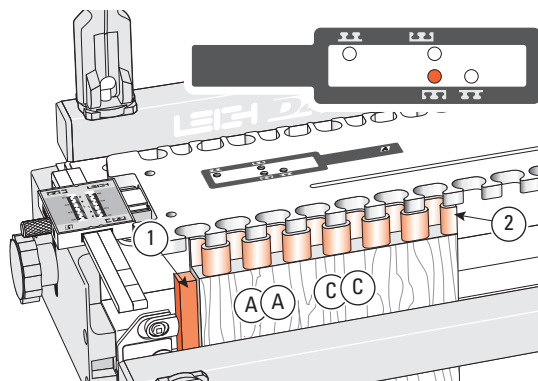


**10-4** So if your joints need to be asymmetrical for dimensional reasons, here's how to mirror-image them correctly as shown here ①.

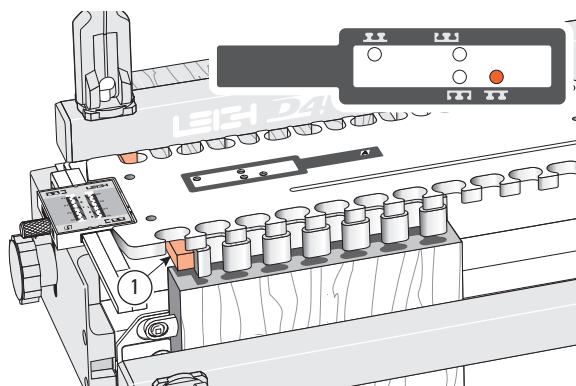


**10-5** Rout pin and socket boards for corners B and D against the left hand side stops.

*Illustrations 10-5 and 10-6 show pin boards only.*



**10-6** Rout pins for corners A and C blocked away from the left side stop ① so that the right edge finish ② mirrors the B and D left edge finish in 10-5.



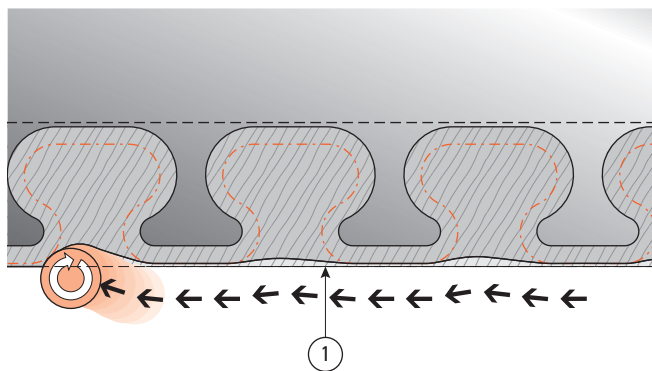
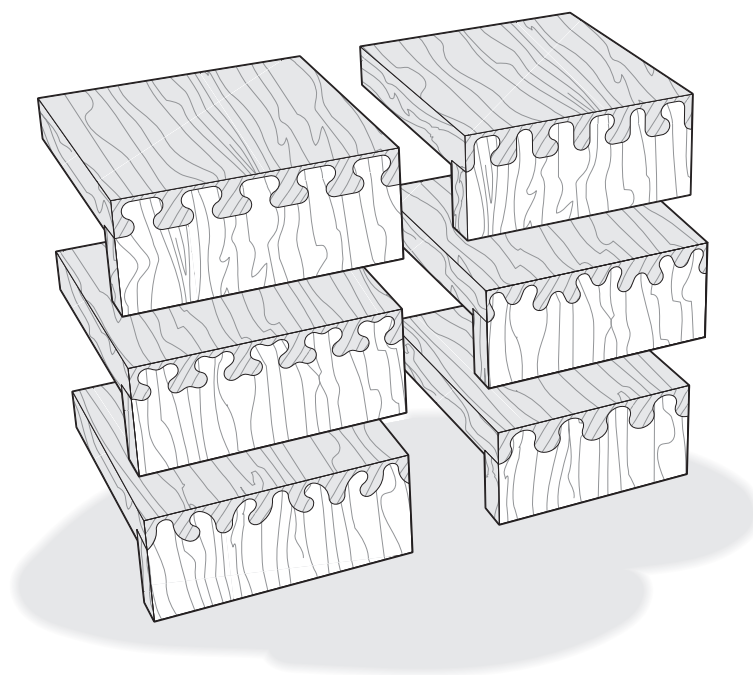
**10-7** Use the same block ① to space the A and C socket boards away from the rear stop.

