

Bow Tie Inlay System Instructions

Effective October 2025

Review full instructions prior to use for important safety information.

Always check [Rockler.com](https://www.rockler.com) to confirm that you are using the most recent version of instructions for your product.



ROCKLER®

CREATE WITH CONFIDENCE

GENERAL SAFETY WARNINGS

This product is designed only for specific applications as defined in the instructions and should not be modified or used for any manner not described in these instructions. Use only recommended accessories. Before using the Bow Tie Inlay System Instructions: **READ, UNDERSTAND** and **FOLLOW ALL INSTRUCTIONS AND SAFETY WARNINGS. KEEP THESE INSTRUCTIONS READILY AVAILABLE FOR FUTURE REFERENCE.**

- > Always confirm that you are using the most recent version of the instructions and safety warnings for your product (see the instructions link on the product page at Rockler.com).
- > Before using another tool with this product, always read, understand and follow the instructions and safety warnings in the owner's manual for that tool. If you do not have the owner's manual, obtain one from the tool's manufacturer before using it with this product.
- > Before using any chemical with this product, always read, understand and follow all safety warnings and guidelines in the manufacturer's Safety Data Sheet (SDS; formerly called "MSDS"), especially regarding:
 - How to safely use the chemical, including potential hazards and recommended first aid measures;
 - Personal safety equipment required to safely use the chemical (e.g. gloves, eye protection, mask/respirator, etc.);
 - Proper and safe handling, storage and disposal of the chemical.
- > Before using this product, review and verify that all tools to be used with it have safety equipment installed and are in proper working order as defined by the tool's owner's manual.
- > Do not use this product until you have read and are confident you understand:
 - Product Specific Safety Warnings (p. 3);
 - Cutting the Key (pp. 4 - 5);
 - Cutting the Mortise (pp. 6 - 7);
 - Making "Nested" Keys (pp. 8 - 9);
 - Cutting the "Half Bow Tie" from Specialty Set 2 (pp. 10 - 11).
- > The user assumes all risk and responsibility for the proper and safe use of this product and for ensuring product suitability for the intended application.
- > It is the sole responsibility of the purchaser of this product to ensure that anyone you allow to use this product reads and complies with all instructions and safety precautions outlined in this manual prior to use.
- > Follow all standard shop safety practices, including:
 - Keep children and bystanders away from the tool operating area;
 - Do **NOT** use power tools in explosive environments, or in the presence of flammable liquids, fumes or dust;
 - **TURN OFF AND UNPLUG** all power tools **BEFORE** making any adjustments or changing accessories;
 - Remain alert and use good judgment. Do not use this product if you are in any way impaired by medications, alcohol, drugs or fatigue;
 - Keep your work area well lit and clean;
 - Dress appropriately. Secure loose clothing, remove all jewelry and tie up long hair before using this product;
 - **ALWAYS** wear safety glasses, hearing protection and respiratory protection that complies with NIOSH/OSHA/ANSI safety standards;
 - Use dust collection tools and dust face masks to reduce exposure to dust;
 - Use safety equipment such as featherboards, push sticks and push blocks, etc., when appropriate;
 - Maintain proper footing at all times and do not overreach;
 - Do **NOT** force woodworking tools.
- > These warnings and instructions do **NOT** represent the total of all information available regarding tool safety, use and technique. Always seek out opportunities to learn more and improve your skills and knowledge.

⚠ CA WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

⚠ DANGER

Danger indicates a hazardous situation that, if not avoided, will result in death or serious injury.

⚠ WARNING

Warning indicates a hazardous situation that, if not avoided, could result in death or serious injury.

⚠ CAUTION

Caution indicates a hazardous situation that, if not avoided, may result in minor or moderate injury or property damage.

NOTICE

Notice indicates important or helpful information and/or user tips.

PRODUCT SPECIFIC SAFETY WARNINGS



⚠ DANGER

- > To avoid serious injury, keep hands and fingers away from the spinning router bit. Maintain awareness of the bit at all times.

