

12½" Deluxe Dovetail Jig

Also Includes:

½" x 14° Dovetail Bit
With ¼" Shank

⅞" Template Guide
Bushing With Lock Nut

HB Setup Gauge



Half-Blind Dovetail Template

Available Separately:

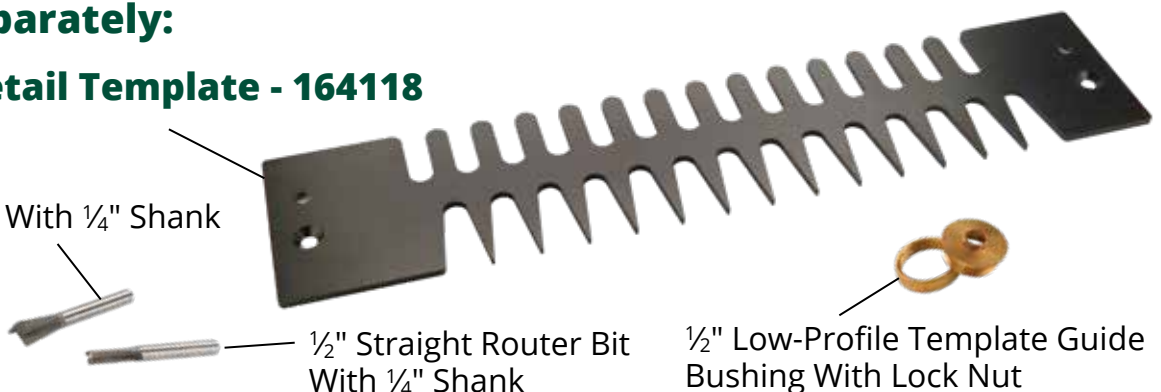
Through Dovetail Template - 164118

Also Includes:

½" x 8° Router Bit With ¼" Shank

½" Straight Router Bit
With ¼" Shank

½" Low-Profile Template Guide
Bushing With Lock Nut



NOTE: Please read this manual carefully before assembly, testing and operation.

WARNING: Read and understand this manual before operating the machine or commencing service. Care should be taken to wear all necessary safety gear.



Limited Tool Warranty

WoodRiver® makes every effort to ensure that its products meet high quality and durability standards. WoodRiver® guarantees that each product is free from defects in materials and grants to the original retail customer a 90-day limited warranty from the date the product was purchased. Warranty does not apply to defects due directly or indirectly to misuse, abuse, normal wear and tear, negligence or accidents, repairs done by an unauthorized service center, alterations and lack of maintenance. WoodRiver® shall in no event be liable for death, injuries to persons or property, or for incidental, special or consequential damages arising from the use of our products.

To take advantage of this limited warranty, please contact Woodcraft® Technical Service at 1-800-535-4486 for more information. WoodRiver® will either repair or replace the

product, if an examination proves that any parts covered under this warranty were defective in workmanship or material during the warranty period.

Proof Of Purchase

Please keep your dated proof of purchase for warranty and servicing purposes.

Replacement Parts

To order parts, please contact Woodcraft Technical Service at 1-800-535-4486. Please use the part order number listed in this manual for all part orders where applicable.

Note To Users

This instruction manual is meant to serve as a guide only. Specifications and references are subject to change without prior notice.



