

Watch the Online Instructional Video

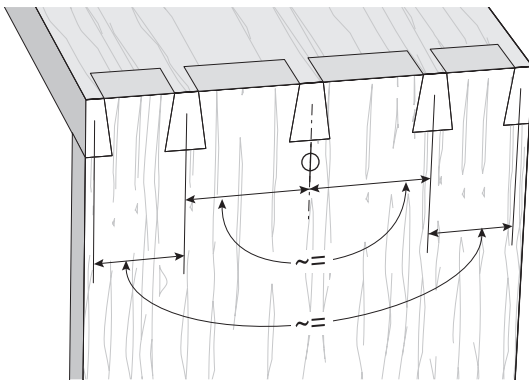
The online video will reduce your learning time dramatically! Stream to your smart phone or tablet to use in your shop as a visual reference. Find the video in the Instructional Videos section of the Support menu at leighjigs.com.



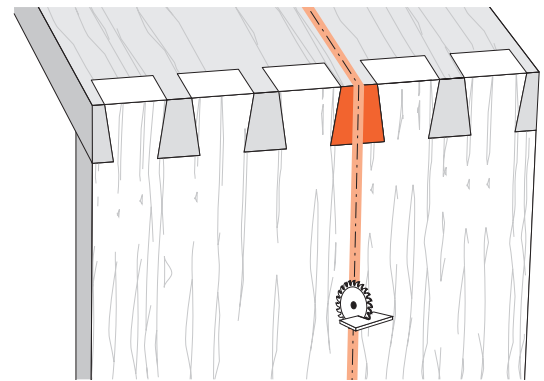
D4R Pro - CHAPTER 14

Asymmetric Dovetails

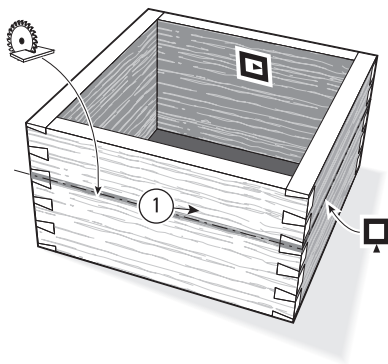
For certain procedures, you will need to use both ends of the Leigh D4R Pro jig. Asymmetrical joint layouts are one example. On the Leigh Jig, no joints will be truly symmetrical, but they can look symmetrical. Apparent symmetry is only required for aesthetic reasons, and not for strength. Be sure you have read and understood chapters 8 through 14 before attempting these procedures.



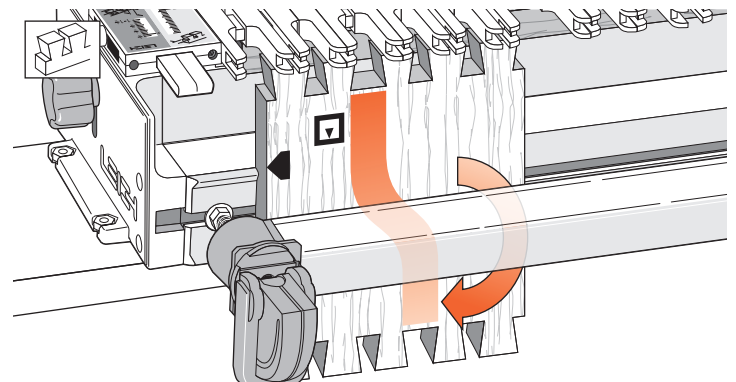
14-1 By *symmetrical* we mean a joint that looks or is approximately symmetrical about its center line but is probably not, and need not be precisely symmetrical. Using the Leigh jig, it is easy to cut a joint that looks symmetrical; the pins will always align perfectly with the tails cut at the same spacing. Remember, symmetry is only required for appearance, not for joinery reasons.