⚠ WARNING

- > Unplug your router before installing or adjusting the router bit, Guide Bushing or Guide Bushing Collar.
- > The Template Frame must be secured to the workpiece with double-sided tape to prevent potentially dangerous shifting during routing.
- > The workpiece from which the Key will be routed **MUST** be secured to a sacrificial piece of wood with double-sided tape. The sacrificial piece is to prevent damage to your workbench or table surface when you rout through the workpiece, and the double-sided tape is to prevent the Key from shifting and being damaged or flying out when it is cut free from the rest of the workpiece.
- > Maximum key thickness: 3/8"

⚠ CAUTION

- > Do **NOT** attempt to cut the full depth in a single pass, or you could break the router bit. Cut no more than 1/8" deep in each pass. Make multiple passes to achieve final depth.



Fig. 1

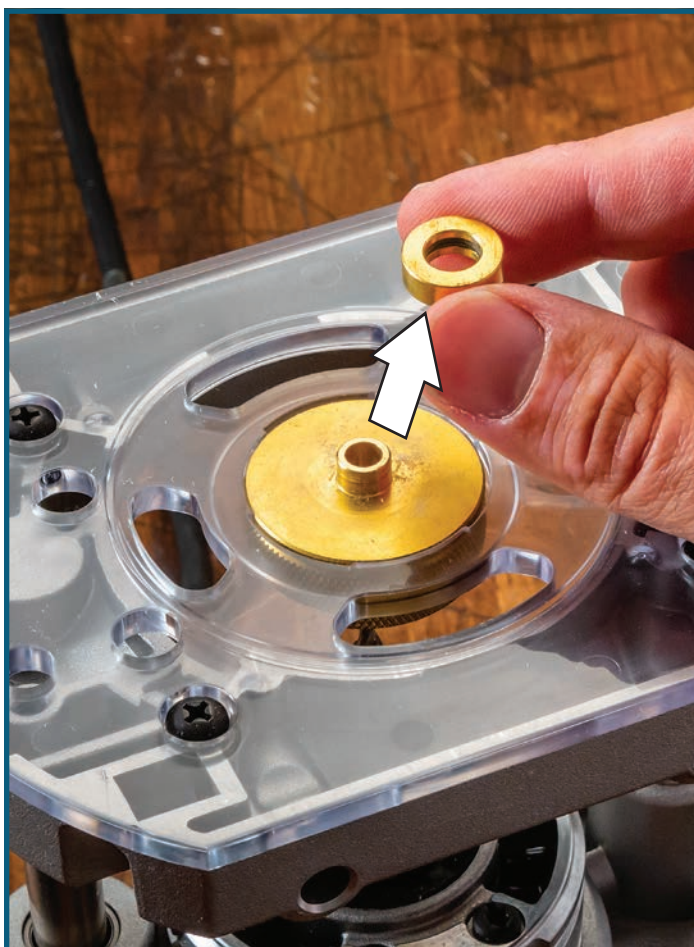


Fig. 2

Cutting the Key

THESE WARNINGS PERTAIN
TO ALL REMAINING STEPS:



⚠ DANGER

> To avoid serious injury, keep hands and fingers away from the spinning router bit. Maintain awareness of the bit at all times.

⚠ WARNING

- > The workpiece from which the Key will be routed **MUST** be secured to a sacrificial piece of wood with double-sided tape. The sacrificial piece is to prevent damage to your workbench or table surface when you rout through the workpiece, and the double-sided tape is to prevent the Key from shifting and being damaged or flying out when it is cut free from the rest of the workpiece.
- > The Template Frame must be secured to the workpiece with double-sided tape to prevent potentially dangerous shifting during routing.
- > Maximum key thickness: 3/8"