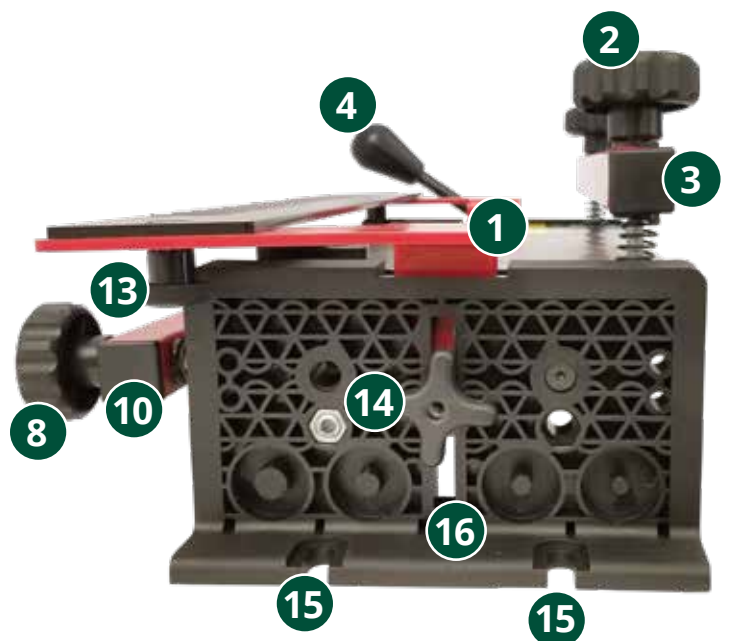
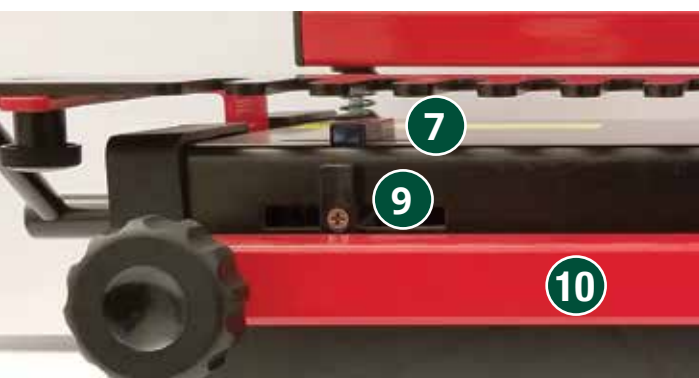
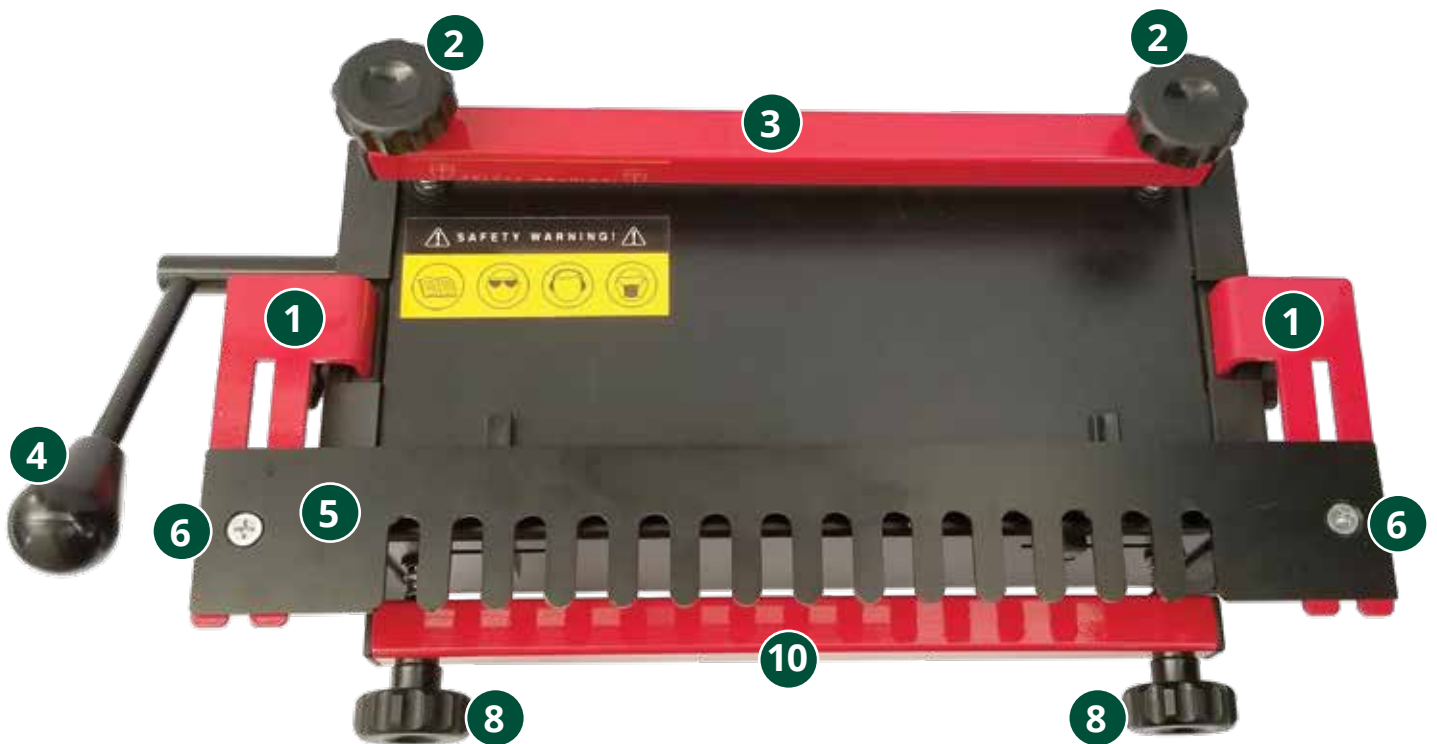
SAFETY

