A-1 MORTISE and CROSSHOLE JIG M-100
OPERATING INSTRUCTIONS

Description:
This is a multi-purpose tool with capabilities for:

Mortising the pocket for the lock case.

Mortising the pocket for the lock face (scalp) plate.

Precisely align and guide the drilling operations for various cylinder hole, turnpiece hole, knob/lever handle holes and escutcheon plate mounting holes of popular mortise locks as well as Simplex pushbutton combination locks. (All crossdrilling requires optional Side Plates).

The M-100 is self-centering and has a clamping range on doors from 1" to 2 ½". The backset is adjustable from 2 ¾" to 2 ½" to 2 3/8" without the use of additional hand tools. The various plates available for cross-drilling can also be firmly attached without tools.

Operation: Mortising & Cross Drilling

1.Adjust top & bottom jaw opening to required door width by aligning inside jaw edge with door width marks on the top & bottom jaw mounting plates.

2.Set the jig for the desired backset by rotating the upper and lower backset toggle bars to the correct position.

No overhang- 2 ¾" backset
'1/2' overhang -2 ½" backset
'3/8' overhang - 2 3/8" backset

3.Select the pair of (optional) sideplates for the lock being installed. With the plate name facing out and at the top, attach the 1st plate to the slot in the lower jaw and then pivot & lock it into the slot of the upper jaw. Repeat for the second plate.

4.Mark the door and door edge with a horizontal line at the desired centerline height of the knob/lever. Standard is 36" from the finished floor.

5.Layout the top and bottom height limits of the mortise case and lock face plate (scalp plate) on the edge of the door following the manufacturer's instructions.

6A. Mounting the Mortiser when no sideplates are being used: See Photos
Loosen the tightening knob on the drill bit guide, turn the lead screw and raise the lead cutting edge of the drill bit so that it is approximately 3/32" to 1/8" away from the surface of the upper backset toggle. Mount the mortiser to the door edge, vertically positioning the unit to align the lead cutting edge of the drill bit with the layout line for the upper height limit of the lock face plate (scalp plate), and tighten the top and bottom jaws. CAUTION-Assure that the top and bottom lock faceplate layout lines are visible between the upper and lower backset toggles. Maximum faceplate length is 8".

6B. Mounting the Mortiser when Sideplates are being used: See Photo
COMPARE PAPER TEMPLATE SUPPLIED WITH MORTISE LOCK TO HOLE PATTERN IN SIDEPLATES TO VERIFY CORRECT HOLE SELECTION.
Mount the M-100 to the door, aligning the mark on the edge of the cross-drilling plate with the knob/lever horizontal centerline mark put on the door in step #4. Tighten the top and bottom jaws.

7. Loosen the tightening knob on the drill bit guide and pivot the guide away from the door. Select the long 1" bit, remove the stop collar and assemble the bit to the guide. Swing the guide back to the door and engage the tightening knob. Do Not tighten the knob at this time.

8.Turn the lead screw so that the outside diameter of the drill is aligned with the top height limit of the mortise case. Tighten the knob securing the drill bit guide.

9.Connect your hand drill to the drill bit. Bring the lead cutting edge (not the drill point) of the bit into contact with the door edge. If the mortise pocket is 4 ½" deep, set the stop collar so that there is 4 ½" between the stop collar and the bronze guide bushing flange. This will produce the correct depth.

WEAR EYE PROTECTION WHEN DRILLING THE MORTISE POCKET HOLD DRILL SQUARE WITH DOOR and CLEAR CHIPS FREQUENTLY

10.Oil drill bit shank and bushing. Drill the first full hole. Loosen the bit guide knob, turn the crank to align the bit with the bottom height limit of the mortise case, tighten the bit guide knob and drill the 2nd full hole.

11.Loosen the knob, turn the elevating crank 8-9 turns clockwise to raise the drill bit, tighten the knob and drill the 3rd hole. Repeat this step until the pocket is cleared.

12.Now clean out the peaks by turning the elevating crank clockwise to position the drill bit half way between the last hole drilled and the 1st hole drilled. Tighten the knob and drill the first clean out hole.

13.Loosen the knob, turn the elevating crank counter-clockwise 8-9 turns, tighten the knob and drill the second clean out hole. Repeat until the pocket is cleaned.

