


How To Rout 1/4" Finger Joints On Your Leigh D-series Dovetail Jig

 These instructions are based on the assumption that you are fully conversant with the dovetailing instructions in the Leigh Jig User Guide. Do not attempt the following procedures until you are.

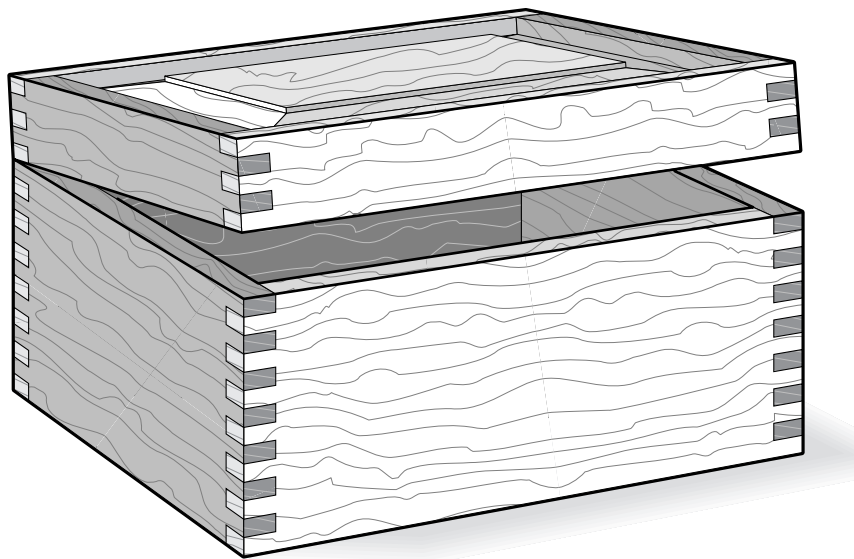
FINGER JOINTS

The best way to rout the popular finger, or box joint, is with the Leigh F1, F2 or F3 Finger Joint Template. However, until you acquire one of those great attachments for your jig, this method for 1/4" box joints will serve you well for the occasional project.

The following instructions are for use on Leigh Jig models D4R Pro, D4R, D4, D3, D1258 and D1258R, and can also be applied to work on the TD514 and TD514L.

Read the instructions and the tips and techniques before cutting wood. Use some scrap boards to perfect your technique.

Happy box making!



ACCURACY

As a woodworker you will know that any time workpieces are moved for a second cut, there is a possibility of inaccuracy, so here are a few tips to ensure success.

- ✓ Make sure your boards are square.
- ✓ Make sure your three 1/4" blocks are very accurate.
- ✓ Use thin double sided adhesive tape to hold the spacer blocks to the jig body.
- ✓ A spiral upcut router bit makes for cleaner cutting.
- ✓ Mark all four boards on the side edges that you want as either the top or bottom of the box. Always keep these edges against the side stop (or spacer blocks). This will ensure the finished box is in plane regardless of variations in board widths. It also means face side selection can be made after routing, because either end of boards No.1 and 2 will fit either ends of board No.3 and 4, provided the marked edges are on the same side.

LEIGH

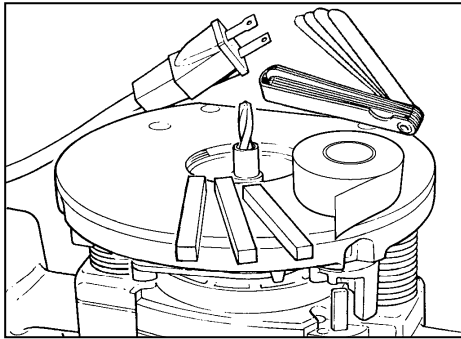
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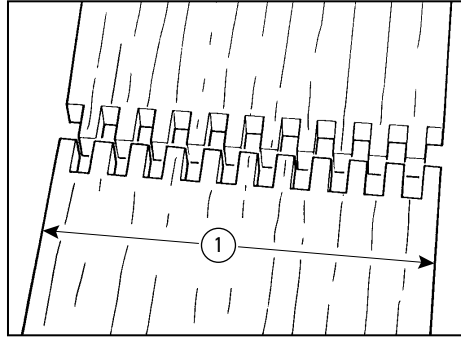
PO Box 357
 (104-1585 Broadway St.)
 Port Coquitlam, BC
 Canada V3C 4K6
www.leighjigs.com