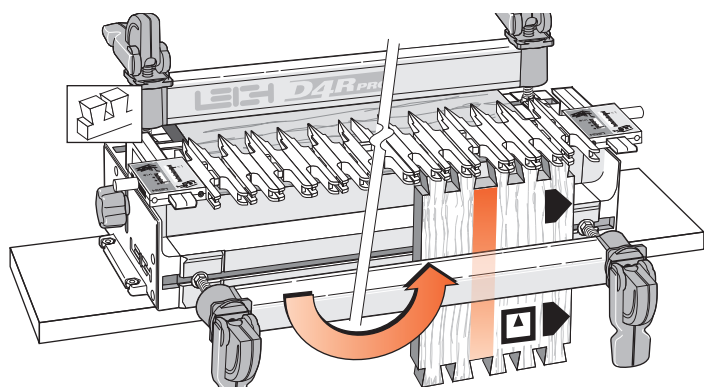
14-2 By *asymmetrical* we mean a deliberately uneven layout of pins and tails required by the project design. For example, asymmetrical joints may be used for blanket chests or boxes. One pin is made wider for a saw-cut allowance...



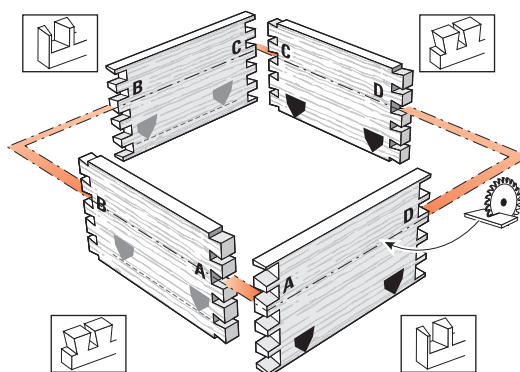
14-3 So the chest and lid half-pins all look the same width after the lid portion ① is cut off.



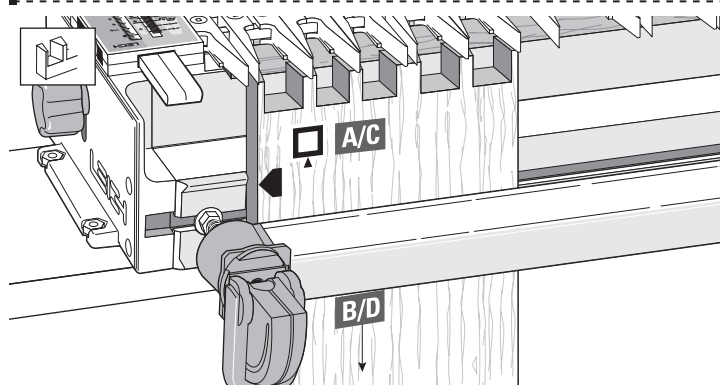
14-4 In the chest example you can see that if both ends of the board are cut under the same guidefingers, the wide sockets and pins at opposite ends will not line up. Remember, the same inside face □ of the through dovetail tail board has to face away from the jig for each cut.



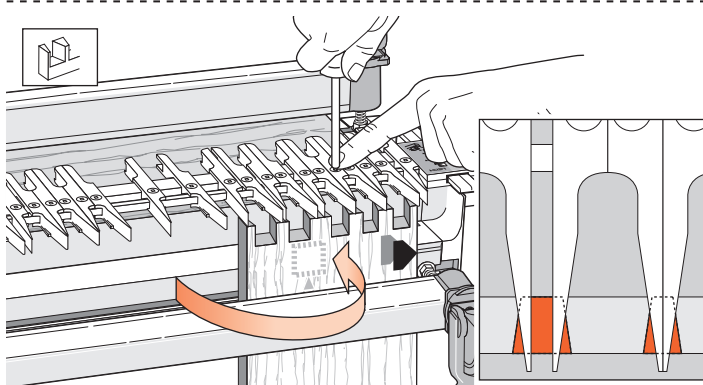
14-5 Deliberately asymmetrical joints must therefore be routed on both ends of the jig using two separate, **almost** mirror-image layouts.