*Note: Also see 8-21, "Shadow" Joint Symmetry.* ■

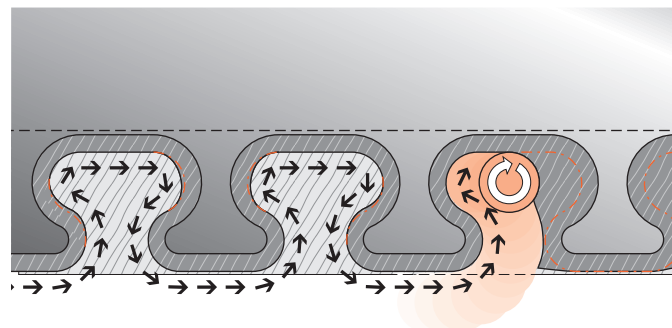
## Routing Procedures Hints and Tips

*Isoloc joints are unique, beautiful, and strong. They are different from routed dovetail joints and require different routing techniques, particularly the horizontal socket boards.*

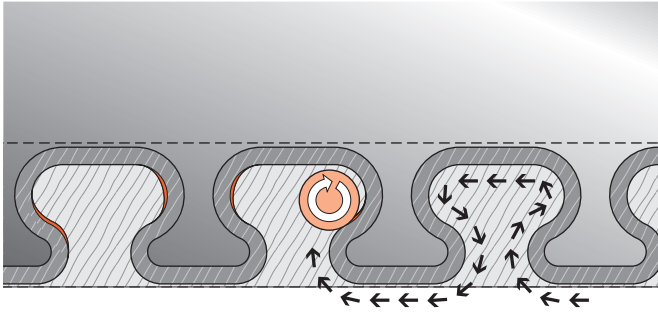
*Here are some special techniques and ideas to help you get the most out of your Leigh Isoloc Template.*



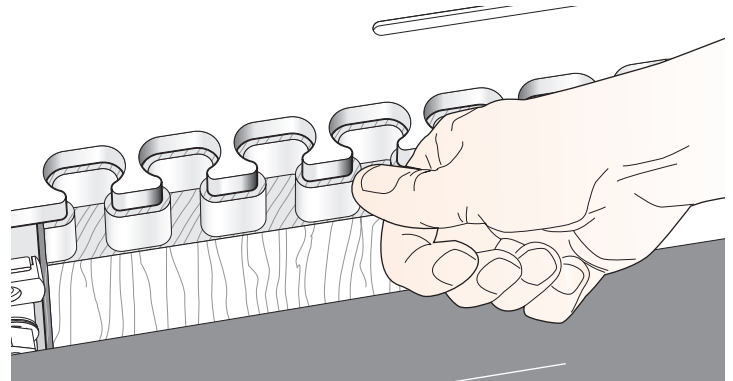
**11-1 Routing Techniques for Pins** The vertical pin boards are the easiest to rout and require little in the way of special technique. **⚠**For the first light cut, move the router from right to left, across the face. **Make sure you control the router firmly, because it is driven in this direction by the bit rotation.** This “back” or “climb” routing leaves a very clean shoulder in the side grain ①.



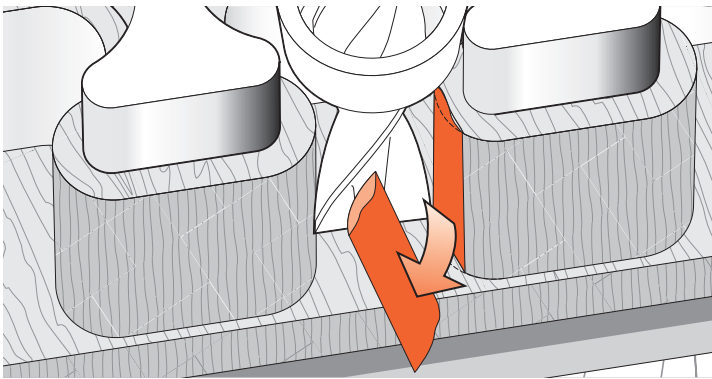
**11-2** Now rout left to right, following the template contours to rout out the pins. Keep the feed rate up; routing too slowly will cause the bit to over-heat. Remember, you will be coming back for a cleanup cut.



