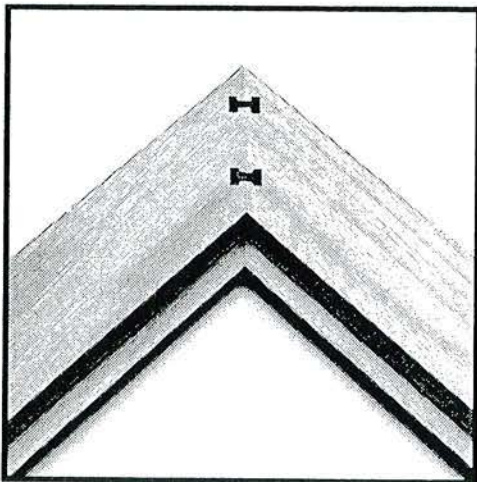
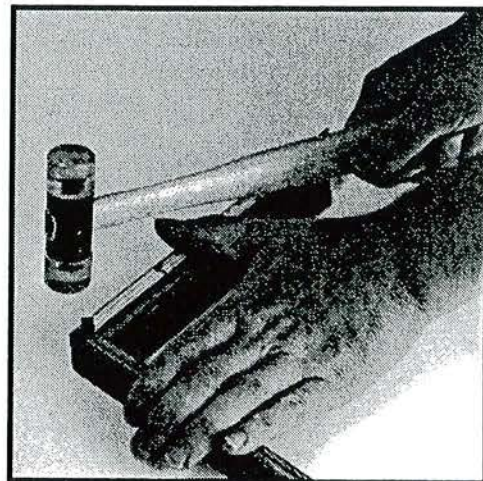




OPERATING MANUAL



AND PARTS LISTING

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IV. Set-Up

Caution

The Thumbnail Master must be clamped or bolted down before operating. **DO NOT** attempt to operate the machine before it is securely fastened to a stable work surface with the four self-drilling screws that have been provided. Make sure to leave enough room behind the machine for routing long pieces of moulding.

Connecting the Vacuum

To significantly reduce the amount of sawdust, a vacuum hose may be attached to the vacuum attachment (C) prior to operating. An adapter is included, in addition to the vacuum attachment, to accommodate most vacuum hose diameters.

Supplying Electricity

Ideally, your Thumbnail Master should be connected directly to a grounded electrical outlet. If it is necessary to use an extension cord it must be a 3 prong grounded wire, and meet the specifications printed below:

Length of Cord in Feet					
AMPS	115 V	25 Ft.	50 Ft.	100 Ft.	150 Ft.
	230 V	50 Ft.	100 Ft.	200 Ft.	300 Ft.
	0-2	18	18	18	16
	2-3	18	18	16	14
	3-4	18	18	16	14
	4-5	18	18	14	12
	5-6	18	16	14	12
	6-8	18	16	12	10
	8-10	18	14	12	10
	Table indicates wire gauge				

Checking the Bit Adjustment

Note: In order to check this adjustment the bit must be at the same height as the set-up die gauge. You can adjust the bit up or down by loosening the Height Adjustment Lever (E) and moving the Angle Bracket (N) up or down until it is in the desired position.

- 1- **CAUTION: DISCONNECT the electrical supply!**
- 2- The Thumbnail Master Bit (G) has been preset at the factory. However, before using the machine it is recommended that you check this adjustment by placing the Set-Up Die Gauge (M) on top of the Thumbnail Master base and sliding it up until the angled face of the set-up die gauge touches the Moulding Stop (P).
- 3- Hold the set-up die gauge in place by turning the Material Clamp Knob (O) until the Moulding Clamp (D) holds the set-up die gauge securely in place.
- 4- Grasp onto the Handle (F) and pivot it until the Bit (G) is on the same side of the Center Fence (J) as the set-up die gauge. If the bit is properly adjusted, the tip will just barely touch the angled surface of the set-up die gauge. If it is not touching the surface, or if it is gouging into the set-up die gauge, then it will be necessary to adjust the bit depth. If you need to adjust the bit please refer to the following section.



