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**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](http://leighjigs.com).

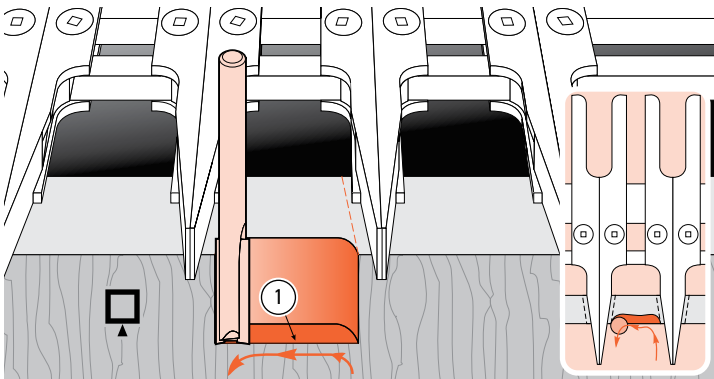


## D4R Pro - CHAPTER 17

# Hints and Tips

The following pages contain valuable information that will help you get the most from your new Leigh D4R Pro dovetail jig. Our website contains additional information and technical bulletins that further expand your jig's capabilities.

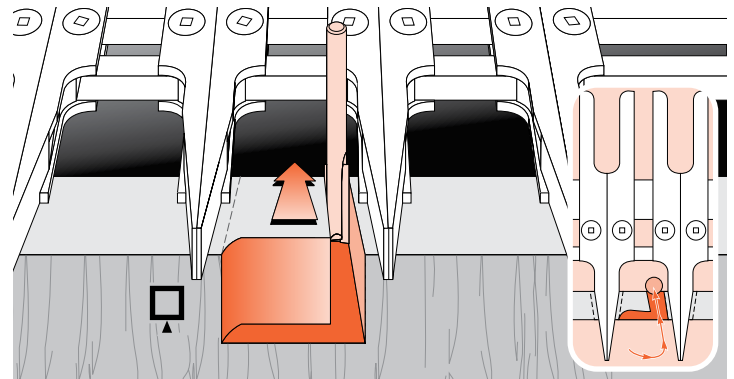
Go to: [www.leighjigs.com](http://www.leighjigs.com) and click on the "Support" tab.




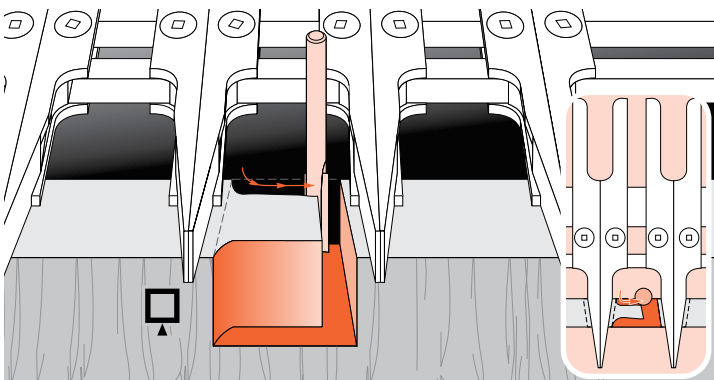
**17-1 Through Dovetail Pins** With the straight bit, carefully climb-rout from right to left. Make sure you control the router firmly when climb routing.

Climb routing produces a nice clean shoulder at ①.

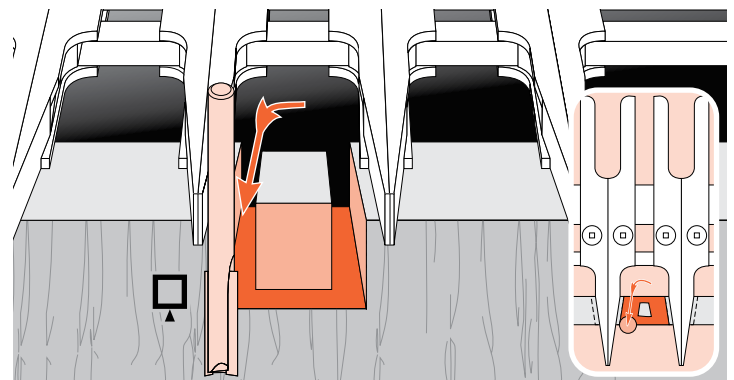
*Note: For clarity, the guidebush is not shown in this sequence.*