**11-3** Go back from right to left to make a final cleaning cut and to ensure no tiny parts have been missed.

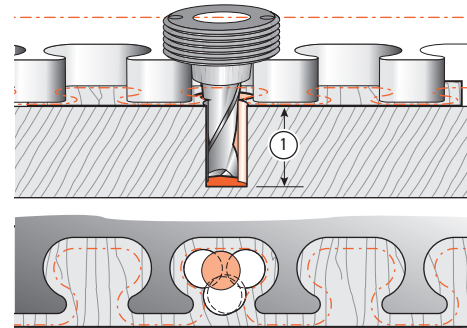


**11-4** Before removing the board, examine the routed pins to ensure a clean cut.



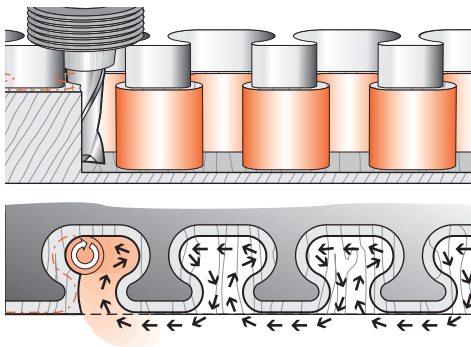
### 11-5 Routing Techniques for Sockets

While there is no “exiting” of the bit to cause tear-out, the combination of horizontal and end grain in horizontal socket boards can present its own problems. Much depends on the wood species. The most vulnerable part when routing is shown here.

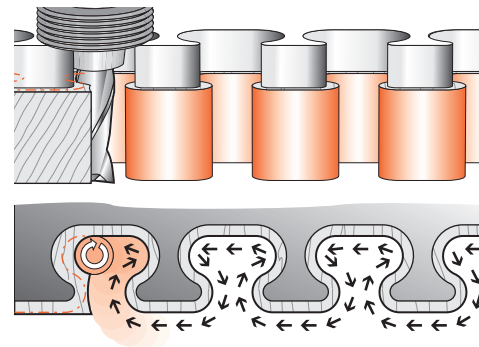


**11-6** The quickest solution in troublesome wood is to plunge two to four times in each opening to 90% of board thickness only ①.

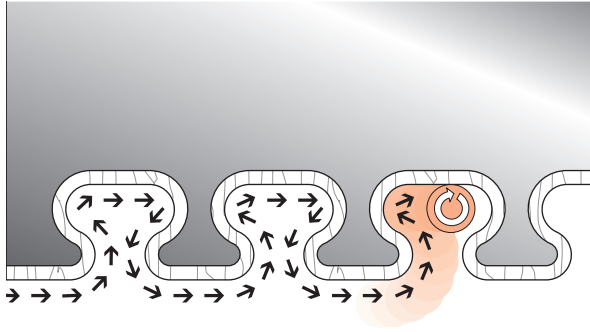
*Note: Any slight “breakout” in the first 90% of cut will be buried in the finished joint, and will not be visible on the outside.*



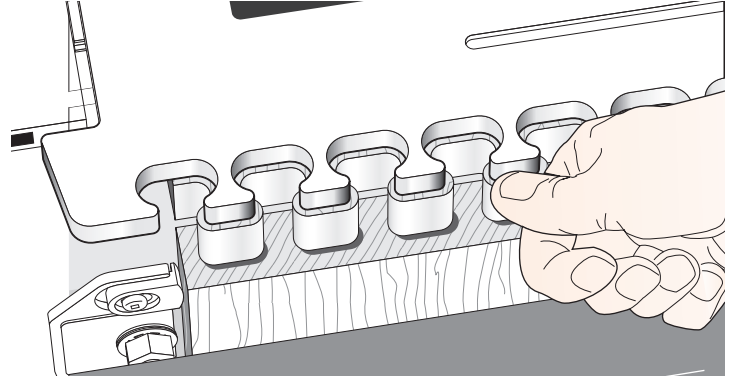
**11-7** Now rout right to left, following the template contours, the bit still set at 90% depth. *Note: In thicker socket boards and hardwoods, rout in several passes at progressively deeper cuts.*