Using the Set-Up Die Gauge

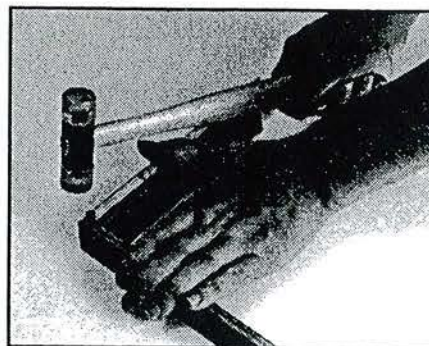
IV. Set-Up

Adjusting and Replacing the Bit

As mentioned previously, the bit has been preset at the factory. However, you will occasionally have to either adjust or replace the bit. Before making any adjustments, recheck the bit depth as indicated in the **Checking the Bit Adjustment** section.

Corner is Too Tight:

- 1- **CAUTION: DISCONNECT the electrical supply!**
- 2- Keep the set-up die gauge in the clamped position. Loosen the Motor Adjustment Lever (K). Move the Motor (A) back so that the bit is slightly above the set-up die gauge. Retighten the motor adjustment lever.
Note: It only takes a small movement (.0015 inches) in the position of the bit to have an effect on the tightness or looseness of the corner. A feeler gauge may be used as a reference when making this adjustment.
- 3- Check the adjustment by placing two scrap pieces of moulding along each side of the Center Fence (J) and the mitered face of the moulding up against the Moulding Stop (P) as indicated in the diagram. Tighten the moulding in place with the Moulding Clamp Knob (O). Position the bit so that it will rout into the center portion of the molding by loosening the Motor Adjustment Lever (K), and moving the Angle Bracket (N) until the bit is in the desired location. Determine which depth you are going to rout at depending on the height of the moulding. Turn the Depth Adjustment Dial (I) to this depth by positioning the desired setting down toward the shaft of the handle. Note: For in-depth directions on setting the routing depth, please refer to the **Instructions for Use** section.
- 4- Make a rout by turning on the machine and moving the handle to the left and to the right until there is a routed channel on each piece of moulding.
- 5- Place the two pieces face down on a flat surface, line up the channels, and insert the pre-determined insert size.
- 6- Check the corner for a snug fit, and readjust if necessary.



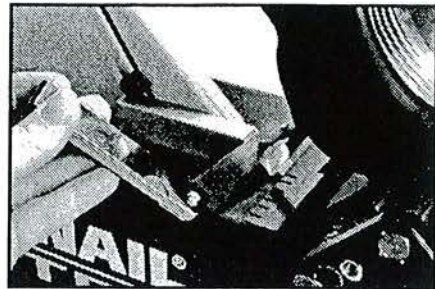
Assembling a Corner

Corner is Too Loose:

- 1- **CAUTION: DISCONNECT** the electrical supply!
- 2- Move the Set-Up Die Gauge (M) back from the Moulding Stop (P) approximately .0015. Clamp the set-up die gauge at this point.
- 3- Loosen the Motor Adjustment Lever (K). Move the Motor (A) slightly down until the tip of the Bit (G) touches the angled face of the set-up die gauge. Retighten the motor adjustment lever.

Note: It only takes a small movement in the position of the bit to have an effect on the tightness or looseness of a corner. A feeler gauge may be used to accommodate this adjustment.

- 4- Using two scrap pieces of moulding, check the adjustment (refer to the previous section, items 4-6) and readjust if necessary.

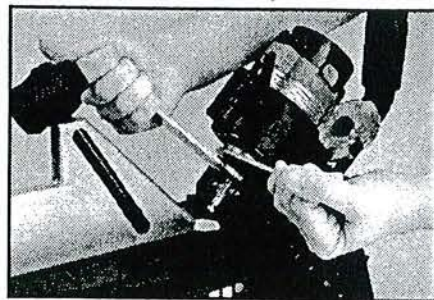


Using a Feeler Gauge

Changing the Bit

The life of the router bit will vary depending on the amount and type of wood that is routed. The bit should be replaced when there is obvious resistance when routing, or when there is excessive burning of wood in the routed groove.

- 1- **CAUTION: DISCONNECT** the electrical supply!
- 2- Remove the plastic Safety Shield (L).
- 3- Using the two wrenches that were provided with the Thumbnail Master, place one on the collet nuts around the router bit, and one on the flats of the motor shaft.
- 4- While firmly holding the wrench on the motor shaft, firmly push the wrench around the collet nut in a counter-clockwise motion until the nut is loose. Remove the bit. **Caution: Never remove bit immediately after use as it may be extremely hot.**
- 5- Insert the shank of the bit into collet until the shank bottoms, then pull out approximately 1/16". **RETIGHTEN FIRMLY.**
- 6- Replace safety shield.
- 7- Proceed with adjusting the bit depth by following the instructions in the **Adjusting and Replacing the Router Bit** section.

