

Woodpeckers® MULTI-ROUTER MORTISE & TENON TEMPLATES & VARIABLE STYLUS PIN

SOLD SEPARATELY

Multi-Router Mortise & Tenon Templates are available in 1/4", 5/16", 3/8", and 1/2" thickness. These templates range in widths as small as 3/4" all the way up to 3", depending on the thickness.

Each set can be used with either the MT Stylus or the Variable Stylus. The MT Stylus is designed to work with router bits that are exactly on dimension to create a perfect fitting tenon for your mortise.

The Variable Stylus can be used to adjust the fit of the joint. Choose one of the four different brass bushings to increase the overall size of the tenon in increments of either .005, .010, .015, or .020 thousandths of an inch.



Scan the QR code above to watch the video or visit woodpeck.com under the video tab towards the bottom of the product page.

Woodpeckers®



MULTI-ROUTER MORTISE & TENON TEMPLATES & VARIABLE STYLUS PIN

If you think you're missing anything, email us at mailroom@woodpeck.com.
You can also call us at 800-752-0725 from
9:00 a.m. to 4:00 p.m. EST Monday - Friday.

REV090622

Woodpeckers®

Woodpeckers, LLC Strongsville, Ohio
woodpeck.com
© 2022 Woodpeckers, LLC



At Woodpeckers we are constantly reviewing & improving our tools. The most current version of our instruction manuals are always available to download at woodpeck.com.
(Located in the bottom section of the tool's page under the "Additional Information" or "Instructions" tabs.)



Be the first to know all the new products, OneTIME Tools & sales by subscribing to our eClub. *(Located at the top center of our webpage woodpeck.com.)*



Subscribe to our YouTube channel to stay up-to-date on all the latest tool tips & tricks.



INTERACT WITH US! Follow us on Facebook, Instagram & TikTok!



Enjoy shop tips, project ideas, tool techniques & more in our Woodworking Resource Center/Blog. *(Located at the bottom center of our webpage woodpeck.com.)*



WARNING!

This product can expose you to chemicals, including chromium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

The Mortise & Tenon Templates (MT Templates) are fixed to the Tenon Template Holder, which is mounted to the front face of the Horizontal Table.

Regardless of the tenon size, use a 1/2" straight bit. *Solid carbide up-cut spiral bits are recommended.*

I. TEMPLATE-GUIDED TENONS

NOTE: To create tenons, the Y and Z axis levers will be used together to guide router bit using the bearing of the stylus along the tenon template.

1. Prepare your stock straight, flat, square and properly dimensioned. Prepare some test material along with your project.
2. Layout the tenon shoulders and length on a test piece. Locate and mark the centerline on the test piece, as well. **FIGURE 1.**
3. Select the correct size template and install it in the Template Holder.
4. Adjust the router depth of cut to set the correct tenon length.
5. Install the Template Holder with the socket-head cap screws on the front edge of the Horizontal Table.
6. If raised, lower the front edge Fence and tighten in place.
7. Bring the Horizontal Table toward the Vertical Table and position so that the router bit cannot reach the Horizontal Table when set to full cutting depth. Lock the "X" Axis of the Horizontal Table at this point, ensuring that the router bit cannot touch the table.
8. Set the "X"-Axis stop on the Horizontal Table flush against the front edge and lock it in place.
9. Raise the Stylus Pin block to approximately the middle of its range.
10. Extend the Stylus so it is over the template. Lower the Vertical Table and adjust the "Y" Axis until the Stylus drops into the notch in the top of the Template Holder. Lock the "Y" and "Z"-Axis table lock. **FIGURE 2.**
11. Place the stock flush to the Vertical Table, face down on the Horizontal Table and align the center of your stock with the centerline of the Vertical Table. Clamp the stock in place and position a stop block for repeat cuts. **FIGURE 3.**
12. Retract the Stylus temporarily.
13. Unlock the "Z"-Axis table lock and lower the router bit until it just kisses the top surface of your workpiece.
14. Verify the router depth of cut is set correctly to your shoulder layout lines. **FIGURE 4.**
15. Move the Horizontal Table back until it is just clear of the router bit and lock it in place.
16. Lower the Vertical Table until the router bit is aligned to the top of the tenon shoulder. Lock the Vertical Table.
17. Loosen the (2) locks on the Stylus.
18. Move the Stylus forward until it is just short of the template face and tighten the Lateral Lock. **FIGURE 5.**
19. Adjust the Stylus vertical travel until the bearing is resting on top of the protruding portion of the template and tighten the Vertical Lock. Now the Stylus is calibrated to the top shoulder of the tenon.
20. Unlock the Lateral Lock on the Stylus and retract it temporarily.
21. Unlock the Vertical Table, raise it until the router bit is above the stock and lock it.
22. Bring the Horizontal Table toward the Vertical Table until the stock is flush with the Vertical Table. It's a good idea at this point to bring the bit down to the stock and confirm that the router is properly set for the correct tenon length. Also confirm that the stock is square to the Vertical Table in both planes. Lock the "X" Axis travel of the Horizontal Table. The stock should be touching the Vertical Table, but not binding its movement.
23. When the Horizontal Table is correctly positioned and locked, move the Stylus forward until the end is just short of the template face and the bearing is correctly positioned on the template protrusion. Lock the Stylus.
24. Unlock the Vertical Table and the "Y" Axis of the Horizontal Table (if locked).