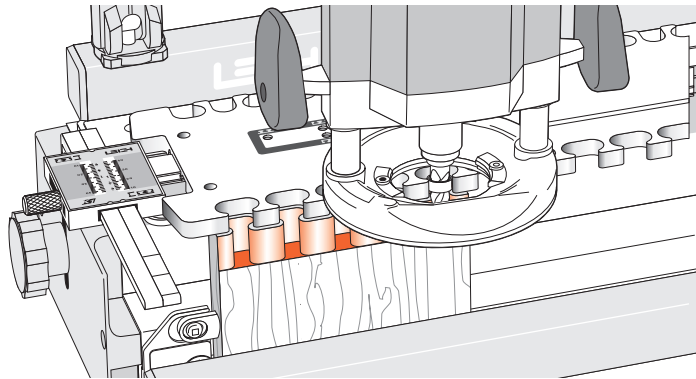
**11-8** Now rout right to left again at full through.



**11-9** Finish up left to right at full through.



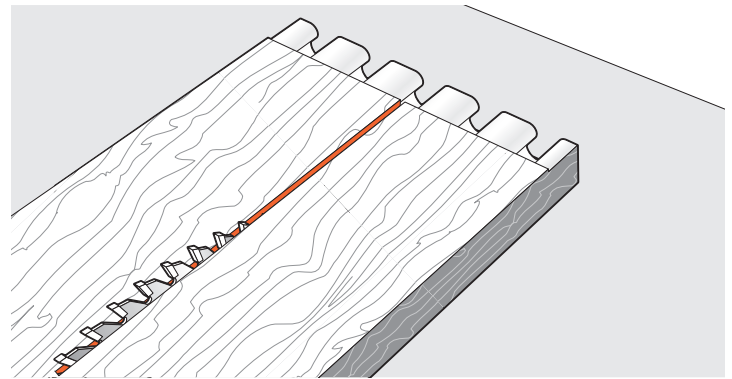
**11-10** Before removing the board, examine the routed sockets to ensure a clean cut.



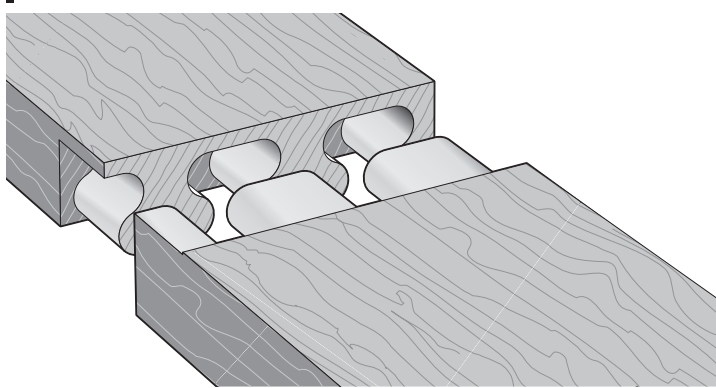
### 11-11 Quick-Fit Test

Rather than rout two test pieces, here is a quick way to get 99% of the way there.

Rout one scrap pin board, at least four pins wide.



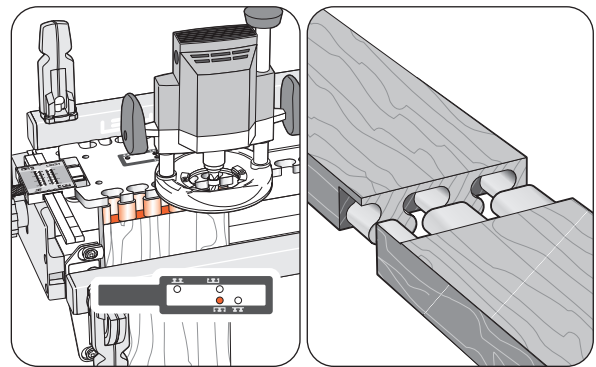
**11-12** Saw the board in half.