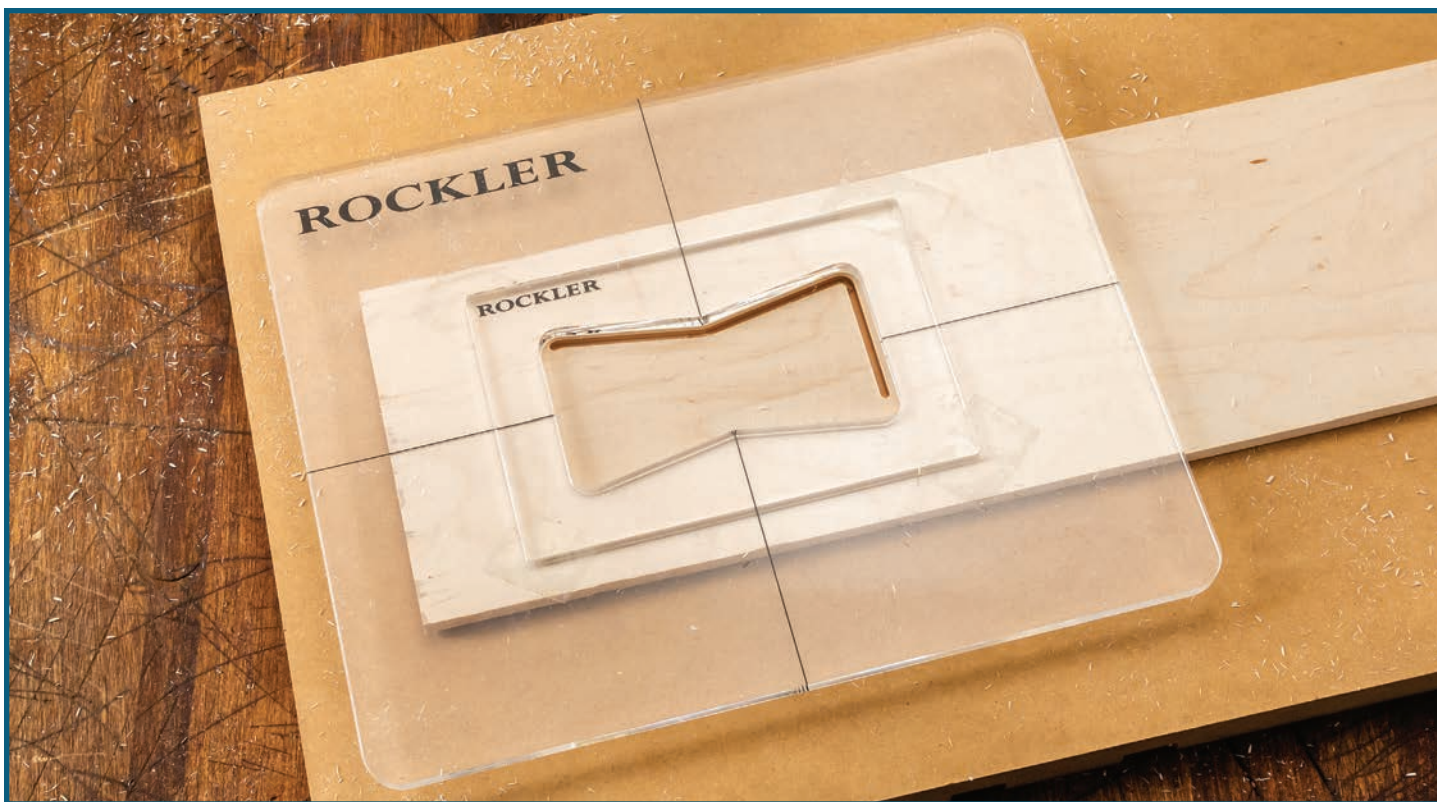


Fig. 3

NOTICE

As with most woodworking jigs, we recommend you familiarize yourself with the use of the Bow Tie Inlay System by making practice cuts in scrap material before cutting your final workpieces.