- **KNOW YOUR TOOL** Read and become familiar with the entire operating manual.
- **SAFETY GUARDS & COVERS** Keep in place and in working order.
- **ALWAYS USE SAFETY GOGGLES**
- **KEEP WORK AREA CLEAN**
- **KEEP WORK AREA WELL ILLUMINATED**
- **AVOID ACCIDENTAL STARTING** Make sure switches are in "OFF" position before plugging in cord.
- **WEAR PROPER APPAREL** Loose clothing or jewelry may get caught in moving parts. Wear protective hair covering to contain long hair.
- **SQUARE STOCK ONLY** The Jig is only intended to be used with milled, squared stock. DO NOT attempt to secure round or other shapes in this jig.
- **AVOID DANGEROUS ENVIRONMENTS** Do not use any Power Tools in damp or wet locations. Do not use Power Tools in explosive atmosphere that are around some paints, flammable liquids, etc.
- **USE PROPER TECHNIQUE** Don't force power tools, jigs or attachments to do a job for which they are not designed.
- **USE RECOMMENDED ACCESSORIES ONLY**
- **KEEP CHILDREN AWAY**
- **DO NOT OPERATE THIS TOOL** while tired or under the influence of drugs, alcohol or any medication.
- **DISCONNECT TOOLS** before servicing and when changing accessories such as blades and cutters.
- **MAINTAIN TOOL IN TOP CONDITION** Keep tool sharp and clean for best and safest performance.
- **MAINTAIN PROPER GRIP** Keep your hands on the provided handles during operation. Do not operate with an extended reach.
- **TIGHTEN** all knobs and screws before making the cut, securing the piece to be cut in the jig.
- **CHECK DAMAGED PARTS** Before further use of the tool, a guard or other part that is damaged should be checked to assure that it will operate properly and perform its intended function. Check alignment of moving parts, breakage of parts, mounting or any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

12½" Deluxe Dovetail Jig

Parts Diagram

1. Template Bracket
2. Clamping Knob For Horizontal Board
3. Clamping Bar For Horizontal Board
4. Hand Lever
5. Half-Blind Template
6. Template Mounting Screw
7. Left Side Horizontal Stop
8. Clamping Knob For Vertical Board
9. Left Side Vertical Stop
10. Clamping Bar For Vertical Board
11. Right Side Vertical Stop (Not Shown)
12. Right Side Horizontal Stop (Not Shown)
13. Lock Knob To Fix Template On Bracket
14. Lock Knob For Template Height
15. Mounting Slots
16. HB Setup Gauge (HB=Half-Blind)



Overview Of Adjustments Reference Parts Diagram on Previous Page.

The Horizontal (3) and Vertical (10) Clamping Bar depths are adjusted with their respective Clamping Knobs (2, 8). Once adjusted, typically the hand knob that is on the side being routed is loosened/tightened to remove and insert the workpieces. (Half of the joinery will favor the left-hand side of the jig, the other will favor the right-hand side)

The Template Lever (4) is used to adjust the Template (5) Height according to the thickness of wood pieces.

- **To Raise the Template:** With your left hand holding the Template Lever, loosen the Lock Knob (14) gently on the left-hand side of the Deluxe Dovetail Jig, then loosen the Lock Knob (14) on the right-hand side. Slowly allow the Template to rise up so it does not jump.

- **To Lower the Template:** Firmly press the Template Lever downwards and have the Template touch the piece. Tighten the Lock Knob on the right-hand side and tighten the Lock Knob on the left-hand side.

Loosen the Template Lock Knobs (13) on both sides of the Template to adjust the Template forwards and/or backwards along the Bracket for the cutting depth as required.

The Template Lock Knobs will need to be loosened to swap out for a different template (#164118).

The Horizontal Stops (7-left side, 11-right side) and the Vertical Stops (9-left side, 12-right side) are adjusted to place the drawer sides in the correct position in relation to the template used.

NOTE: Check for tightness on all knobs for the Template prior to turning on the router and machining materials.

Securing The Dovetail Jig To A Work Surface

Place the Deluxe Dovetail Jig on your work surface or workbench situated with the front clamping surface slightly overhanging the front of the benchtop. Secure the Deluxe Dovetail Jig in position by either clamping the Deluxe Dovetail Jig in place or using four Self-Tapping Screws through the Mounting Slots.

TIP: An alternative to permanently securing the jig to your work surface or workbench would be to mount the jig to a piece of $\frac{3}{4}$ " plywood which then can be properly clamped in place.



12½" Deluxe Dovetail Jig

Preparation

It is recommended that you come up with a plan before starting. When creating a series of drawers or multiple boxes, it is best to label each of the wood pieces now. Proper organization now will minimize headaches later.