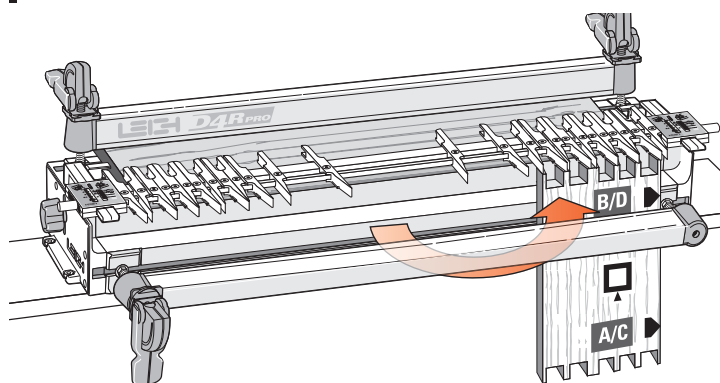
14-6 The layouts need not be exact mirror images because the parts that fit together will be made on the same end of the jig. For a typical blanket chest you would rout corners **A** and **C** on one end of the jig and corners **B** and **D** on the other end. As long as the side stop marks all face up (or all down), the box will go together.



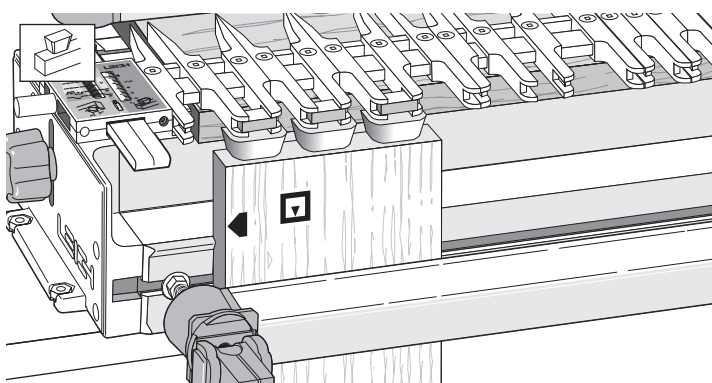
14-7 Here is an easy way to cut these near-mirror-image joints. Lay out the **A** and **C** corner joints in the usual way (i.e., in the TD PINS mode). Rout the **A** and **C** corners' tails and pins. Leave the guidefingers set and in the TD PINS mode.



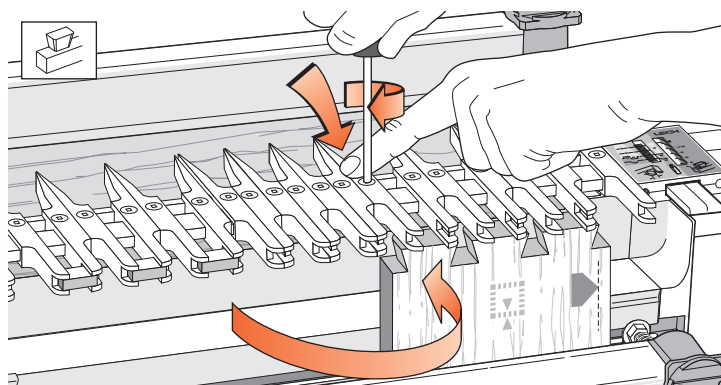
14-8 Simply flip a completed **A** or **C** pin board from one end of the jig (like turning a page) to the other end, and center each pair of guidefingers over a pin.



14-9 Now rout the **B** and **D** corners' tails and pins using this guidefinger pattern. When you assemble the case, the **A** and/or **C** ends will fit each other, and the **B** and/or **D** ends will also fit each other. Keep the boards inside face  inwards on the case and the side stop edges all turned the same way, and the parts are sure to match (see 14-6).

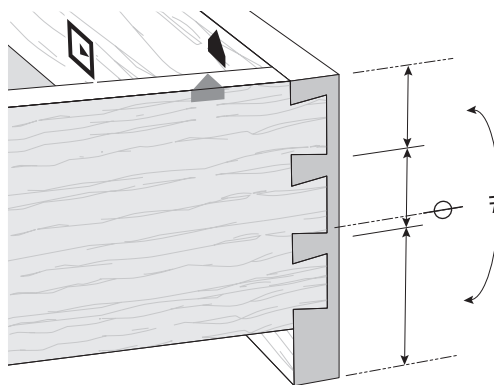


14-10 To transfer a **mirror image** asymmetrical half-blind joint...