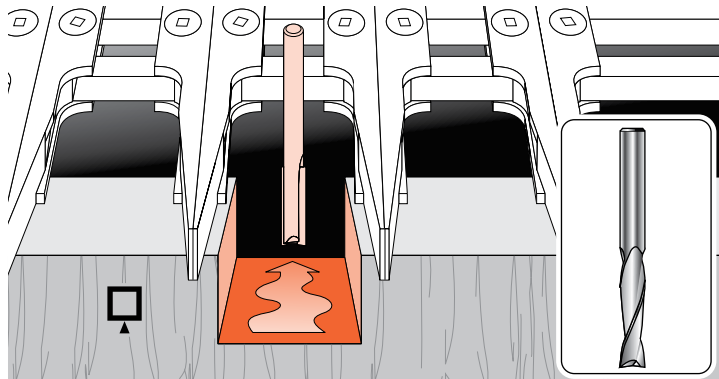
**17-2**  Rout through on the right side.



**17-3** Climb rout from left to right from the rear of the cut. Take care to control router.

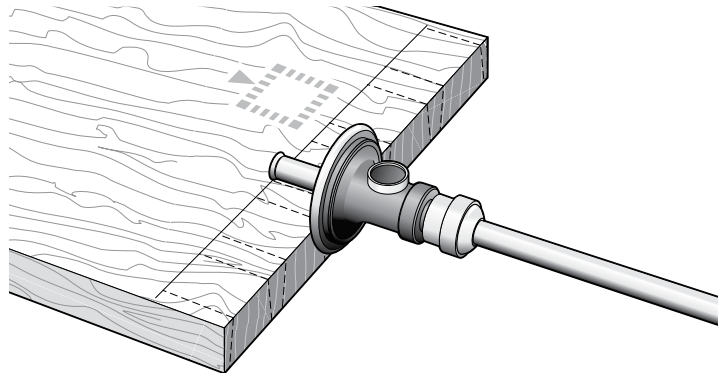


**17-4**  Rout back through towards you on the left side.



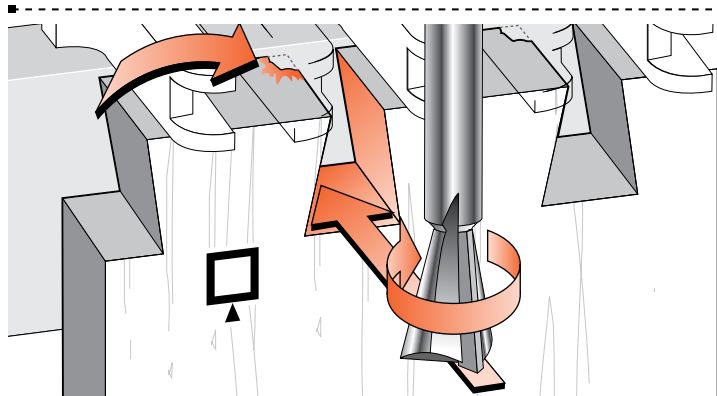
**17-5** Rout away the rest of the waste.

**Note:** Spiral up-cut straight bits (inset) generally rout more smoothly than the two-flute carbide-tipped bits. Leigh recommends solid carbide bits.

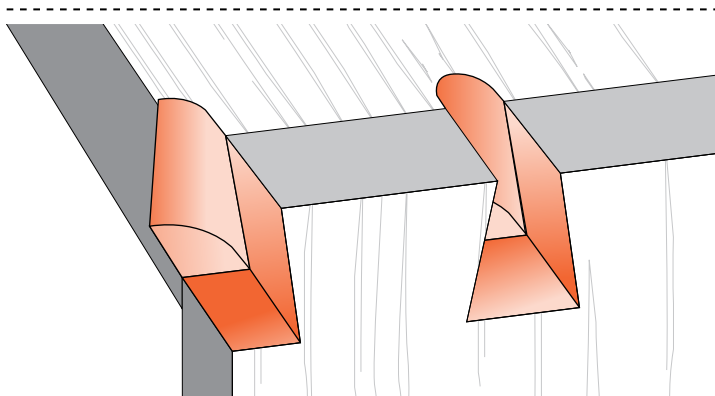


**17-6 Through Dovetail Pins Tearout**

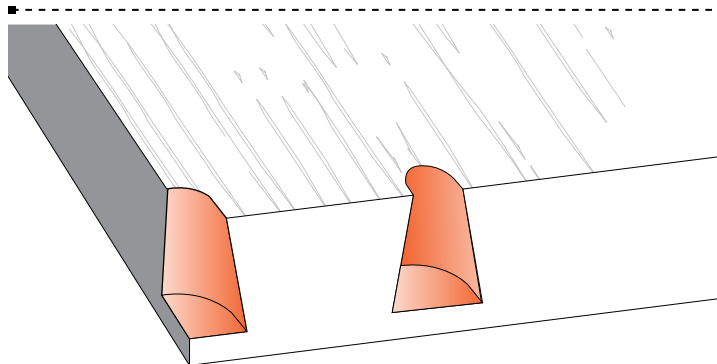
To prevent tearout at the back bottom part of a straight cut, scribe a line with your marking gauge across the back of the pin board at exactly the depth of cut.