Lock Face Plate Pocket

14.Remove the 1" dia. it and install the 1-1/4" bit (or other dia. as required). Use the same procedure as in step 9 above to set the depth for this shallow pocket.

15.Align this bit to the lower limit line of the lock case plate (scalp plate). Verify that the drill will not contact the top or bottom backset toggles.

16.Using the same technique as you did in steps 10,11,12 & 13 for the lock case, mortise the lock case plate (scalp plate) except turn the elevating crank 11 turns when moving from hole to hole.

17.For the final sizing pass, loosen the tightening knob so there is a light drag on the bit guide, and with the drill running, crank the elevating screw to advance the bit over the entire length of the pocket. In some cases it may be desirable to move both up and down in the pocket for a finer edge. Remove mortising bits when finished.

18.Without moving the jig, drill the cross holes as required using hole saws and drill bits. The plates accommodate hole sizes of 2-1/8, 1-1/4, 1, 7/8, ¾, 5/8, AND 3/8.

19.Remove the jig and using a wood chisel, square the corners of the shallow pocket for the lock case plate.

20.Additional trim holes, if required, are located on the lock manufacturers templates.

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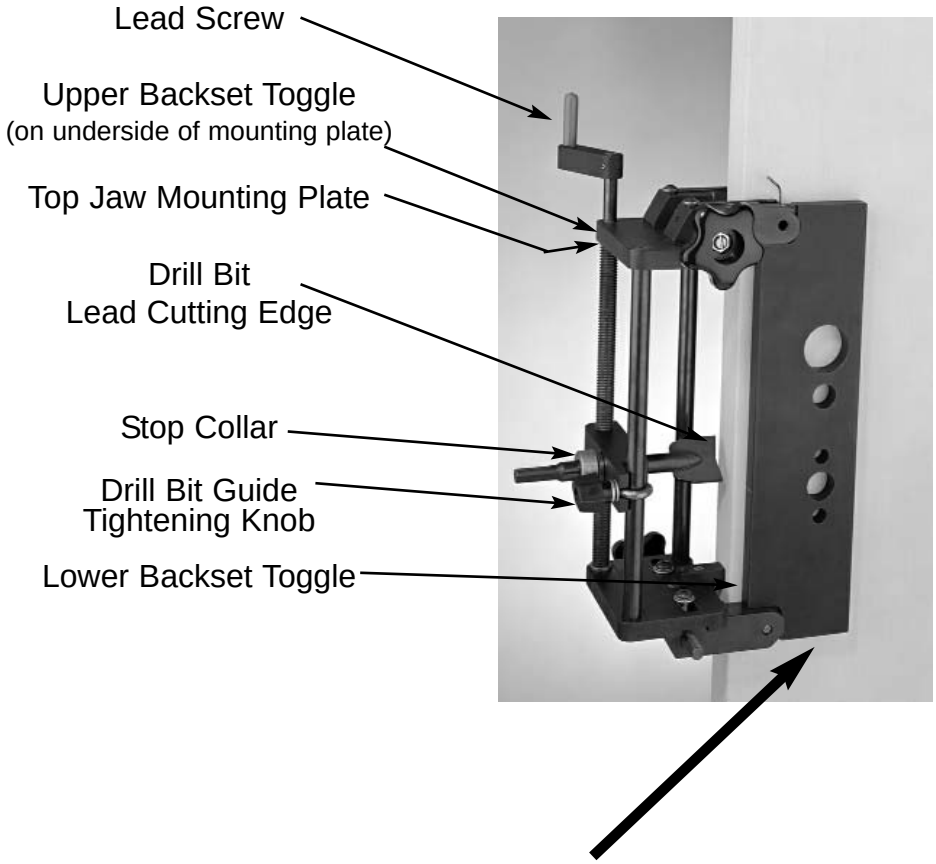

OPTIONAL SIDEPLATES

ARROW MORTISE #M1

MARKS MORTISE #M2

BALDWIN MORTISE #M3

SCHLAGE MORTISE #M4

SIMPLEX #M5

CORBIN / RUSSWIN #M6

SARGENT #M7

SPECIAL ORDER

BEST 30-H #M8

TESA - CT #M9