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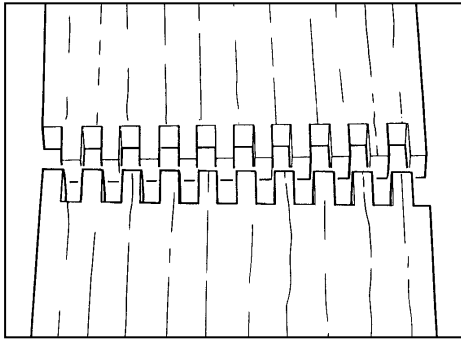


- 1-1** You will require:
- Router (fixed or plunge)
 - 1/4" straight bit
 - 7/16" OD guide bush
 - 3 - 1/4" spacer blocks
 - a feeler gauge (optional)

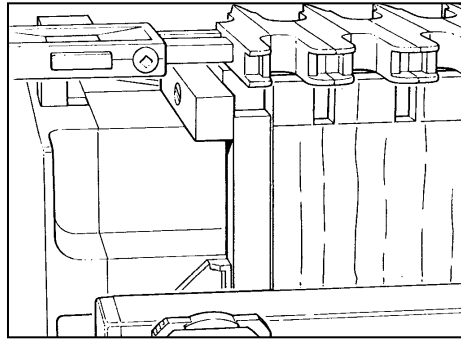
The three spacer blocks must be thinner than the boards used. Double sided sticky tape is great for mounting these blocks to the front of the jig.



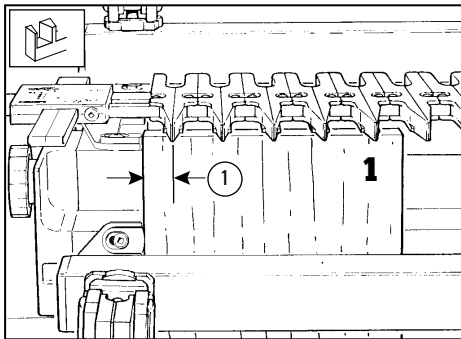
- 1-2** Board widths should be in 1/4" increments, less 1/16" ①. Board widths ending in 1/4" or 3/4" will make symmetrical joints with fingers both sides of one board, and sockets both sides of the mating board.



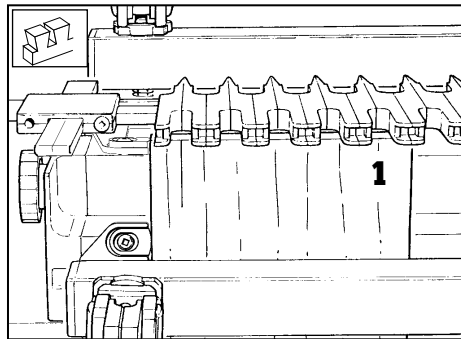
- 1-3** Board widths ending in 1/2" or 1" will make asymmetrical joints with a finger on one side of each board and a socket on the other side of each board. Maximum board thickness is 1" and maximum joint width is 9" on a 12" jig, and 12" on a 24" jig, unless you have extra guide fingers.



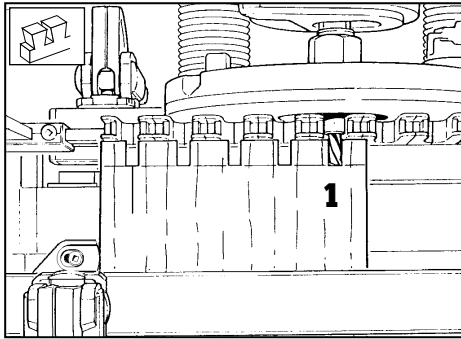
- 1-4** **Tip:** If you have an earlier Leigh Jig with plastic side stops, you can improve accuracy when workpieces are moved for a second cut. Screw a small block to the end of the spacer board in the rear clamp so it projects over the front clamp face in line with the front side stop. Make the spacer blocks long enough to reach this auxiliary stop.