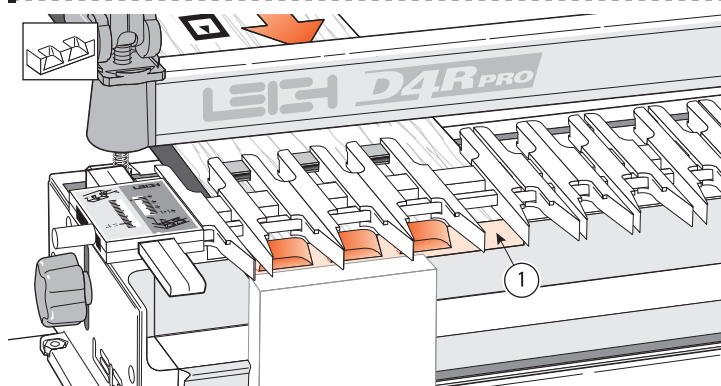


14-11 Turn the tail board (like turning a page of a book) to the other end of the jig. Position the guidefingers over the tails, then rout the tails for the other drawers.

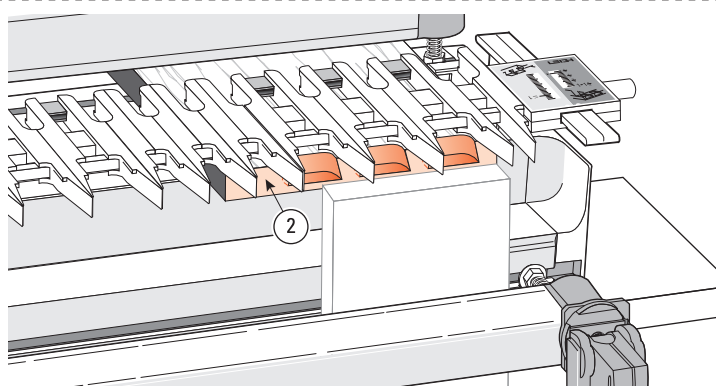
This tail board layout may look symmetrical, but as the next illustration shows, it forms part of an asymmetrical joint.



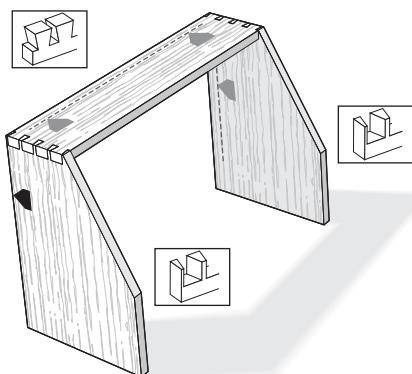
14-12 This common example of asymmetry is where boards are of a different width. In this case, a drop-front drawer, the drawer front bottom half-pin is much wider than the top half-pin. The top edges of the drawer front and sides are flush, so it makes sense to use these edges against the side stops at each end of the jig.



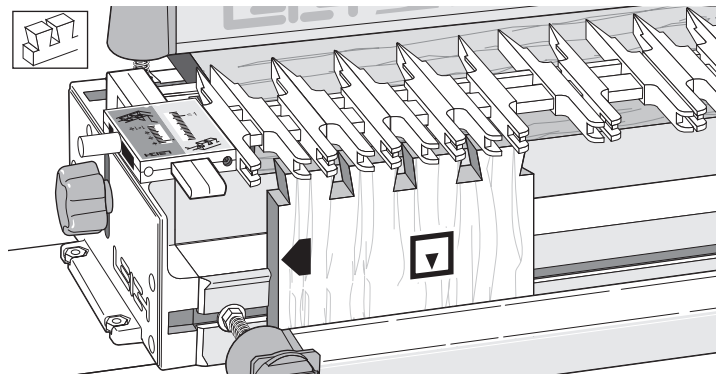
14-13 Mount the right end of the drawer front on the left end, but do not rout this opening ①.