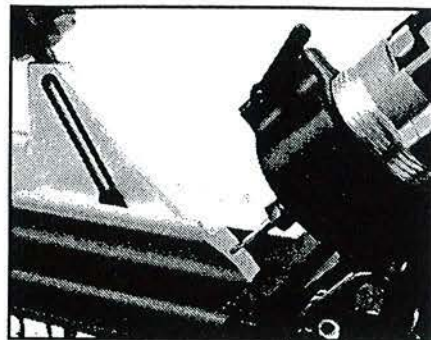


Changing the Bit

V. Instructions for Use

After securing the machine and checking the router bit depth, you can now proceed with using your Thumbnail Master. Before assembling a completed frame it is recommended that you practice with a few pieces of scrap molding until you are comfortable with the process.

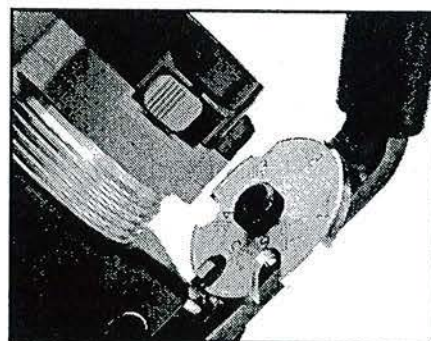
- 1- **Moulding Placement:** Place two of the four pieces of your frame with the bottom of the moulding up against the Center Fence (J) and the faces of the mitered corners against the Moulding Stop (P). While holding the moulding with one hand, secure it in place by tightening firmly down on the Moulding Clamp Knob (O).



Proper moulding placement

- 2- **Positioning of Bit:** Determine where you are going to make the rout. This is usually in the middle of the mitered moulding or positioned under the tallest portion of the moulding. Move the Angle Bracket (N) up or down by loosening the Height Adjustment Lever (E) until the bit is at the desired position. Retighten the height adjustment lever.

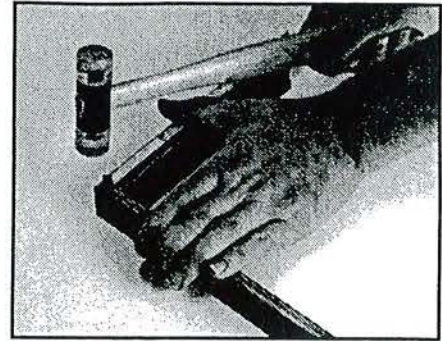
- 3- **Insert Selection:** Determine which depth you are going to rout at. This is determined by the height of the moulding. **Note: There are six different depth possibilities; #1 = 3/8", #2 = 5/8", #3 = 15/16", #4 = 1-5/16", #5 = 1-1/2" and #6 = 1-15/16".** Set the Depth Adjustment Dial (I) at the desired setting by turning the dial down toward the handle shaft. There are reference lines on the moulding stop to aid in the determination of the rout depth. The rout should be as deep as possible, being careful not to rout through to the face of the moulding.



Close-Up of Dial

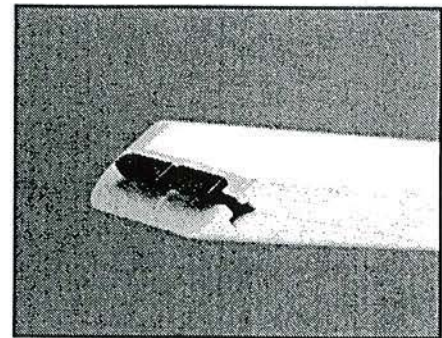
- 4- **Routing the Moulding:** Turn the motor (and vacuum if connected) to the on position. **Caution: Always wear eye protection and keep loose items away from the motor and moving bit.** Grasp onto the handle and use one continuous motion to push it to the left and right, as far as the depth stop will allow. Repeat this process on all of the mitered corners.