1. Secure the workpiece from which you will cut the bow-tie Key to a sacrificial piece of wood with double-sided tape. Make sure that the tape is positioned so that it will hold the Key as it's cut from the rest of the workpiece.
2. Secure the Template Frame to the workpiece with double-sided tape. Make sure that the Frame is oriented so the Rockler logo is readable (and not backward). **Fig. 1.**
3. Fit the Key Template into the frame, making sure that the Rockler logo on the Template is in the corner nearest the logo on the Template Frame. **Fig. 1.**
4. With your plunge router turned off and unplugged, install the Guide Bushing on the baseplate of the router and secure by tightening the retaining ring.
5. Remove the Collar from the Guide Bushing. **Fig. 2.**
6. Chuck the 1/8"-diameter Spiral Up-Cut bit in your router, and make sure the bit is centered in the Guide Bushing. (If it's not, you'll need to adjust the position of your router's baseplate; refer to your router's owner's manual for guidance on how to do this.) Set the overall plunge depth so that you will cut the full depth of the Key material, but not beyond. If your router's plunge base allows, set it to make one or more shallower passes; otherwise, you'll need to judge the shallower depth yourself during routing.

7. Position your plunge router on the Key Template so that the Guide Bushing is tight to the inside edge of the Template.

CAUTION

Do **NOT** attempt to cut the full depth in a single pass, or you could break the router bit. Cut no more than 1/8" deep in each pass. Make multiple passes to achieve final depth.

8. Turn on your router and carefully plunge the bit about 1/8" into the workpiece, making sure that the Guide Bushing is still tight against the inside edge of the Key Template. Keeping the Guide Bushing tight to the Template as you go, carefully move the router clockwise around the inside of the Template. **Fig. 3.**
9. Once you have finished the first pass, turn off the router and allow it to fully stop. Then adjust the plunge depth and make a second pass (and, if necessary, a third pass) clockwise around the inside of the Key Template to fully cut the Key. Make sure to keep the Guide Bushing tight against the inside edge of the Key Template in all passes.
10. After your last pass, turn off the router, allow it to fully stop and lift it from the Key Template. Carefully pry the Key away from the sacrificial piece and remove any remnants of the double-sided tape.
11. Remove the Key Template from the Frame and pry the Frame from the wood.



Fig. 4

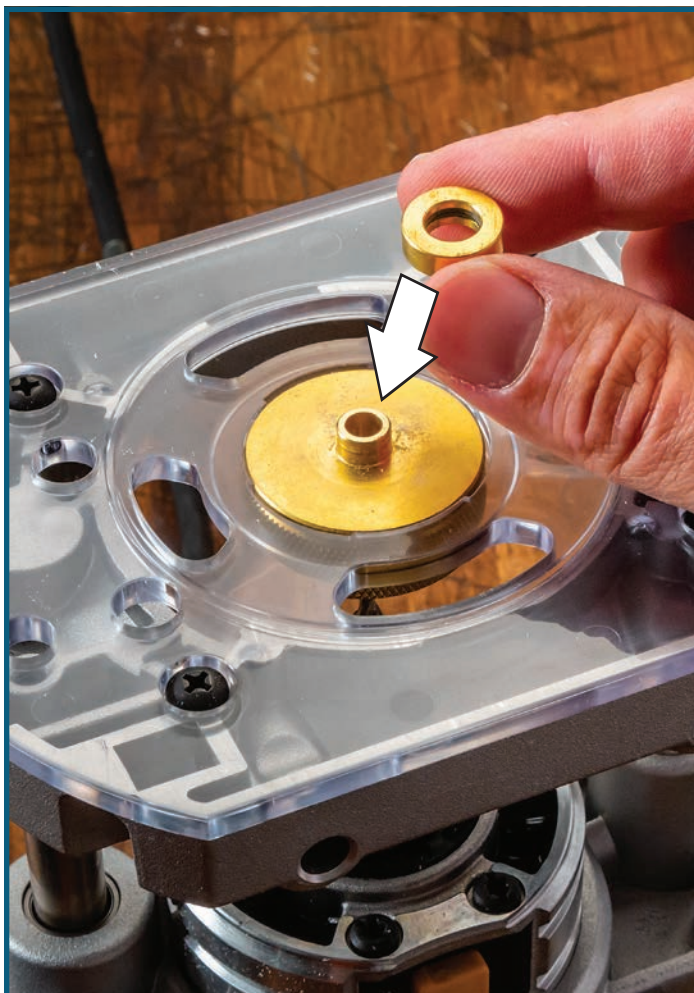
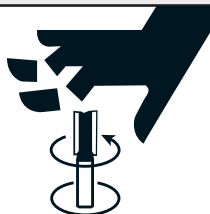