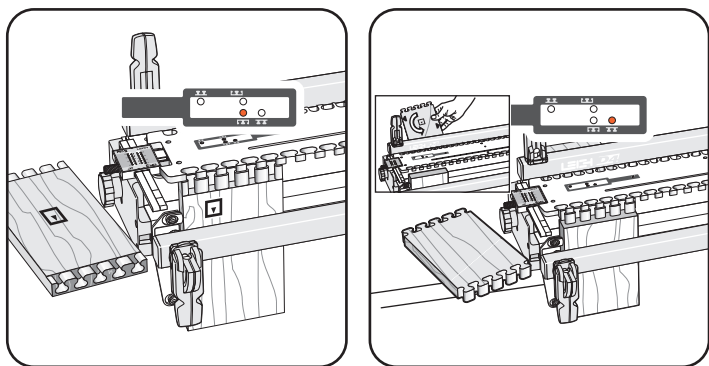
**11-13** Try the boards end-on-end for fit.

If too loose, lower the bush.

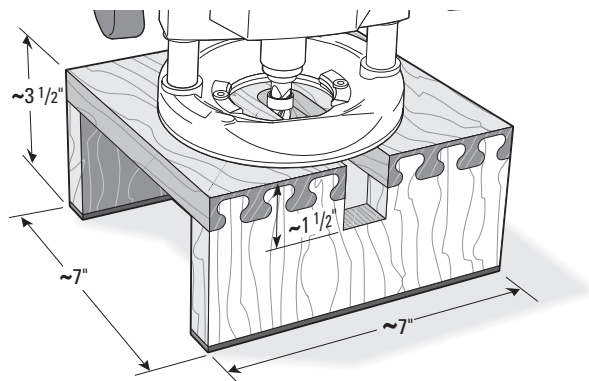
If too tight, raise the bush.



**11-14** Rout and test again.

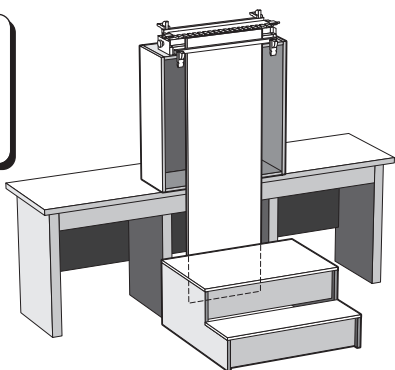
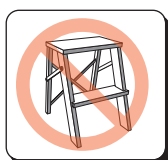


**11-15** Once you have a good fit, rout a complete pin and socket joint, using the same species wood as for the workpieces, to test for final fit.



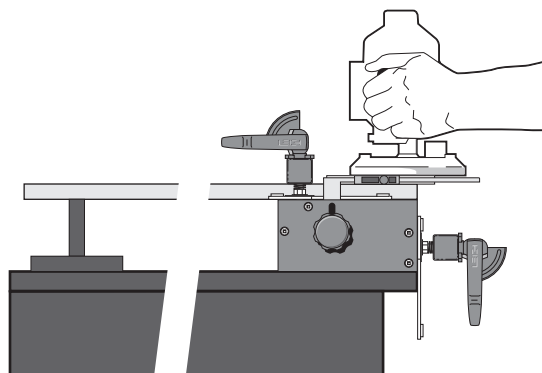
### 11-16 Router Stand

If you do not already have one, make up a small router stand as illustrated, to mount the router securely on the bench when not in use.



### 11-17 Routing Long Vertical Boards

To rout long vertical boards, you may need to build a jig stand to mount on your bench. Make the stand and bench height combination sufficient to accept the board length you have in mind. Bolt the stand securely to the bench. Make a stable platform to stand on as illustrated. Portable steps are too unstable.



### 11-18 Routing Long Horizontal Boards

When placing long horizontal boards in the rear clamp, make sure the rear end of the board is supported to prevent unnecessary racking of the jig. ■