FIGURE 1. Carefully lay out the centerline of your stock and the depth of the tenon cut.



FIGURE 2. Center the horizontal and vertical table by placing the stylus in the notch on the template holder.



FIGURE 3. Calibrate stock to template by aligning centerline of stock to centerline of vertical table.



FIGURE 4. Adjust depth of cut by adjusting the router.



FIGURE 5. Stylus is adjusted to top of template once cutter is adjusted to tenon shoulder. Bring Stylus forward to template, then back off slightly.

24. Start the router. Bring the router down onto the stock until it starts cutting. Move the router across the tenon with the "Y" Axis Lever. Make a shallow cut across the top of the tenon until the Stylus engages the template. Move to the end of the tenon and make shallow cuts up and down across the shoulder of the tenon until the Stylus engages the template. Repeat at the other shoulder.

25. Move the bit under the tenon and make shallow cuts across the bottom of the tenon until the Stylus engages the template.

26. Holding light consistent pressure against the template with the "Y" and "Z" Axis handles, go completely around the tenon in a clockwise direction once or twice. **FIGURES 6 & 7.**



FIGURES 6 & 7. After most of the material is machined away, hold Stylus tight to Template and work all the way around the Template.

II. TEMPLATE-GUIDED MORTISES

NOTE: To create mortises, the X and Y levers are used together to guide the router bit between the Y-axis stop collars and the X-Axis stop collar. The template allows fast setup of the Y-axis stop collars, by using the reduced pin side of the stylus inside the slot of the template.

1. Install a spiral upcut router bit for your desired corresponding mortise (1/4", 5/16", 3/8" or 1/2").
2. Adjust the router depth of cut to set the correct mortise depth. The mortise depth should be slightly deeper than your tenon length.
3. Select the correct size MT Template and install it in the Template Holder.
4. Install the Template Holder with the socket-head cap screws on the front edge of the Horizontal Table.
5. Slide the horizontal table forward until there is roughly a 1-1/16" gap between the Vertical Table and the Front Edge Fence.
6. Set the "X"-Axis stop on the Horizontal Table flush against the front edge and lock it in place. **FIGURE 8.**
7. Extend the MT Stylus over the Tenon Template Holder.
8. Center the horizontal and vertical table by placing the stylus in the notch on the Template Holder. Lock the "Z" and "Y"-Axis Table Lock.



FIGURE 8. Center the horizontal and vertical table by placing the stylus in the notch on the template holder.



FIGURE 9. The front fence can be raised to reference your stock square to the vertical table.

9. Locate and mark the centerline of the mortise on your workpiece as well as desired mortise depth.

10. Depending on the width of your material, you can either reference the mortise location of your workpiece off of the vertical table or the front edge fence. If you choose to use the front edge fence, raise it and lock it in place at this time. **FIGURE 9.**

NOTE: If you choose to reference your material off of the front edge fence, you must extend your router bit further to compensate for the space between the workpiece and the vertical table.

If your router bit is not long enough to rout your desired mortise depth while using the front edge fence, you may remove the template holder in later steps to allow the Horizontal table to be positioned closer to the Vertical Table than the previously instructed gap of 1-1/16" in step 5. If you change the position of the horizontal table, make sure to adjust your x-axis stop in relation to the change you made.

11. Place the stock either flush against the Vertical Table or Front Edge Fence and align the center mark of the mortise on your workpiece with the center line on the Horizontal and Vertical Table. Clamp the stock in place and position a stop block for repeat cuts. **FIGURE 10.**

12. Lower the Vertical Table and adjust routers depth of cut to your desired depth. (Mortise depth should be slightly longer than your tenon length).

13. Loosen the Stylus Lateral Lock and Remove the MT Stylus Pin. Flip the MT Stylus Pin around so the reduced pin on the back end of the Stylus is facing the template and re-install it.

14. Slide the horizontal table back until it is just clear of the router bit.

15. Lower the vertical table and insert the reduced pin on the MT Stylus into the slot on the MT Template. Tighten the "Z"-Axis Table Lock and Stylus Lateral Lock.



FIGURE 10. Calibrate stock to template by aligning the centerline of stock to centerline of vertical and/or horizontal table.