Fig. 5

Cutting the Mortise

THESE WARNINGS PERTAIN
TO ALL REMAINING STEPS:



⚠ DANGER

- > To avoid serious injury, keep hands and fingers away from the spinning router bit. Maintain awareness of the bit at all times.

⚠ WARNING

- > The workpiece from which the Key will be routed **MUST** be secured to a sacrificial piece of wood with double-sided tape. The sacrificial piece is to prevent damage to your workbench or table surface when you rout through the workpiece, and the double-sided tape is to prevent the Key from shifting and being damaged or flying out when it is cut free from the rest of the workpiece.
- > The Template Frame must be secured to the workpiece with double-sided tape to prevent potentially dangerous shifting during routing.

NOTICE

Both the Template Frame and the individual Key Templates have center registration marks to make positioning easier and more precise.

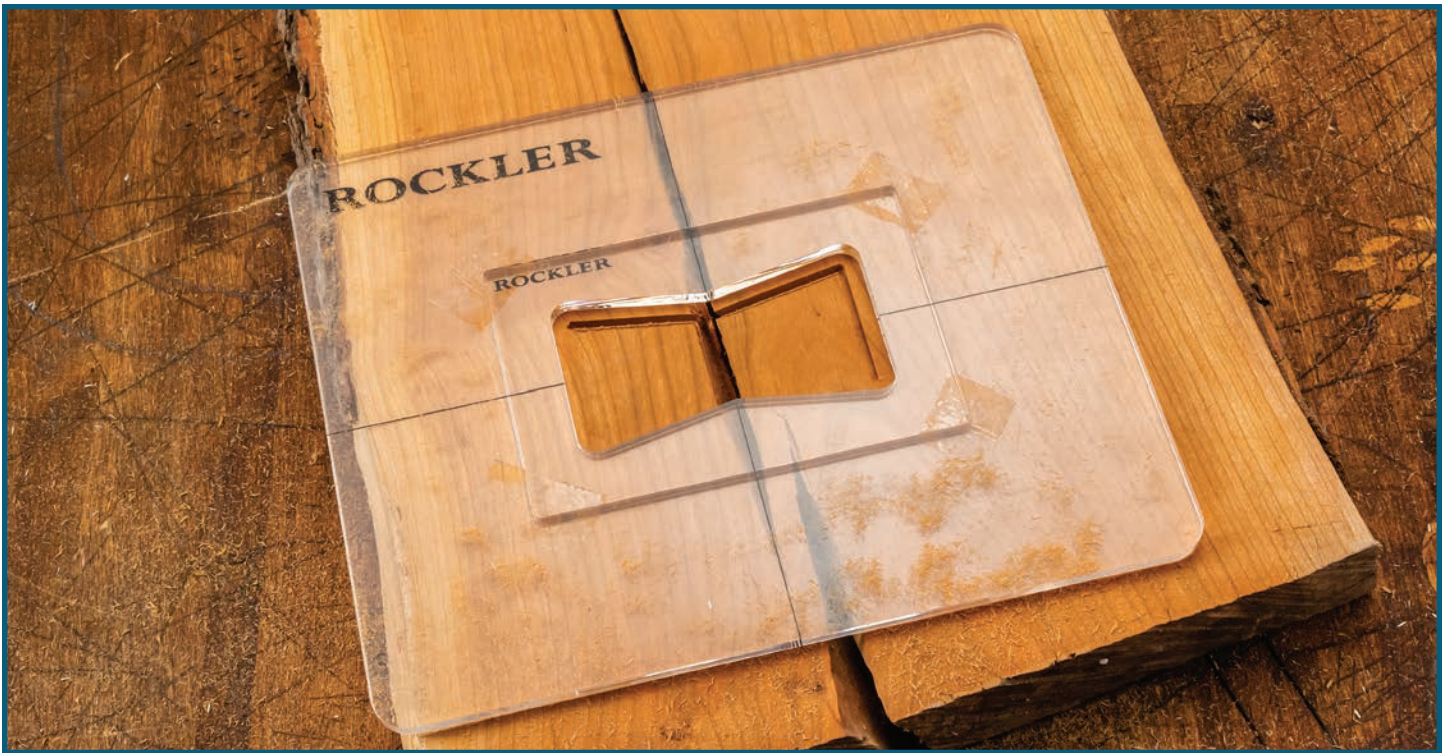


Fig. 6

1. Secure the Template Frame at the target location on the final workpiece with double-sided tape. Make sure that the Frame is oriented so the Rockler logo is readable (and not backward) and the mortise will be located where you want the Key to go.
2. Fit the Key Template into the Template Frame, making sure that the Rockler logo on the Template is in the corner nearest the logo on the Frame. **Fig. 4.**
3. With the router off and unplugged, install the Collar on the Guide Bushing. **Fig 5.**
4. Position your plunge router on the Key Template so that the Collar on the Guide Bushing is tight to the inside edge of the Template.

⚠ CAUTION Do **NOT** attempt to cut the full depth in a single pass, or you could break the router bit. Cut no more than 1/8" deep in each pass. Make multiple passes to achieve final depth.

5. Turn on your router and carefully plunge the bit about 1/8" into the workpiece, making sure that the Collar is still tight against the inside edge of the Template. Carefully move the router clockwise around the inside of the Template to establish the edge of the mortise. Then fully rout out the internal area of the mortise. **Fig. 6.**