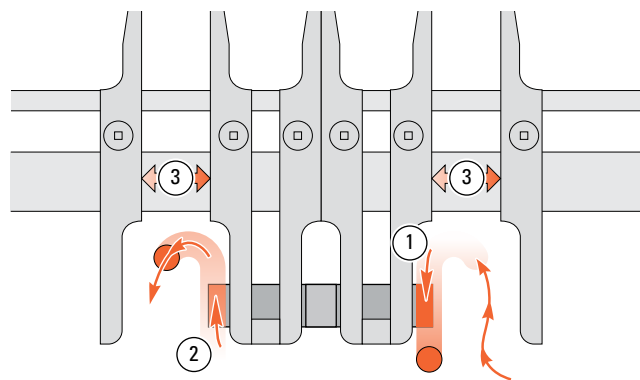
**17-7 Dovetail Tails Tearout** With the dovetail bit, most tearout occurs at the top left exit of the cut.



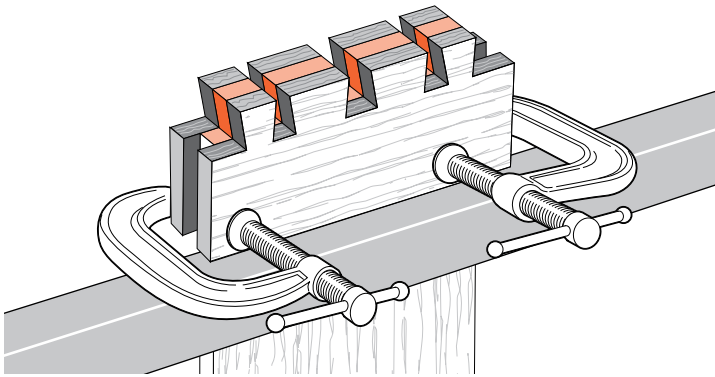
**17-8** To help prevent this, back up the cut with the end-grain of a horizontal board pushed against the back of the workpiece and held in the rear clamp. This board replaces the spacer board.



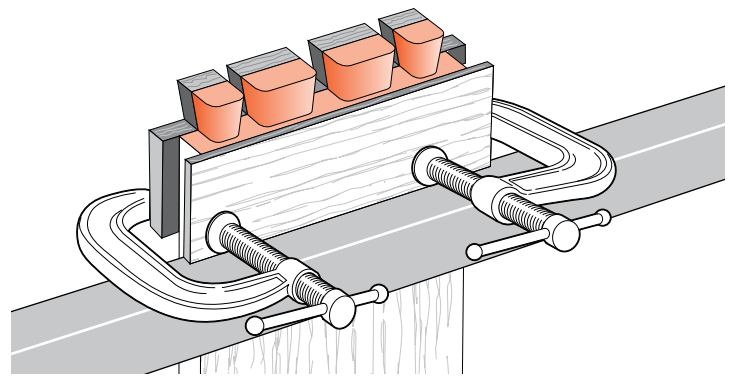
**17-9** This same scrap piece can remain in place for successive cuts.



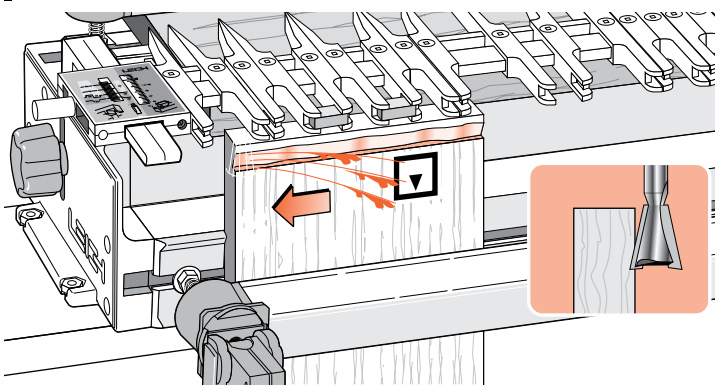
**17-10** Always rout the right hand half pin socket starting from behind the board and moving the router outwards ①, and rout the left hand half pin socket from the outer face, moving the router inwards ②. Position the non-active guide fingers both sides so that they do not impede this process ③.




