

Safe Operating Procedure

Biscuit Joiner (AKA Plate Joiner)



PRE OPERATIONAL SAFETY CHECKS

- Ensure this power tool has a suitable safe work area;
- Check the biscuit joiner and bit for obvious signs of damage;
- Examine the power lead and plug for obvious damage;
- Ensure is currently tested and tagged;
- Ensure the cord does not create a tripping hazard.

POTENTIAL HAZARDS

- Ejected material;
- Eye injuries;
- Dust;
- Noise
- Rotating sharp parts;
- Electricity;
- Kickback.

OPERATIONAL SAFETY PRACTICES (CONTROLS)

- Check the work-piece for faults and defects;
- Fit the correct bit to the machine. Ensure cutter bit conforms to machine specifications;
- Make all adjustments for depth of cut BEFORE connecting to the power source;
- Ensure your work-piece is firmly secure and supported;
- Keep fingers, hands and power cord clear of the bit;
- Always consider the direction of rotation. This will determine the direction the biscuit joiner is to travel;
- Allow the biscuit joiner to reach operating speed, then apply load gradually. Maintain a constant pace to avoid uneven finishes;
- Keep the sole plate pressed firmly on the work-piece;
- Maintain complete control. Always operate with both hands. Maintain a proper & steady footing at all times;
- If any unforeseen problems arise while routing, stop immediately, switch off and report it;
- Turn off immediately after use. Do not place the biscuit joiner down until the cutter has stopped rotating.

HOUSEKEEPING

- Return this tool to the appropriate storage cupboard;
- Leave the work area in a safe, clean, & tidy condition.

General Operation

Biscuit joiners are primarily used for making cabinetry and furniture, joining millwork or other similar applications where a strong, accurate joint is required in wood or wood by-products. There are literally hundreds of variations of joints that can be made with your Biscuit joiner. We will limit our discussion to six basic joints that can be used to build on and adapt to your own applications. The following are some basic set-up steps that will apply to all biscuit joints.

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- 1. BISCUIT SIZE SELECTION** the three biscuit sizes are #0, #10 and #20. It is a principle to use the largest biscuit size that will physically fit in the application. Unless you are joining narrow face or picture frames or using 1/2" or thinner stock, you will find the #20 biscuit size to suit most applications. After selecting the biscuit size, set the depth adjustment knob to the corresponding size (see Controls section in Manufacturer's Instructions). Also, be sure the fine depth adjustment is correctly set by first testing in a scrap piece. This is extremely important as you do not want to discover during glue-up that your biscuit slots are not quite deep enough.
- 2. BISCUIT LOCATION AND LAYOUT** Generally, biscuits may be spaced and located at your discretion. For edge joints, a good guide is to space biscuits every 150 mm – 254 mm (6–10") on centre. It is further recommended that biscuits be placed so that the centreline of the end biscuits is 50 mm – 74 mm (2-3") from the end of the workpiece. When joining face frames or picture frames where the workpiece is narrow, you may have to choose the smaller biscuit sizes to keep from "breaking out" on the end of the joint. Breaking out should be avoided if possible, but if not you can assemble the joint and trim off the exposed biscuit tip after the glue sets (see Figure 13). When working with material up to 1" thick, we advise to use a single biscuit located in the approximate centre of the material thickness. If thicker stock is to be joined, you may choose to use 2 biscuits across the thickness for greater strength (see Figure 14). Biscuit locations should be marked by first positioning the mating pieces exactly as they are to be assembled. Next, make a mark at 90° to the joint interface across both pieces at the desired biscuit locations (see Figure 15). See Application section for more specific information on joint layout. The marks you make will then be aligned with one of the centre registration marks on the tool, again, depending upon your specific application.
- 3. MAKING THE CUT** Prior to making any cut, be sure that all fence adjustments are set and lock knobs are tight. Also, be sure you have selected the proper depth setting. Clamp your workpiece firmly and align the plate joiner's centre registration mark with your layout mark. Turn on the tool and let the blade come up to full speed (approximately 1 second). Grasping the switch handle and auxiliary handle and positioning the fence firmly and squarely against the workpiece, plunge the blade until it bottoms against the stop. Continuing to hold the tool squarely and firmly, allow the return spring to retract the blade from the work and then release the switch to shut the tool off. It will take some practice to obtain a "feel" for the tool to produce accurate joints, so practicing in scrap wood first is advisable.
- 4. JOINT ASSEMBLY** After your joints are cut, you may wish to trial fit everything together before gluing. When you are satisfied with your joints, evenly spread any good quality woodworking glue in each slot as well as on the mating flat surfaces of your joint. Place biscuits in the slots, assemble the joint and clamp until dry. For a biscuit joint to be most effective, it is important that the biscuits themselves be in contact with the glue. This is because the biscuits absorb the moisture in the glue and expand to form a tight joint.