6. Once you have finished the first pass, turn off the router and allow it to fully stop. Then adjust the plunge depth and make a second pass (and, if necessary, a third pass) to cut the mortise to full depth.



Fig. 7

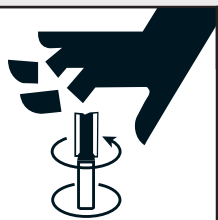
7. With the mortise routed to full depth, remove the Key Template from the Template Frame and carefully pry the Frame from the workpiece.
8. Apply glue to the back and sides of the Key and in the mortise, and fit the Key into the mortise. If necessary, use a dead-blow or rubber mallet and a block of wood to gently tap the Key until it's seated. Wipe away any excess glue. **Fig. 7.**
9. If necessary, sand to bring the Key flush with the surface.



Fig. 8

Making “Nested” Keys

THESE WARNINGS PERTAIN TO ALL REMAINING STEPS:



⚠ DANGER

- > To avoid serious injury, keep hands and fingers away from the spinning router bit. Maintain awareness of the bit at all times.

⚠ WARNING

- > The workpiece from which the Key will be routed **MUST** be secured to a sacrificial piece of wood with double-sided tape. The sacrificial piece is to prevent damage to your workbench or table surface when you rout through the workpiece, and the double-sided tape is to prevent the Key from shifting and being damaged or flying out when it is cut free from the rest of the workpiece.
- > The Template Frame must be secured to the workpiece with double-sided tape to prevent potentially dangerous shifting during routing.

With the two Templates in the Starter Template Set (65846), the four Templates in the Inset Template Set (65180, sold separately) and the chain-link template in the Specialty 2 Set (62050, sold separately), you can create “nested” Keys, one inside another, to create eye-catching patterns. We’ll use the Starter Template Set as an example.