5- Assembling the frame: Apply a thin coating of glue to two of the pieces of one corner. Hold the corner together face down on a clean hard surface, lining up the router channels. While holding the corner together place the insert into the groove. If necessary you can tap the insert down into the moulding with a small hammer or mallet. Check the face of the moulding. At this point you can slightly twist the corner if necessary, in order to achieve a nice flush fit. Repeat steps 1-3 on the adjacent corner. Apply glue to the remaining exposed corners. Hold the two completed sections together, face down, to form a frame. Complete the frame assembly by inserting the required inserts into the remaining corners. Allow the glue to dry according to the manufacturer's instructions before fitting up the frame.



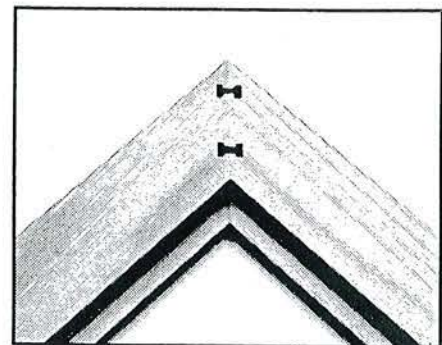
Assembling the Frame

6- Stacking inserts: If you are stacking inserts for joining taller mouldings, insert the longer insert first, then put a small slotted screwdriver on the end of the insert and tap on the end of the screwdriver with a hammer to get the longer insert into the end of the routed slot.