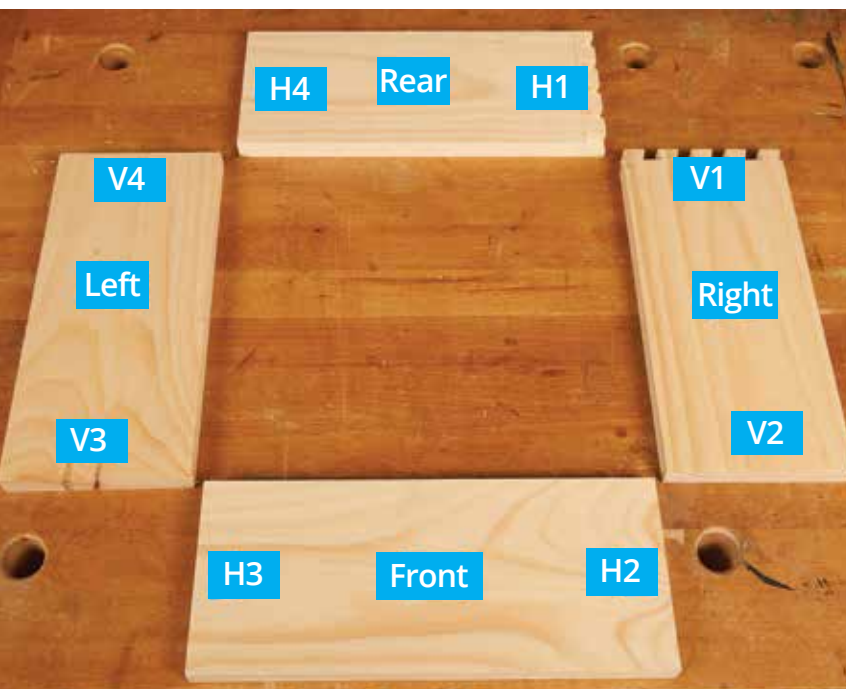
- **Note:** Because of the Fixed Pin Design of this jig, it is desirable to size the height of the drawer/box in 1" increments to ensure even spacing of the Pins & Tails. You can use whatever drawer height you want; just remember that the end pins will not be "½" pins when compared to the full-sized ones.
- **Recommendation:** When you are dimensioning the actual drawer or box components, you should dimension additional pieces of the same thickness and width to use for test cuts to ensure the dovetail jig is setup correctly.

After all the pieces have been cut to size and ensured for squareness, put them on a bench and label them individually, referring to the picture below. The front and rear pieces will have the "Pins" and the sides will have the "Tails." It is helpful to label the ends of the boards on the inside faces. This will aid in placing the boards in the dovetail jig & avoid an error in determining which end mates with another.

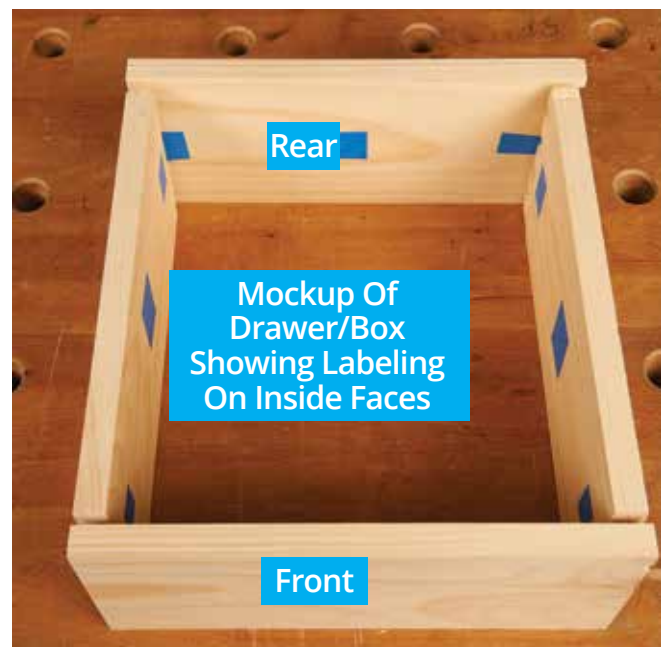
TIP: Blue or green masking tape is great for this.

In the picture below, we labeled each corner with a 1, 2, 3 and 4 in a clockwise fashion. The Front and Back pieces were designated with an "H" and the sides designated with a "V." The ends of the boards were then labeled accordingly.

Drawer/Box Layout



The picture below illustrates how the labeling relates to the assembly of the drawer/box.



Note: The "H" is a subtle reminder that these boards will be horizontal in the dovetail jig and the boards with a "V" will be vertical.

Operation: Half-Blind Dovetails Reference Parts Diagram as needed.

Gather all the wood pieces on your bench that were prepared and labeled earlier. It is strongly recommended to do the initial setup and test cuts with the additional wood pieces you dimensioned.