1. Follow the process described in the “**Cutting the Key**” section on page 4 of these instructions to cut out Keys using each of the Key Templates desired.
2. Secure the Template Frame at the target location on the final workpiece with double-sided tape. Make sure that the Frame is oriented so the Rockler logo is readable (and not backward) and the mortise will be located where you want the Keys to go.
3. Fit the Key Template for the largest Key into the Frame, making sure that the Rockler logo on the Template is in the corner nearest the logo on the Frame.
4. Follow Steps 3-6 in the “**Cutting the Mortise**” section on page 6 of these instructions to rout the mortise for the first Key.
5. Once the mortise for the first Key has been routed to full depth, remove the Key Template from the Template Frame, but do **NOT** pry the Template Frame from the workpiece. It must remain in place to correctly register the subsequent template(s).



Fig. 9

6. Apply glue to the back and sides of the first Key and in the mortise, and fit the Key into the mortise. If necessary, use a dead-blow or rubber mallet and a block of wood to gently tap the Key until it's seated. Wipe away any excess glue.
7. After the glue securing the first Key in place has dried, insert the Key Template for the next largest Key into the Frame, again making sure that the Rockler logo on the Template is in the corner nearest the logo on the Frame. **Fig. 8.**
8. Follow Steps 3-6 in the “Cutting the Mortise” section on page 6 of these instructions to rout the mortise for the second Key.
9. Once the mortise for the second Key has been routed to full depth, remove the Key Template from the Template Frame. If you plan additional nested Keys, do **NOT** pry the Template Frame from the workpiece. It must remain in place to correctly register the subsequent template(s). If you are stopping with the second Key, carefully pry the Template Frame from the workpiece. **Fig. 9.**
10. Apply glue to the back and sides of the second Key and in the mortise, and fit the Key into the mortise. If necessary, use a dead-blow or rubber mallet and a block of wood to gently tap the Key until it's seated. Wipe away any excess glue. **Fig. 10.**



Fig. 10

11. For additional nested Keys, repeat the above process using Key Templates with progressively smaller openings.
12. When all Keys have been glued in place and the glue has dried, sand to bring them flush with the surface.