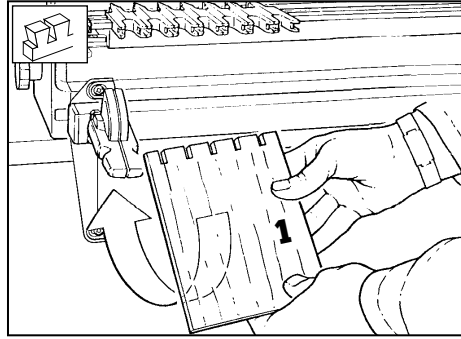
- 1-5** Mark a line ① on No.1 board 19/32" from the edge and clamp board against the side stop. In the TD PINS mode, slide all guide fingers over the board until center of first pair is on the 19/32" mark. Lock up all guide fingers with all guide fingers touching together.



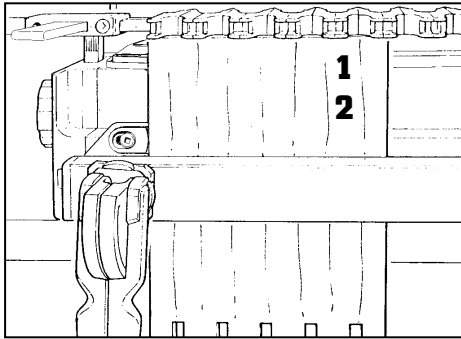
- 1-6** Rotate finger assembly to TD TAILS mode and set scales on the ≤1" [≤26mm] ALL setting. That's all there is to jig setup and takes only a few minutes. *The finger assembly is not moved again.*



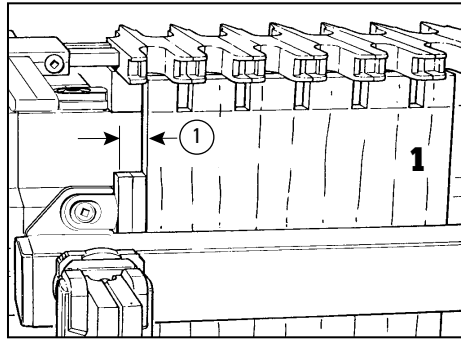
1-7 Rout sockets as shown. Depth of cut should match thickness of mating board.



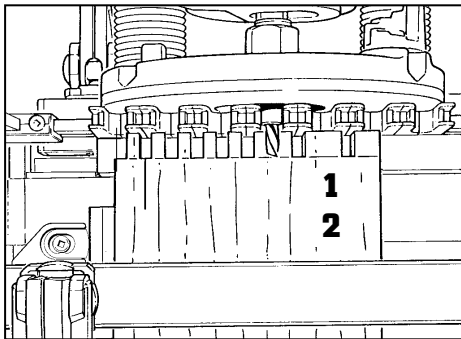
1-8 Rotate board No.1 in jig as shown. **always** keep the same edge of boards against the side stop.



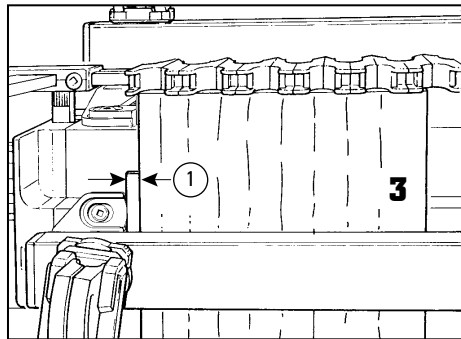
1-9 Repeat step 7 on other end of board No.1 and on both ends of board No.2. (Board No.2 will be the opposite side of the box to No.1).



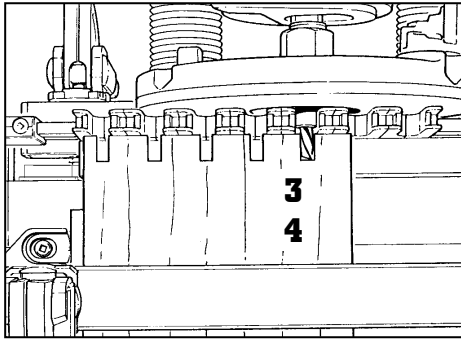
1-10 Now use two blocks ① to space the No.1 board $\frac{1}{2}$ " away from the side stop.