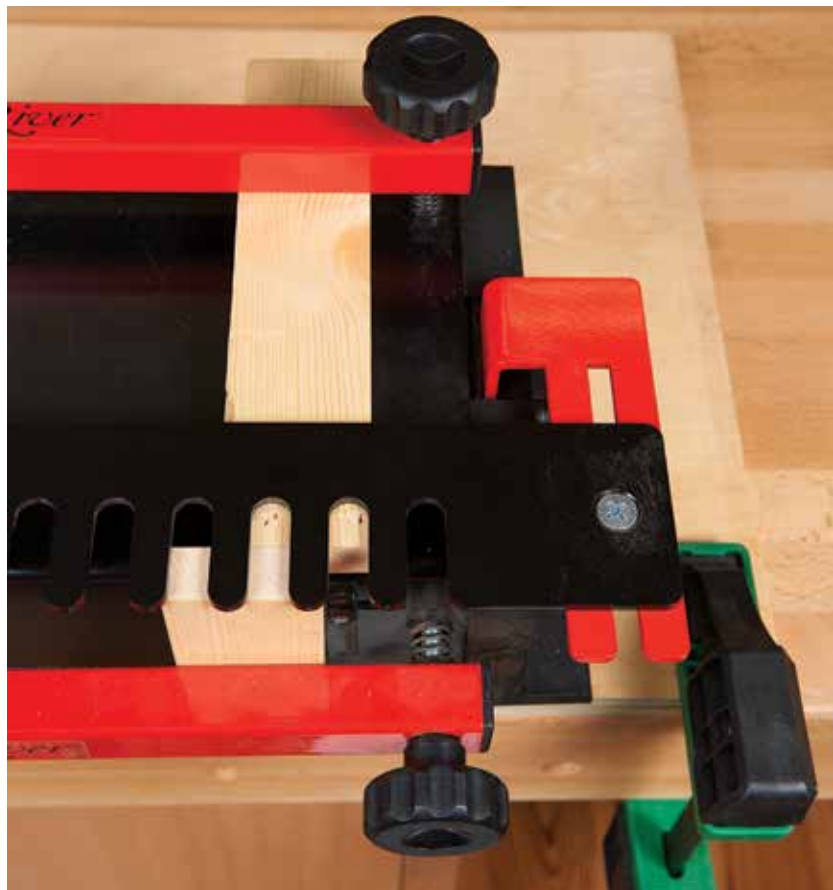
The following illustrates setting up your WoodRiver® Dovetail Jig.

Place one of your scrap pieces in the jig under the Horizontal Clamping Bar and Half-Blind Template. Adjust the clamping bar so it is clamping evenly. Loosen the Left-Hand Horizontal Clamping Bar Knob slightly so you can adjust the board under the pins of the template. Lower the Half-Blind Template using the Template Lever so it is just sitting on top of the test piece. Tighten both the Left-Hand and Right-Hand Lock Knobs. With a bias to the left side of the jig you will center the board under the Half-Blind Template so the edges of the board are of equal distance under the Template fingers. Make sure the end of the board is squared under the Horizontal Clamping Bar, then tighten both the Left-Hand and Right-Hand Horizontal Clamping Bar Knobs equally. **(Figure 1)**

TIP: With narrow drawers/boxes, place a scrap piece of wood of the same thickness on the far right side to ensure even clamping pressure and to make sure the template will not bow.



Figure 1



12½" Deluxe Dovetail Jig

Loosen the Template Lock Knobs, and slide the Half-Blind Template to rear of slots.

Move Left Side Horizontal Stop against board and tighten locking screw.

(Figure 2 - Half-Blind Template Removed For Clarity)



Figure 2

Remove the test board from Horizontal Clamping Bar, and place HB Setup Gauge against Left Side Horizontal Stop. Then move Left Side Vertical Stop against gauge, and tighten locking screw.

(Figure 3)