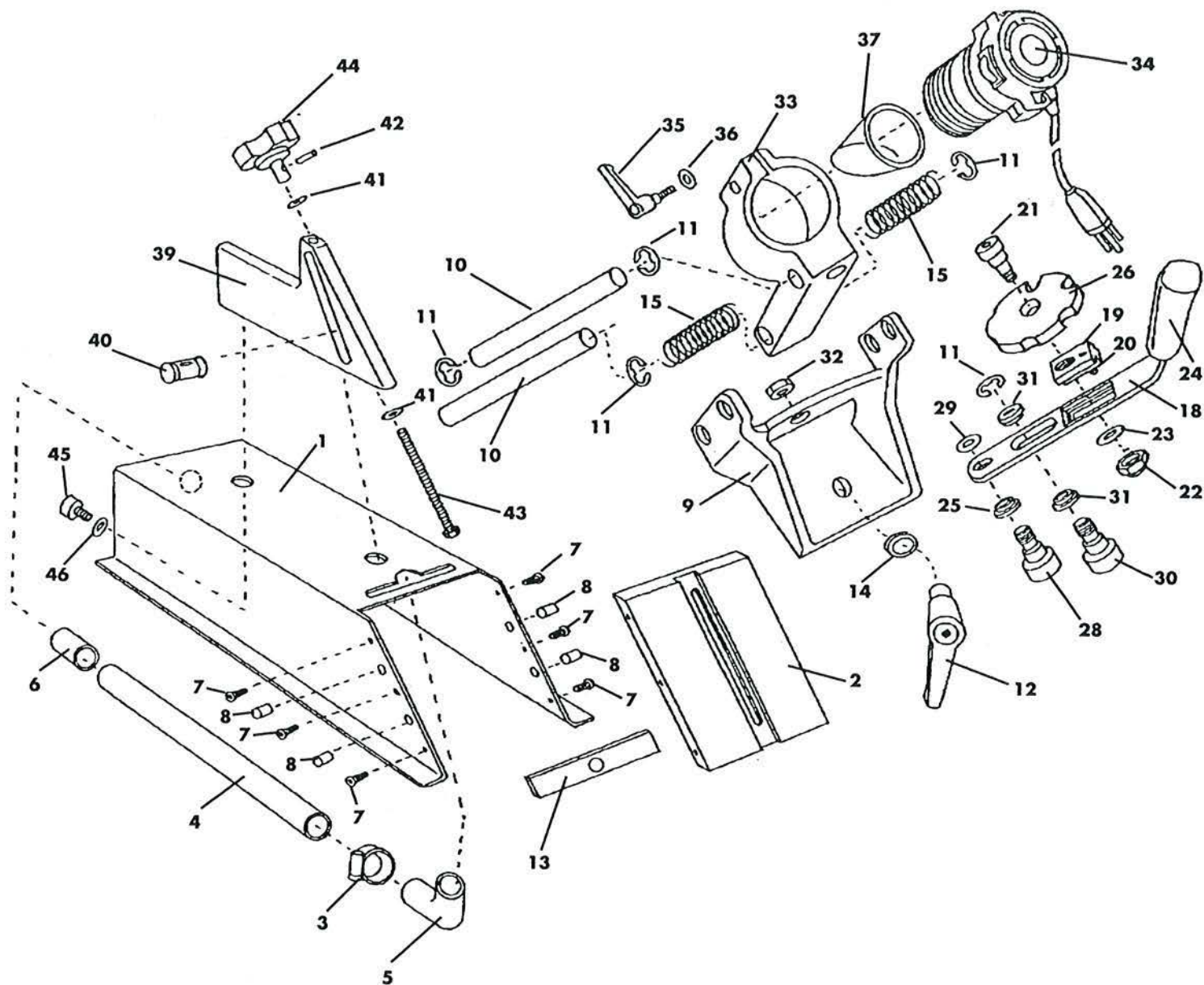
Stacking Inserts

7- Multiple positioning of inserts: On wide mouldings it is possible to position more than one routed channel. When doing this, it is necessary to make the initial rout on all four pieces of moulding in order to ensure the routed channels will line up properly. Readjust to the desired bit height and then re-rout all four pieces at the next height.



Multiple Positioning of Inserts

VI. Exploded Diagram



VII. Parts Listing

Item No.	Description	Part Number
1.	Base Assembly	TNP107
2.	Base Plate	TNP104
3.	Clamp	TNP017
4.	Vacuum pipe	TNP037
5.	PVC Elbow - Elbow	TNP038
6.	Coupling - 1/2"	TNP039
7.	Screw 10-24 x 3/8"	G0175
8.	Dowel Pin - 3/16 x 1/2"	TNP114
9.	Angle Bracket	TNP020-6
10.	Slide Shaft	TNP022-1
11.	Retaining Ring	TNP013
12.	Height Adj. Ratchet Lever	TNP115
13.	Nut Plate - Angle Bracket	TNP035-1
14.	Washer - 3/8"	6119
15.	Shaft Spring	TNP116
16.	Slide Guide <i>(not shown)</i>	TNP044
17.	Slide Pad <i>(not shown)</i>	TNP045
18.	Handle	TNP101
19.	Depth Stop Plate	TNP118
20.	Ball Plunger	TNP119
21.	Shoulder Bolt 1/2" x 3/8"	TNP120
22.	Nut - Domed 3/8 - 16	TNP127
23.	Washer	TNP124
24.	Handle Grip	TNP125
25.	Bushing - Flanged	TNP126
26.	Stop - Depth	TNP102
27.	Label - Stop <i>(not shown)</i>	TNP105
28.	Shoulder Bolt - 1/2" x 5/8"	TNP121
29.	Thrust Washer	TNP128
30.	Shoulder Bolt - 1/2" x 1-1/4"	TNP122
31.	Bushing - Flanged	TNP129
32.	Nut - Jam, 3/8" - 16	TNP138
33.	Motor Bracket Assembly	TNP110
34.	Motor	TNP018
35.	Ratchet Handle - 1/4 - 20 x 3/4"	TNP130
36.	Washer 1/4" x 1/2" x .015	M0526
37.	Safety Shield	TN131
38.	Safety Clamp Shield <i>(not shown)</i>	TNP132
39.	Center Fence	TNP087-1
40.	Moulding Clamp	TNP032
41.	Nylon Washer	TNP030
42.	Spring Pin 1/8" x .50	TNP001
43.	Bolt, Center Fence	TNP028-1
44.	Knob, Center Fence	TNP133
45.	Soc. Hd. Cap Screw 1/4 - 20 x 5/8"	TNP002
46.	Washer - 1/4"	TNP004

VIII. Maintenance

Keep the Machine Clean of sawdust build-up, especially around the motor and moulding stop. The use of the vacuum connection will help minimize sawdust build-up. An air compressor can be used to blow away any debris.

Lubricate the slide shafts periodically with a lightweight machine oil. No lubrication is needed for the motor.

IX. Troubleshooting

Problem	Solution
Corner is too loose	Check that the moulding was placed firmly against the Moulding Stop Clean away sawdust from Moulding Stop Refer to "Corner Too Loose" on page 7
Corner too tight	Refer to "Corner Too Tight" on page 6
Odor of burning wood	Router is being moved too slowly during routing Dull bit: Replace with new bit (refer to page 7)
Failure to start	Check to make sure that the prongs on the cord plug are making good contact in the outlet Make sure "on" switch is turned on Check for blown fuses or open circuit breakers