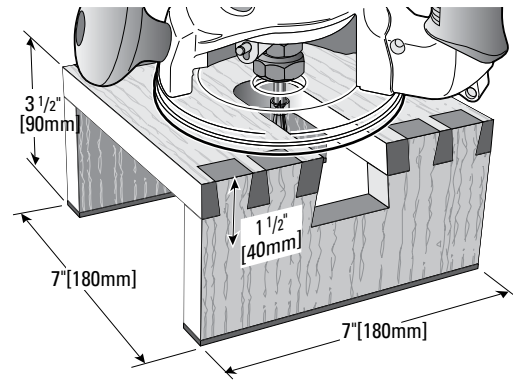
**17-11** For particularly vulnerable pieces or that last piece of exotic wood, the best solution is to clamp horizontal scrap pieces to front and back of the work piece. Make sure the clamps are below the bit depth. **PLYWOOD** material is not suitable for routing; laminates are very prone to tearout. Figures 17-10 or 17-11 are essential for plywood but do not guarantee success.



**17-12** A single scrap piece can be C-clamped on the back of half-blind tails, but make sure you protect the workpiece from the clamp pads. Note: There is no 100% solution to tearout. It's not the jig's fault, just something that happens when machining, sawing and even chiseling wood. Important pieces fall off from where you least want them to.

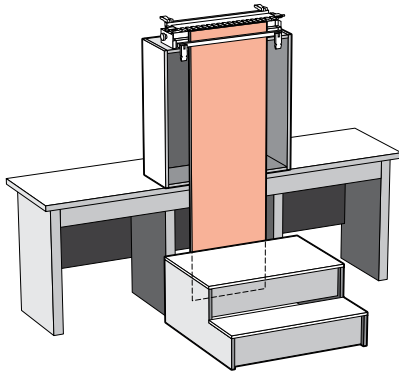
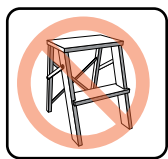


**17-13**  On face cuts, whether using a straight bit or a dovetail bit, climb routing or back routing will leave a clean edge; but great caution must be exercised in controlling the router's movement from right to left, as the bit rotation pulls the router in that direction anyway

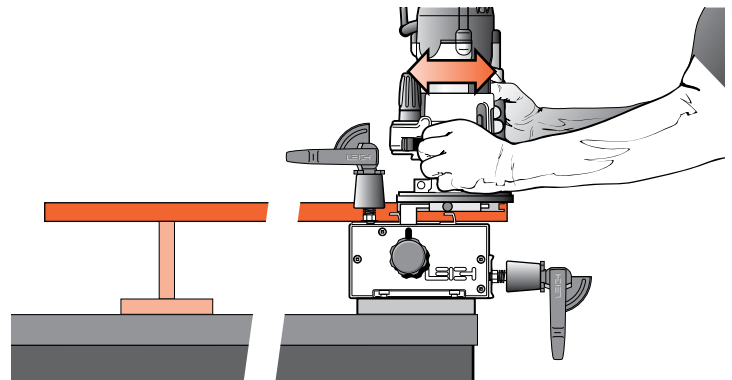


**17-14 General Hints**

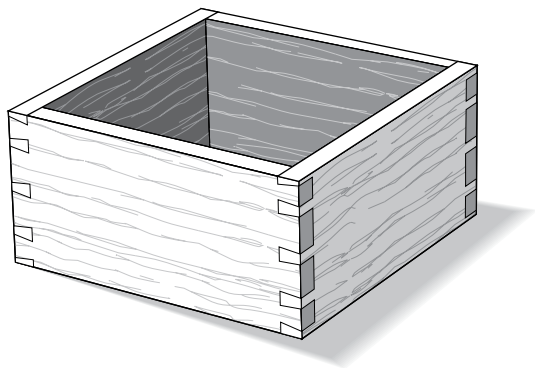
Router Stand: Make up a small router stand as illustrated, to mount the router securely on the bench when not in use.



**17-15** For routing long vertical boards it may be necessary to build a jig stand to mount securely on your bench. Make the stand and bench height combination sufficient to accept the board length you have in mind. *The jig stand should be bolted securely to the bench.* Make up a stable platform to stand on as in the illustration. Do not use a set of steps. Steps are not stable enough.

