

Figure 23-8. Adjust and lock pins to engage work during cuts.

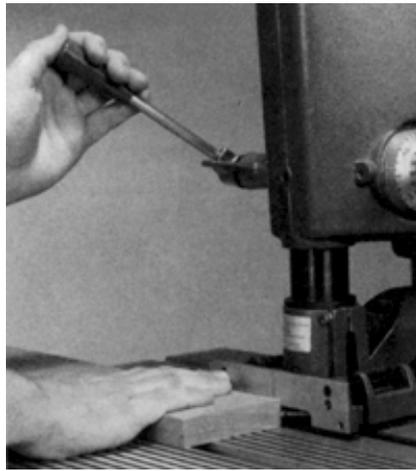


Figure 23-9. Use the quill adjustment to position blade for cut. Allow clearance between biscuit joiner and worktable.

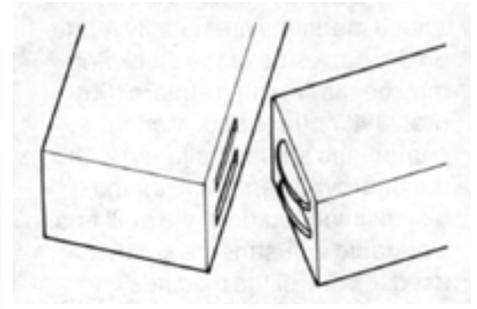


Figure 23-11. On stock more than 1" thick, two biscuits may be used for added strength.

than 3" and be sure to allow clearance between the biscuit joiner arbor and the worktable in order to prevent damage to the table surface.

After all adjustments have been made, turn on the Mark V and set the correct speed. Guide the workpiece with your left hand until the biscuit centerline mark on the stock is aligned with the engraved centerline on the biscuit joiner guide. With a push block in your right hand (Figure 23-10), press the stock slowly against the guide, compressing the springs until the guide reaches the depth stops. then retract the stock. Repeat this procedure for each cut on both pieces of stock before changing the setup or height adjustment.

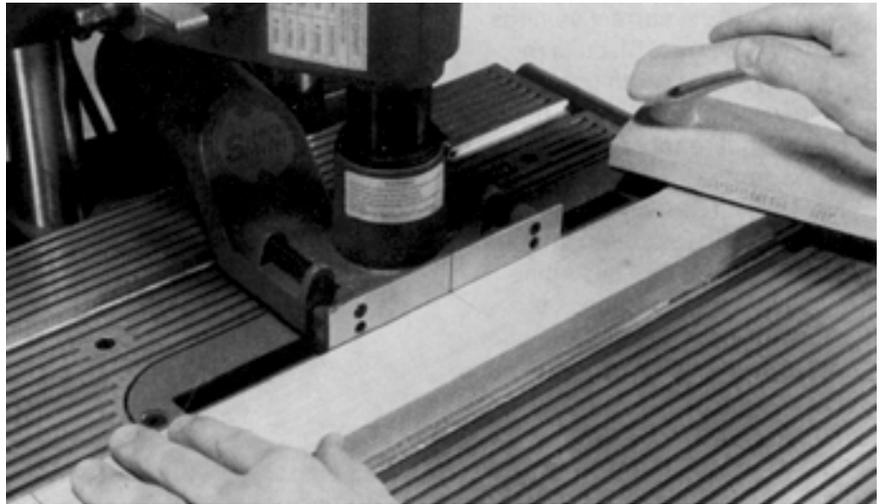


Figure 23-10. Align biscuit centerline with joiner guide and use a push block in your right hand when feeding stock.

Panel Construction- Panel construction or edge-to-edge joinery is one of the most common woodworking operations. For best results, place the boards face down next to each other and mark biscuit centerlines on the back side. Then cut the biscuit slots and assemble the boards in this facedown position to help assure a flat, smooth final surface.

Typically, allow one biscuit for each foot of length in an edge-to-edge joint, with a minimum of three biscuits. Space the biscuits evenly and position the end biscuits at least 3" from the ends of the boards so the boards will engage both of the pins in the guide when the biscuit slots are cut.

End Grain and High Stress Joints- Because of the wood's high porosity, end grain joints—such as T-Frame, L-Frame or End Butt—are almost impossible to make with glue alone. Using biscuits will strengthen these joints because the biscuits are glued face-grain-to-face-grain.

