

Ryobi BT3000 Stop Block Construction Notes

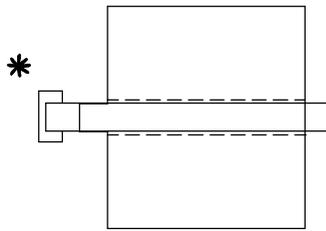
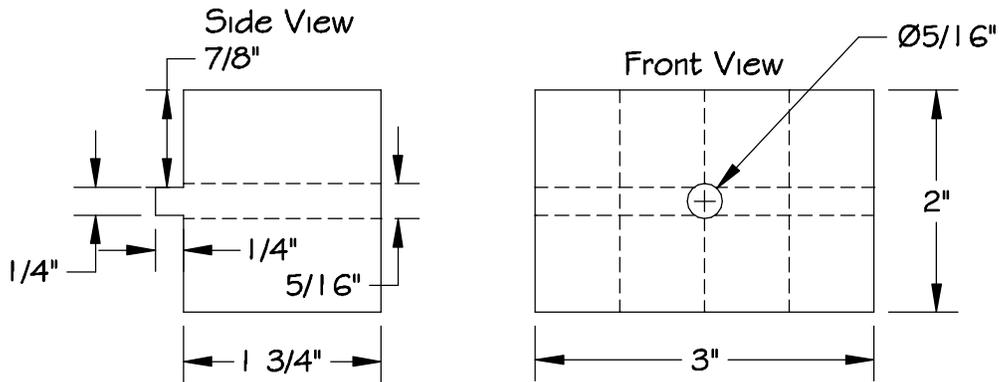
By Jim Frye

1. Begin by cutting four pieces of $\frac{3}{4}$ -inch thick stock 2-1/4 inches square. The stop block will be stronger if it is made from plywood, but any hard wood will work satisfactorily.
2. Glue the four blocks together, clamping until the glue has cured. It is easier to glue two blocks together and then join the two glue-ups together after the first glue-up has cured. If the block is being made from plywood, rotate the plies so that every ply is 90 degrees to the next ply on the adjoining block. If the block is being made from solid hardwood, orient the grain so that all four blocks are the aligned the same.
3. Using the table saw, rip the blocks to 2 inches square.
4. Drill a $\frac{5}{16}$ -inch hole through the stop block from front to back.
5. If the stop block is being made from solid hardwood and not plywood, mark $\frac{1}{4}$ " x $\frac{7}{8}$ " rabbits on each side of the back of the block so the remaining $\frac{1}{4}$ " by $\frac{1}{4}$ " rib is in line with the grain of the block for strength. Another way of putting this is the grain should run from the body of the block out through the rib. If the stop block is being made from plywood, the alternating plies will provide the strength for the rib.
6. Cut the two rabbits on the back of the block. This will leave the $\frac{1}{4}$ " by $\frac{1}{4}$ " rib that will fit into the T-slot in the faces of the fences.
7. Epoxy a $\frac{1}{4}$ -inch plain washer on the face of the stop block centered on the hole that was drilled earlier. This will serve as a bearing surface for the locking knob.
8. The knob is made by scribing a 1-1/2" circle on a piece of $\frac{3}{4}$ -inch plywood. Mark the circle into eight equal segments. Drill a $\frac{1}{4}$ -inch hole at all eight intersections of the circle and at the center. Counter bore the center hole to accept a $\frac{1}{4}$ x 20 hex nut. Band or jig saw out the knob. Mount the knob on a $\frac{1}{4}$ x 20 machine screw and chuck it into a drill or drill press. Sand the knob smooth and round. Un-mount the knob and epoxy a $\frac{1}{4}$ x 20 hex nut into the counter bore. Also epoxy a $\frac{1}{4}$ -inch plain washer on the back of the knob.
9. A T-bolt can be made by narrowing the head of a regular $\frac{1}{4}$ x20x2 $\frac{1}{2}$ inch long hex bolt. Grind or file two opposing flats on the bolt head until the bolt slips into the T-slot on the fences.
10. Thread the stop block onto the T-bolt with the stop block rib facing the head of the bolt and screw on the knob with the washers facing each other.

11. The stop block is now ready for use on the BT3000.

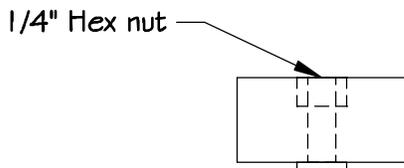
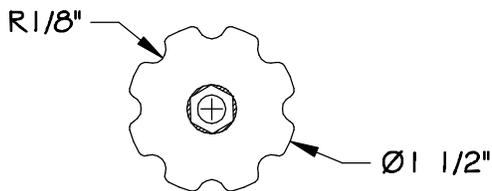
Stop Block for Miter or Rip Fence

Designed by Jim Frye
 Drawing by Kevin Lynch
 11/22/99



- 1 - 1/4x2-1/2" hex bolt
- 3 - 3/4"x2"x2" plywood
- 1 - 3/4"x1-1/2" dia knob
- 1 - 1/4x20 hex nut
- 2 - 1/4" washers

* The hex bolt head must be narrowed on two opposing flats to fit the T-slots in the fences.



Steel washers:
 epoxy 1 to knob,
 1 to block