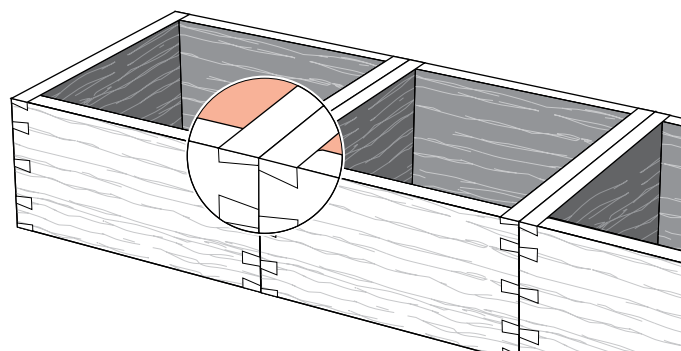


**17-16** When placing long horizontal boards in the rear clamp, make sure the rear end of the board is supported to prevent unnecessary racking of the jig.

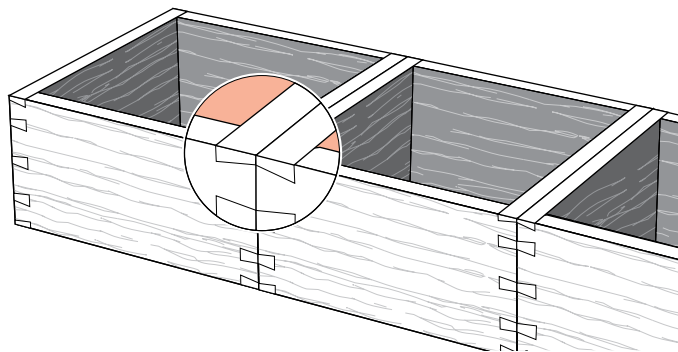


### 17-17 More On Symmetry

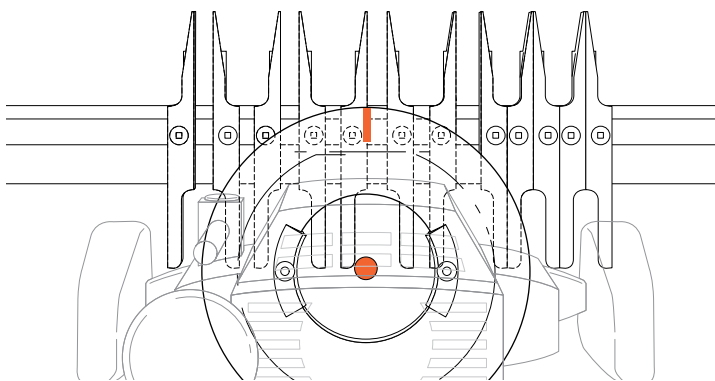
It doesn't matter if symmetrical-looking joints on a single box do not precisely mirror the adjacent corners. No one will ever know the difference. These joints look perfectly symmetrical on their own, but...



**17-18** If a number of these boxes end up side-by-side, e.g. spice caddys on a kitchen shelf, the slight misalignments of the joints could be unattractive. So when making boxes or through dovetail drawers that will be lined up beside each other with the joints showing...

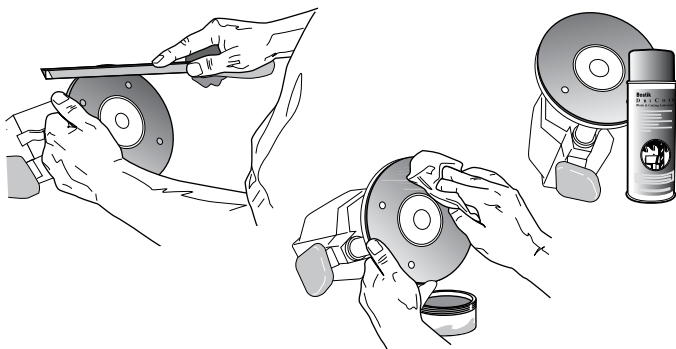


**17-19** Use the asymmetrical *mirror image* aligning techniques 14-4 to 14-11 for perfectly aligned *neighbour* joints.



**17-20 Using The Router** Mark the router base top edge at the 12 o'clock position with a felt marker pen. Without wood or bits, try some **dry runs** in each jig mode. This will soon get you used to positioning the guidebush against the correct guide surface without looking under the router.

⚠ Do not rout at face level.



**17-21** Some router bases have sharp edges on the outside and inside corners. A slight chamfer of the edges with a fine file or sandpaper block will ease router movement on the jig. An occasional light spray of "Top Cote®" application of soft wax to the router base makes for smooth, easy router movement on the jig. ■