16. Loosen the "Y"-Axis Table Lock and slide the horizontal table to the left and right. **FIGURES 11, 11-1.**

17. Maintain the position of the horizontal table at the left and right most position and set the two Y-Axis Stops to limit the travel of the Horizontal Table. **FIGURES 12, 12-1.**

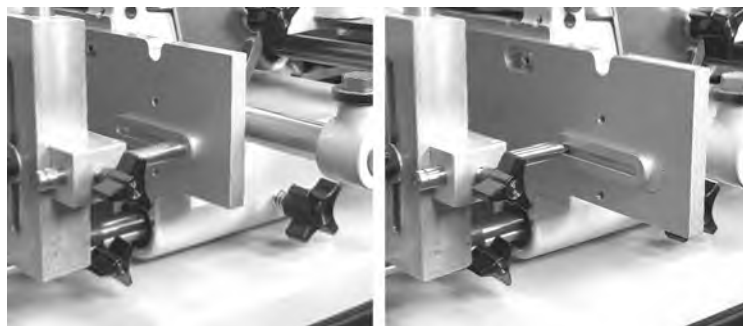
18. Retract the position of the stylus pin.

19. Unlock the "Z"-Axis Table Lock and raise or lower the vertical table to the desired position for your mortise. Use the Micro Adjust to dial in the final position. Lock the "Z"-Axis Table Lock once the vertical table is in the correct position. **FIGURE 13.**

NOTE: If you are using the Front Edge Fence and need to position the Horizontal Table Closer to the Vertical Table to reach your desired mortise depth, you may remove the Template Holder at this time. If adjustments are made, adjust the X-axis Stop at this time in correlation to the adjustment you made to the position of the Horizontal Table.

20. Loosen the "X" and "Y"-Axis Table Lock (if locked).

21. Start the router. Bring the Horizontal Table toward the Vertical Table with the "X"-Axis Control Arm until the router bit plunges roughly 1/8" into the material. Maintain the position of the "X"-Axis and use the "Y"-Axis control arm to move the Horizontal table left and right to clear out material in the mortise. Repeat this technique until the mortise has been routed to full depth. **FIGURES 14, 14-1 & 14-2.**



FIGURES 11. Insert the reduced pin on the back end of the stylus into the slot on the MT Template. With the reduced pin inserted, slide the horizontal table left and right.



FIGURES 12. Lock the stops in place to limit the travel of the horizontal table.

III. MORTISE & TENON VARIABLE STYLUS PIN (SOLD SEPARATELY)

NOTE: The Mortise & Tenon Variable Stylus Pin (MT Variable Stylus Pin) is only compatible with old or new style tenon templates, and is not designed for use with box joint, dovetail, or round tenon templates.

The Mortise & Tenon Stylus Pin (MT Stylus Pin) is designed to work with router bits that are exactly on dimension to create a perfect fitting tenon for your mortise. The MT Variable Stylus Pin operates in place of the MT Stylus Pin.

The reduced end operates the same as on the MT Stylus Pin for setting up Mortises, but the brass bushing adjusts for the fit where the bearing on the MT Stylus Pin does not. If your tenon is coming out too small when using the bearing on the MT Stylus Pin, switch to the MT Variable Stylus Pin and begin using the "+5" bushing to increase the size of your tenon. If the tenon is still too small, continue onto the "+10" bushing, and so on, until the desired joint fit is achieved.

- The MT Variable Stylus Pin includes four interchangeable brass bushings that increase the overall size of the tenon in increments of either .005, .010, .015, or .020 thousandths of an inch.

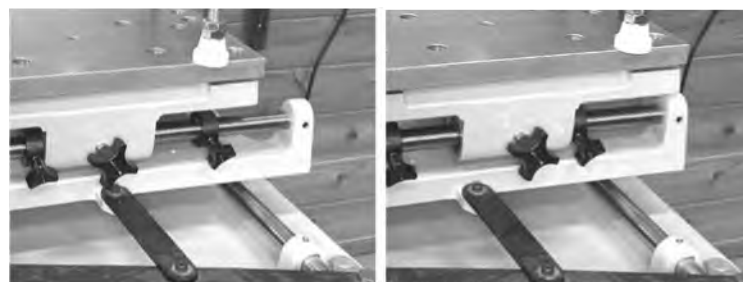
- **How to change out the bushings on the MT Variable Stylus Pin.**

1. Loosen the hex head screw with the included hex key.
2. Remove the brass bushing and install your bushing of choice.
3. Reinstall the hex head screw.

- If you purchased a cased set of the MT Combo Templates, a space within the foam is available to store your Variable Stylus and extra bushings when not in use.



FIGURE 13. Set the vertical table to the desired position for your mortise for your mortise and lock the Z-Axis Table Lock.



FIGURES 14. Use the "X" and "Y"-axis control arms to bring the horizontal table forward and left-to-right to cut your mortise.