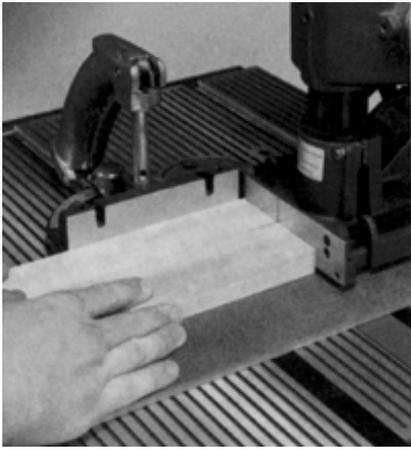


Figure 23-12. When joining stock of different thicknesses a shim may be used to eliminate adjustments and assure accurate alignment.



Figure 23-13. If the stock does not engage both pins, use your miter gauge to maintain control of the workpiece.



Figure 23-14. Use your miter gauge to hold and advance the stock on mitered cuts. Do not slide the stock across the miter gauge face.

For best results, use the largest biscuit available that will allow at least 1/4" of stock at each end of the biscuit slots. On wide joints, such as a T-shelf, use multiple biscuits, allowing as little as 1/2" between biscuit slots.

On stock over 1" thick—especially on high stress joints such as a table leg and skirt—two or more rows of biscuits may be used for added strength (Figure 23-11).

When joining stock of different thicknesses—such as a 1" thick skirt being joined to a 2" square table leg—a thin piece of scrap wood or hardboard can be used as a shim (Figure 23-12) to eliminate the need to make quill adjustments for each thickness. This assures that the setback will be exactly the same on all joints and that the biscuit slots will be aligned correctly for easy assembly.

Short and Narrow Stock- Workpieces less than 6" in width or length must be handled with special care because the pins in the joiner guide will not engage the stock and a kickback or injury is possible. For these cuts, align the centerlines and lock the miter gauge into the worktable to serve as a guide and stop. Hold the workpiece against the miter gauge face and advance it slowly and firmly into the biscuit joiner (Figure 23-13).

If you are making multiple matching components—such as door frames or rails and stiles for a cabinet front—you can make the setup once and cut all biscuit slots quickly and accurately.

Miter Joints- For corner miters, mount the biscuit joiner so that it faces the front of the Mark V with the guide perpendicular to the miter gauge slots (Figure 23-14). Adjust the worktable so one of the miter gauge slots is under the biscuit joiner and the quill is extended 3" to avoid interference between the safety grip and the Mark V's powerplant. Set your miter gauge to 45° (or to match the angle of the miter), place your workpiece against the miter gauge with the centerlines aligned, and adjust the safety grip to hold the stock securely.

Make the cuts by advancing the miter gauge and stock into the cut together. Do not slide the stock across the miter gauge and into the biscuit joiner as this will not produce an accurate cut. A piece of coarse sandpaper may also be attached to the surface of the biscuit joiner guide to keep the stock from creeping during the cut.

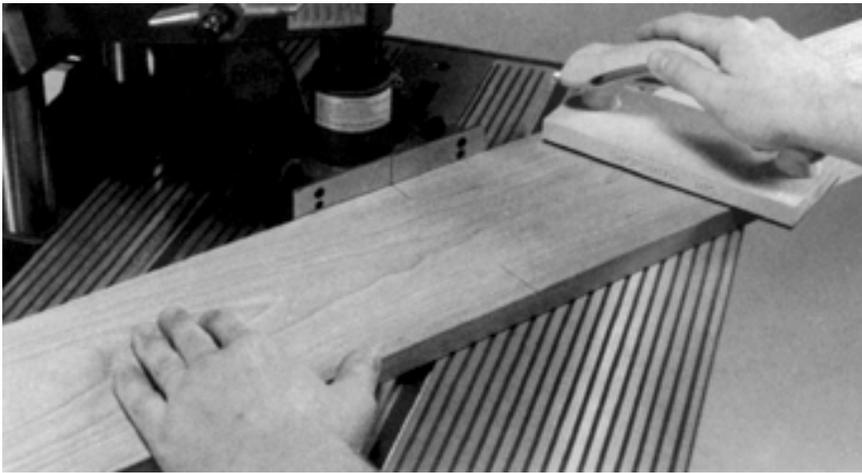


Figure 23-15. When working with large stock, mount the biscuit joiner diagonally for maximum support of the workpiece.

Edge Cuts in Wide Stock- Working with large or wide stock is similar to other edge joining operations, but additional support must be used to give the operator control of the stock for accuracy and safety. This is achieved by mounting the biscuit joiner diagonally, at about a 30° to 50° angle to the miter gauge slots (Figure 23-15). With the Model 510, check your setup to be sure the table height crank doesn't interfere with the stock.

If additional support is needed, use the extension table system (Model 510), a roller stand or a helper to gain control.