Fig. 11

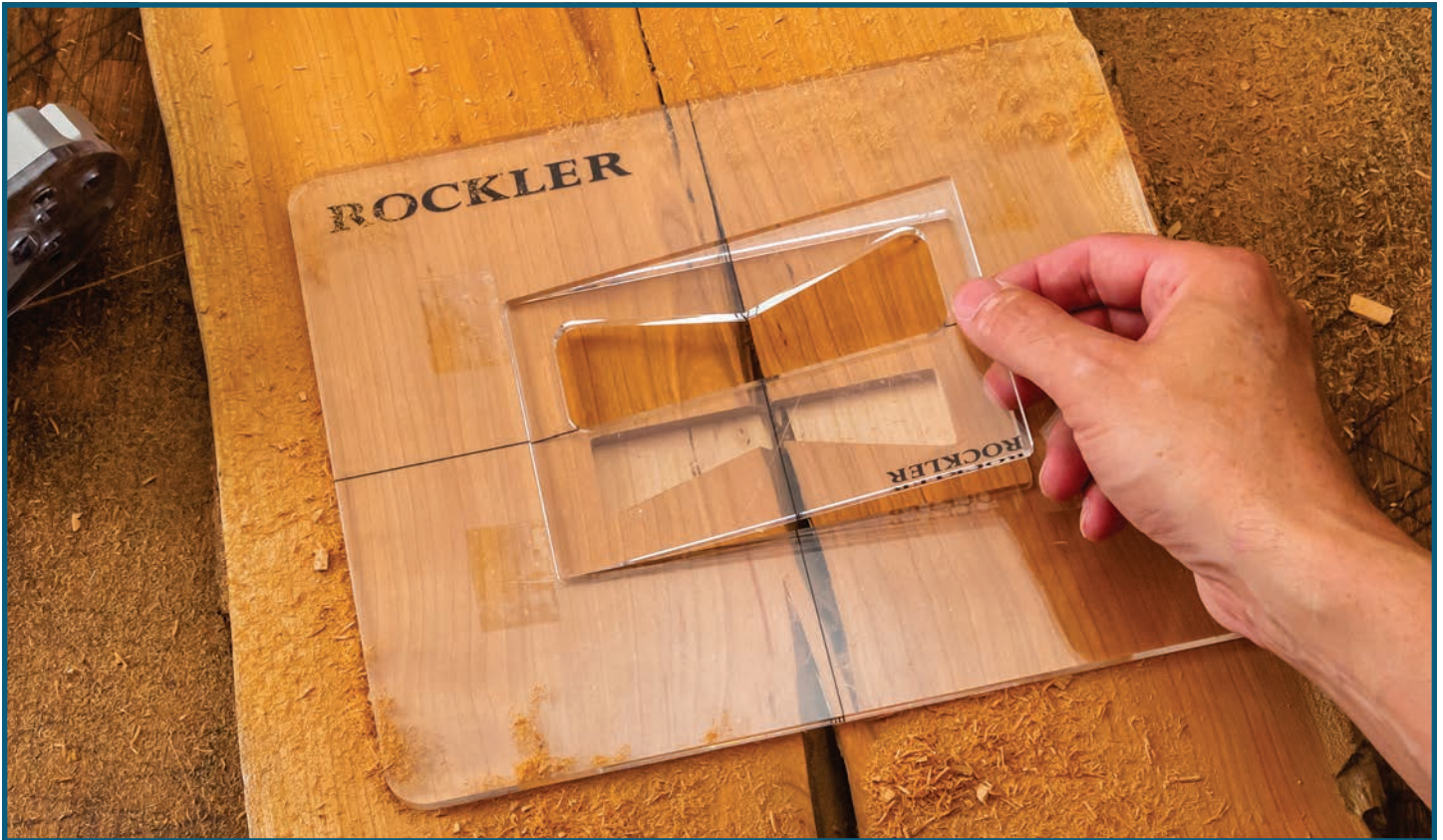


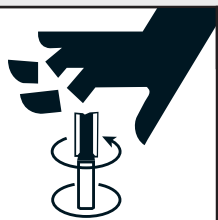
Fig. 12



Fig. 13

Cutting the “Half Bow Tie” from Specialty Set 2

THESE WARNINGS PERTAIN TO ALL REMAINING STEPS:



⚠ DANGER

- > To avoid serious injury, keep hands and fingers away from the spinning router bit. Maintain awareness of the bit at all times.

⚠ WARNING

- > The workpiece from which the Key will be routed **MUST** be secured to a sacrificial piece of wood with double-sided tape. The sacrificial piece is to prevent damage to your workbench or table surface when you rout through the workpiece, and the double-sided tape is to prevent the Key from shifting and being damaged or flying out when it is cut free from the rest of the workpiece.
- > The Template Frame must be secured to the workpiece with double-sided tape to prevent potentially dangerous shifting during routing.

1. Follow the steps in “Cutting the Key” section on page 4 of these instructions to cut out two Half Bow Tie Keys.
2. Follow Steps 3-6 in the “Cutting the Mortise” section on page 6 of these instructions to rout the mortise for the first Key. Fig. 11.
3. Remove the Half Bow Tie Key Template, rotate it clockwise 180° and reinstall it in the Template Frame. Fig. 12.

⚠ CAUTION

Do **NOT** attempt to cut the full depth in a single pass, or you could break the router bit. Cut no more than 1/8" deep in each pass. Make multiple passes to achieve final depth.

4. Rout the mortise for the second Half Bow Tie Key.
5. Apply glue to the back and sides of both Keys and in the mortises, and fit the Keys into the mortises. If necessary, use a dead-blow or rubber mallet and a block of wood to gently tap the Keys until they're seated. Wipe away any excess glue. Fig. 13.
6. When both Keys have been glued in place and the glue has dried, sand to bring them flush with the surface.

Check Rockler.com for updates. If you have further questions, please contact our Technical Support Department at 1-800-260-9663 or support@rockler.com