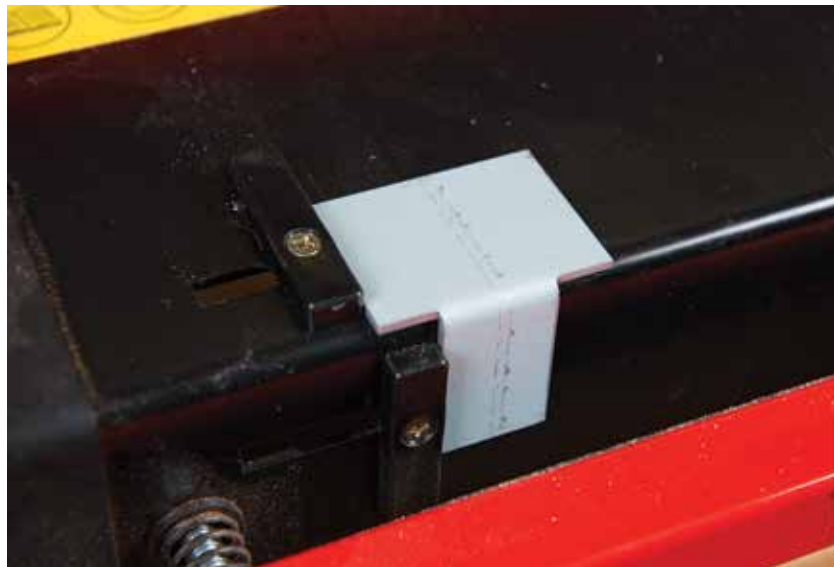


Figure 3

Scribe a line ⅝" from end of your test board on the inside face. **(Figure 4)**

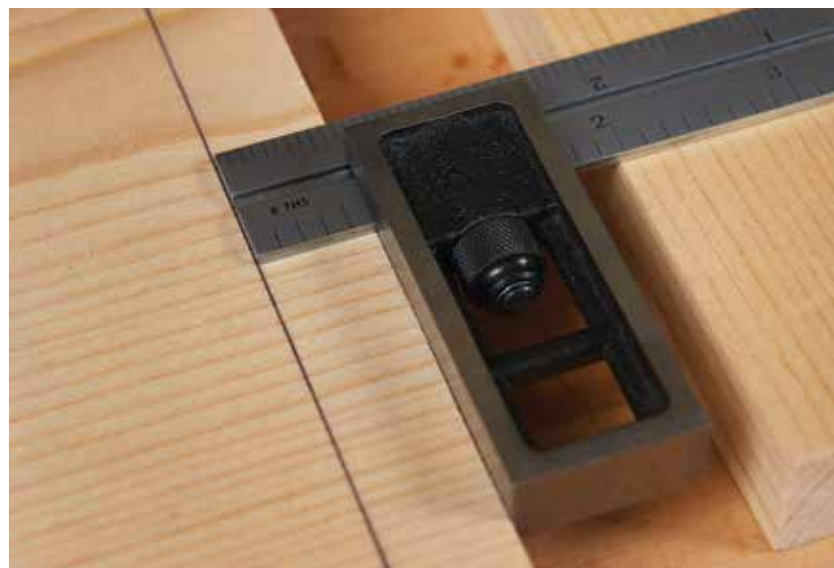


Figure 4

Place the test board in the horizontal portion of the Dovetail Jig against the Left-Hand Horizontal Stop with the scribed line facing up under the Half-Blind Template. Place a different test board in the vertical position of the jig up against the Left-Hand Vertical Stop and below the face of the horizontal test board. Adjust the Vertical Clamping Bar similar to what you did for the Horizontal Clamping Bar, and tighten the Vertical Clamping Knobs. Slide the horizontal piece up against the vertical piece, keeping it tight to the Left-Side Horizontal Stop, so that it is flush and square. Tighten the Horizontal Clamping Knobs. **(Figure 5)**

You will now adjust the Half-Blind Template to be even with the scribed line on the test piece. You do this by aligning the bottom pockets of Half-Blind Template so they are flush with the line. Tighten the Template Lock Knobs to fix Half-Blind Template in position. **(Figures 6 & 7)**

TIP: It may be easier to use a ruler to ensure a consistent reveal.