Surface Cuts-Surface cuts are necessary for two basic types of joinery: edge-to-face joints, such as along the corner of a cabinet, and T-shelf joints, such as where a shelf joins the sides of a bookcase. Surface cuts require special setups and additional care.

For edge-to-face joints, mount the biscuit joiner with the Mark V in the vertical position. Also lock the worktable vertically with the table edge slightly below the biscuit joiner. With the Mark V unplugged, depress the biscuit joiner guide to the desired depth stop and adjust the worktable until its surface is even with face of the guide (Figure 23-16). Finally, mount the rip fence on the table so that it supports the workpiece at the correct height for the biscuit position.

To make the cuts, tip the top edge of the work slightly away from the table and slide it along the rip fence until one of your centerlines marked on the top edge of the stock is aligned with the engraved centerline on the joiner guide. With a push block in your right hand, tilt the stock slowly back against the worktable. As you do the stock will engage the pins and compress the guide to make the cut (Figure 23-17). Pivot the stock toward you and away from the table before attempting to advance to the next cut.



Figure 23-16. For surface cuts, adjust the table so it is flush with the biscuit joiner guide when fully depressed.

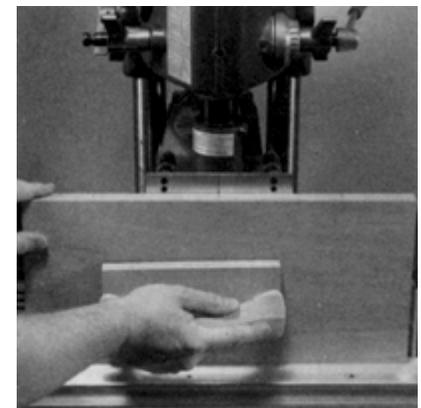


Figure 23-17. This setup is ideal for surface cuts along the edge of the workpiece.

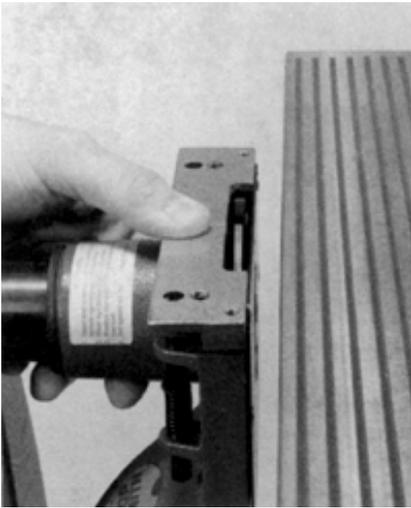


Figure 23-18. For surface cuts, adjust the table so it is flush with the biscuit joiner guide when fully depressed.

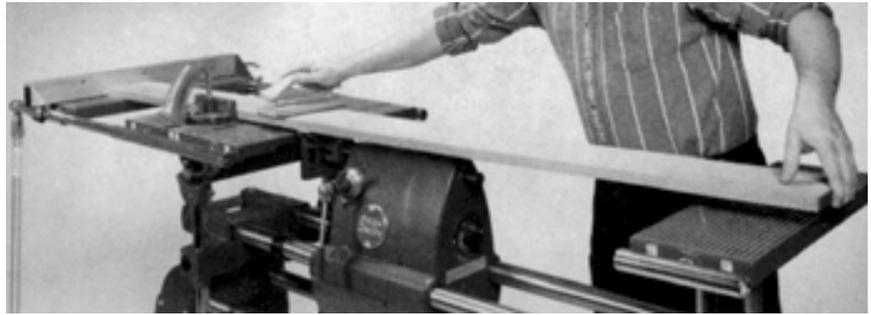


Figure 23-19. The rip fence and miter gauge can be used as guides when cutting "blind" biscuits.

A T-shelf or similar joint is more difficult because one side of the cut must be made "blind." The accuracy of the joint depends totally on the accuracy of your measurements and setup.

Mount the biscuit joiner with the Mark V in the horizontal position and slide the worktable close to the biscuit joiner. With the Mark V unplugged, depress the joiner guide to the desired depth stop, set the stops, and adjust the Mark V table to match this height (Figure 23-18).

A typical setup is shown in Figure 23-19. In this example, the rip fence on an extension table determines the position of the cut along the length of the stock and the miter gauge locked in its slot determines the position across the width.

After all measurements have been made and checked, hold one end of the stock elevated and place it against the rip fence and miter gauge. With a push block in your right hand, lower the stock slowly until it engages the pins, depresses the guide and finishes the cut. Lift the stock completely before attempting to move to the next cut.