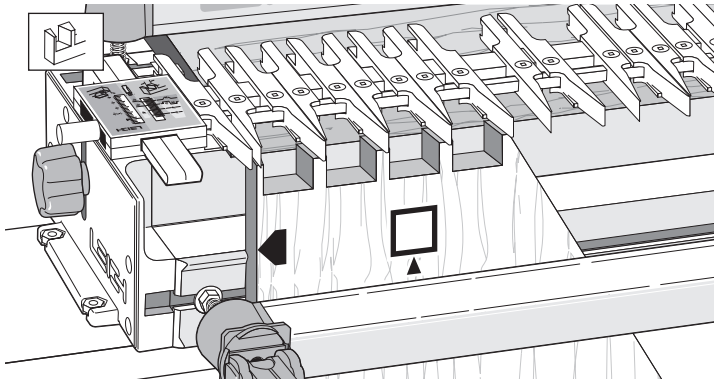
14-14 Mount the left end of the drawer front on the right end, using the **mirror-image** layouts on both ends, but do not rout this opening ②.



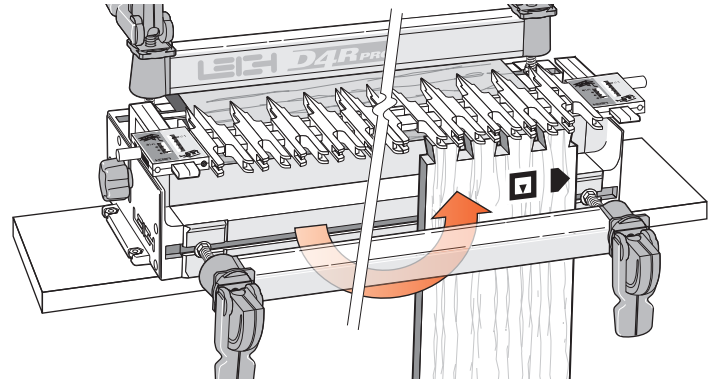
14-15 Both ends of the jig are also used for the top corners of a slant-front desk. The joints themselves may be symmetrical, but they must be routed on opposite ends of the jig because the sloped front will not register accurately against the fixed side stops.



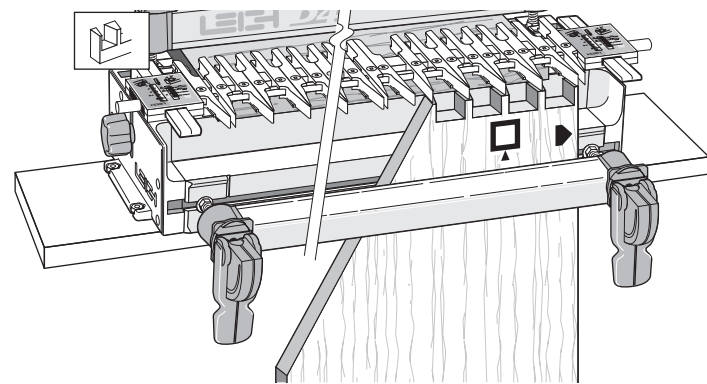
14-16 At the back of the desk both sides and top are flush, so the rear edges are set against the side stops. Place the left end of the top tail board against the left side stop ◀. Rout the tails.



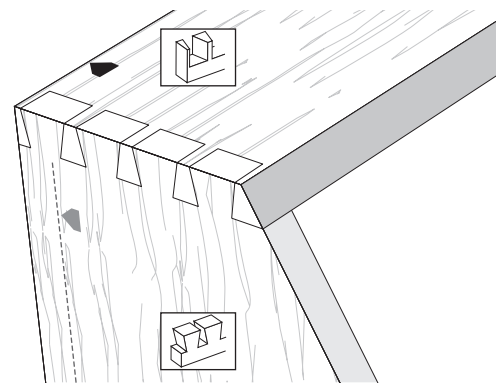
14-17 The left side of the desk goes against the left side stop ◀. Rout the pins.



14-18 Transfer the joint layout from left to right (as for 14-8 to 14-11) and place the right end of the top tail board against the right side stop ▶. Rout the tails.



14-19 Place the right side of desk against the right side stop ▶. Rout the pins.



14-20 *Note: If, in the slant-front desk example, the pins were in the desk top and the tails in the sides, then all the parts would be routed in the opposite ends of the jig to those shown above. ■*