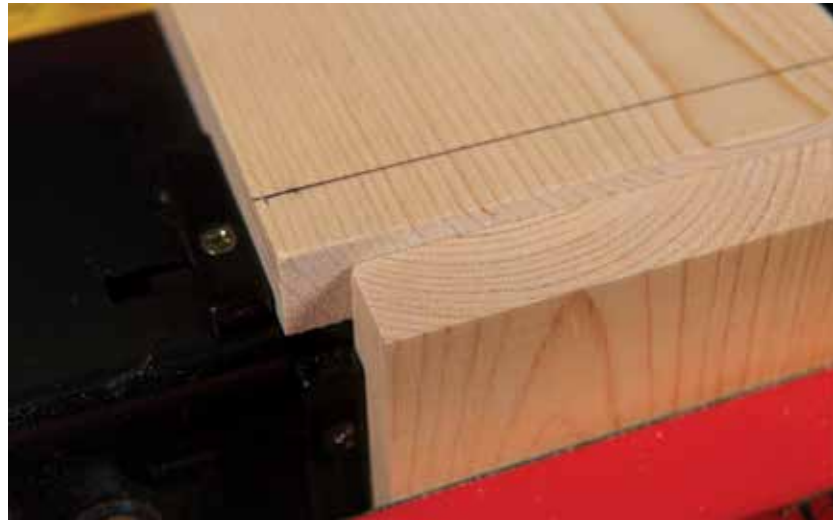


Figure 5

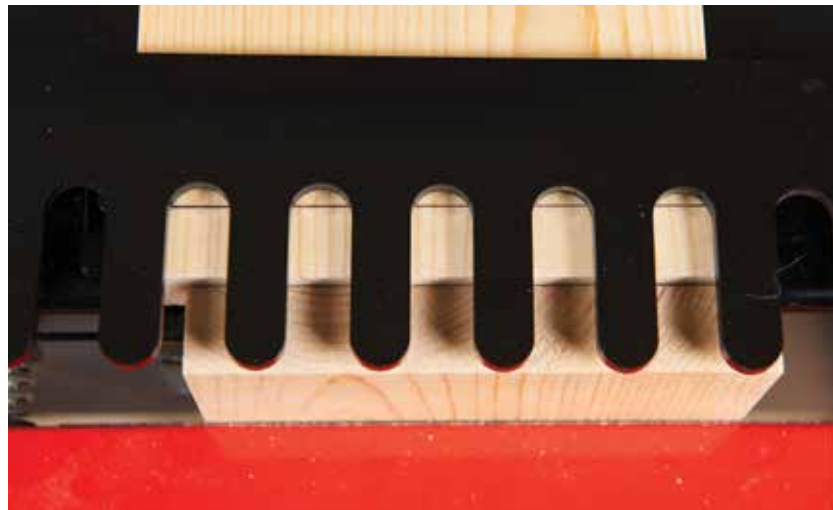


Figure 6 - The Scribed Line Is Proud Of The Bottom Pockets

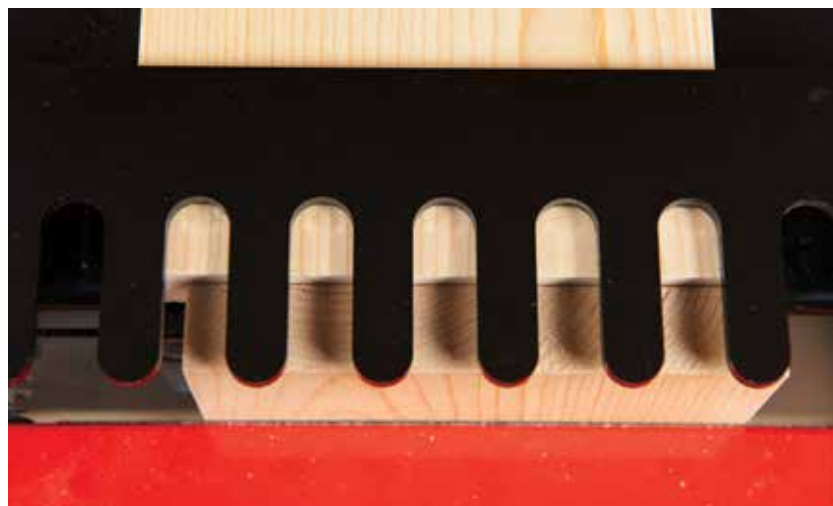


Figure 7 - The Scribed Line Is Flush With Bottom Pockets

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Loosen the Left-Hand Vertical Clamp Knob. Move the vertical test piece so it is tight against the Left-Hand Vertical Stop and flush with the underside of the Half-Blind Template. Tighten the Left-Hand Vertical Clamp Knob. Loosen the Template Lock Knobs while holding onto the Template Lever, then slowly raise the Half-Blind Template. Verify that the vertical test piece is square and flush to the horizontal test piece. Adjust if necessary. Lower the Half-Blind Template with the Template Lever so it is resting firmly on the test boards, and tighten the Template Lock Knobs. **(Figure 8)**



Figure 8

Install 7/16" Template Guide Bushing and Lock Nut in your router base.

Install the ½" x 14° Dovetail Bit in your router and set the bit height to ½". **(Figure 9)**

TIP: If you have problems with the locking ring loosening, apply a wrap of Teflon tape to the bushing threads before assembly.



Figure 9

You will now make your first test cut. Starting on the left side of the jig, rout dovetails using a smooth, controlled motion. As you move the router in and out of the grooves of the template, you will go "In" on the left side of the groove and "Exit" on the right side to finish the cut. Repeat this, working from left to right, until you reach the right-hand end of your test boards. **(Figure 10)**

Remove the test boards and check for fit. The boards should go together with minimal effort with no gaps. Use the Troubleshooting Guide to aid in your evaluation.