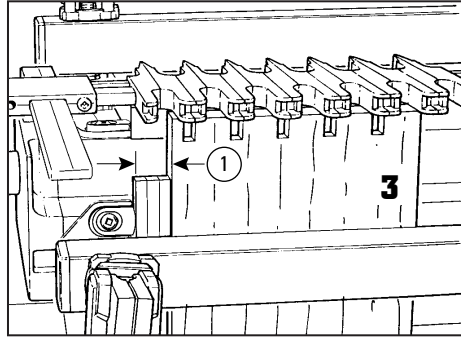
1-11 Rout both ends of boards No.1 and 2 in this position. Remember, **always** keep the same edge of boards against the spacer block.



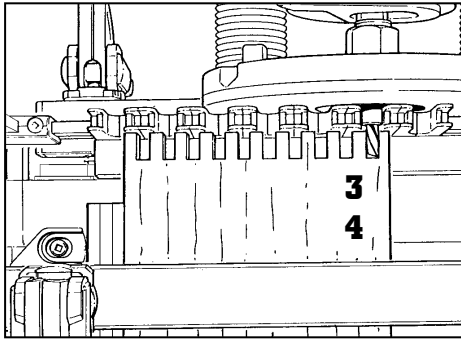
1-12 Now use one block ① to space the No.3 board $\frac{1}{4}$ " away from the side stop.



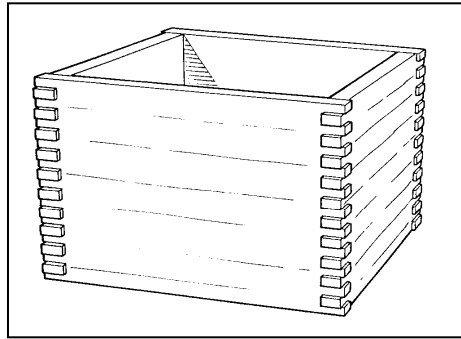
1-13 Rout both ends of boards No.3 and 4 in this position.



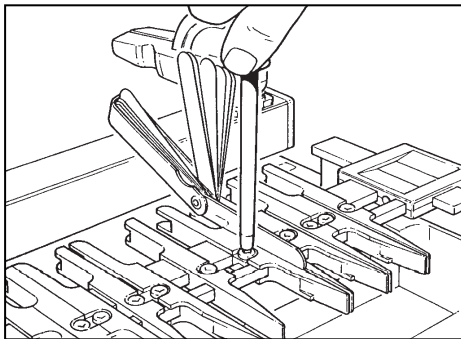
1-14 Now use all three blocks ① to space No.3 board $\frac{3}{4}$ " away from the side stop.



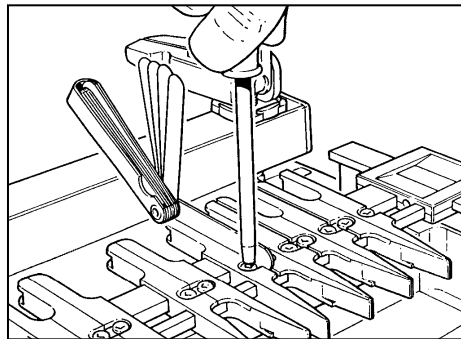
1-15 Rout both ends of boards No.3 and 4 in this position.



1-16 The finished box. In this case a symmetrical joint. Finished joint fingers should project slightly to allow for cleanup. Routing time on this box was about 7 to 8 minutes, using the Cam-Action Speed-Clamps.



1-17 The $\frac{1}{4}$ " bit in a $\frac{7}{16}$ " bush should give a good fit. Remember, there are a lot of glue surfaces on finger joints so don't aim for a tight joint when dry fitting. But if the test joint is too tight, use an automotive feeler gauge (or note paper about .004" thick) to open each pair of guide fingers between the pointed ends. This will give a looser fit.



1-18 If the joint is too loose, space each pair of guide fingers apart between the rounded ends. This will give a tighter fit. *Note: On wide boards, add these cumulative gaps to the width of boards because on a 10" wide board, .006" gaps will add up to another $\frac{1}{16}$ ". Record the feeler gauge size for future reference.*