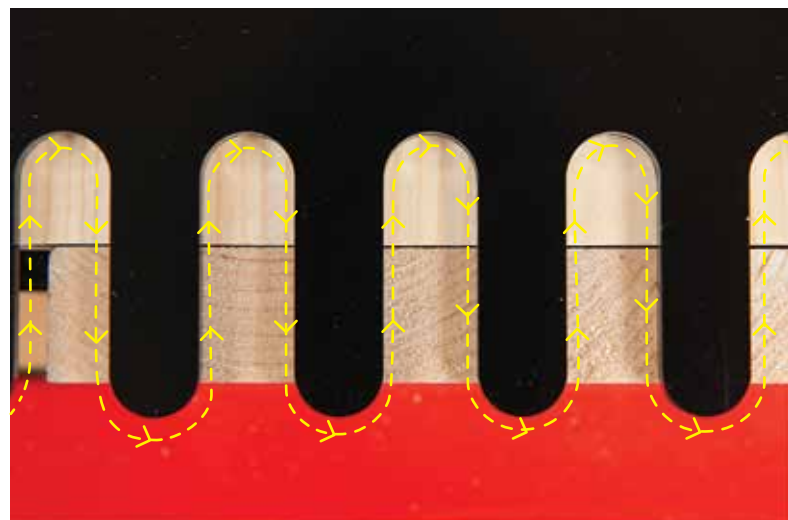


Figure 10

Once satisfied with your setup, you are now ready to continue with your drawer or box components that you prepared earlier.

The following refers to the lumber you milled and labeled for the drawers/boxes.

Place the board with the “V1” label up and facing you inside Vertical Clamping Bar. Locate the left edge of board against Left Side Vertical Stop, and tighten the Clamping Knobs slightly. Place the board with the “H1” label up and towards you under the Horizontal Clamping Bar, tight against Left Side Horizontal Stop and tight against back of board “V1”. Ensure both boards are square and flush to one another, then tighten the Clamping Knobs for both the Vertical Clamping Bar and Horizontal Clamping Bar. Firmly rest the Half-Blind Template on the leveled boards, using the Template Lever, and tighten the Left and Right Lock Knobs.

Starting on the left side of the jig, rout dovetails using a smooth, controlled motion. As you move the router in and out of the grooves of the template, you will go “In” on the left side of the groove and “Exit” on the right side to finish the cut. Repeat this, working from left to right, until you reach the right-hand end of your boards.

Evaluate your cut to make sure nothing has shifted. Adjust if necessary.

Repeat the above steps for the boards with labels “H3” and “V3”.

Important: The above setup for the left side of the Dovetail Jig is for the odd numbered labeled joints. For the even numbered labels (H2 & V2, H4 & V4), you will exchange the settings from far left to far right and then repeat the previous steps, biasing everything to the right instead of the left. **(Figure 10)**

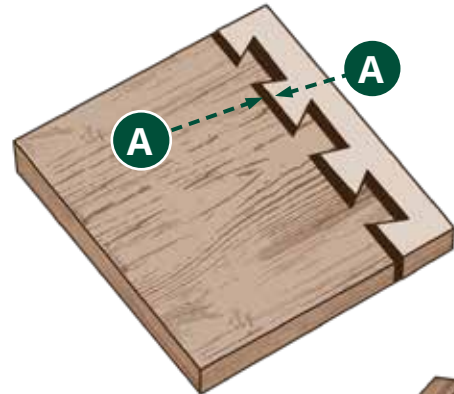


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Evaluating And Troubleshooting Your Test Piece

Note: In the following evaluation, remember most wood glues will take up space and slightly swell the wood fibers. The goal is for your sides/parts to fit together snugly, but not hammer-tight. The Pins will be on the Drawer front/back pieces and the Sockets are the spaces between the Pins. The Tails will be on the Drawer Sides.

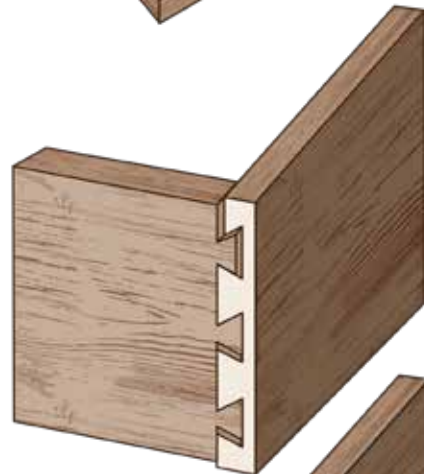
The following refers to the gap between the Tails and Pins (**A**). You will adjust router bit height slightly.



Joint is too **Tight** - Raise the router bit to make the cut shallower ($\frac{1}{64}$ ").

Joint is too **Loose** - Lower the router bit to make the cut deeper ($\frac{1}{64}$ ").

Joint is **Uneven** (Board with the Tails sits both below and above the surface of the joint) - **Template** not set uniformly to the scribe line.



Sockets are too **Deep** (Board with the Tails sits below the surface of the joint) - Adjust the **Template** closer to you slightly.



Sockets are too **Shallow** (Board with the Tails sits above the surface of the joint) - Adjust the **Template** away from you slightly.



Note: When adjusting the **Template**, make sure both Lock Knobs are loosened and then retightened.