Instruction Manual

Lonnie Bird's Crown Molding Set

model number **800.523.11**

Congratulations on your new purchase! This manual will assist you during the use of your new set. This manual is not intended to teach you about woodworking. This is basic information for use of our product. It is assumed that you are an experienced woodworker and you are familiar with the basic woodworking skills and techniques necessary to use this product safely. If you are unsure after reading all material presented in the manual, please consult widely available books on woodworking techniques.

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General Conditions

CMT USA, INC. reserves the right to make product changes without notice and without obligation to make these changes on products previously sold. Title and risk of loss or damage to the goods passes to the buyer upon consignment to the carrier regardless of who pays the shipping cost.

CMT is not liable for damages to goods, property, or persons, due to improper installation or misapplication of equipment.

Contents of Set

One each of the following items:

867.501.11B	Inverted Roman Ogee
867.502.11B	Inverted Roman Ogee
867.503.11B	Inverted Roman Ogee
867.601.11B	Inverted Beading Bit
867.602.11B	Inverted Roundover Bit
867.603.11B	Inverted Roundover Bit
235.006.07	Cove Cutter Head
299.011.00	Spacer 2-5/8" dia (not shown)

Read and understand the entire contents of this manual before attempting assembly or operation of these tools! Inspect contents for shipping damage and shortages. Report problems to your distributor immediately.

IMPORTANT! Safety Precautions

SAFETY WARNINGS

- **Failure to heed all safety instructions and warnings regarding use of this product can result in serious bodily injury or death.**
- Carefully read all important safety instructions in the owner's manual that came with your machine before operating.
- If you do not have a manual, contact the manufacturer and obtain one before using any CMT bits or blades.
- Always wear eye protection in compliance with the current ANSI standard Z87.1 when operating any power tool.
- Always use proper guards and other safety devices when operating any machine.
- Carefully check router bits or blades prior to each use. Do not use if damage or defect is suspected.
- Do not exceed recommended RPM for any saw blade or router bit.
- Avoid wearing loose clothing or jewelry that may catch in a rotating saw blade or router bit.
- Unplug the machine when mounting or adjusting any saw blade or router bit.
- For best results always have router bits and saw blades professionally sharpened.

Specific Router Bit Safety Precautions

- Never force the bit or overload the router.
- Be sure that at least 3/4 of the shank length is inserted into the router collet.
- Never "bottom-out" the bit in the collet, the end of the shank should be about 1/8" from the bottom of the collet.
- Always make sure that the guide fences on your router table are firmly clamped in position before each use.
- Route in two or more passes when large amounts of stock must be removed.
- Use reduced speeds for large diameter bits.

Specific Saw Blade/Cove Cutter Safety Precautions

- Do not use this blade on metals, for masonry cutting or other materials not intended for use with this product, unless otherwise specified.
- Be sure to mount blade securely and in the correct rotation direction as indicated on the blade.
- Never reach over a saw blade with the machine turned on.
- When using a cove cutter head only remove 1/16" of material per pass.
- Allow saw to operate at maximum blade speed.
- Store blades properly to avoid damage and rusting.

WARNING: The router bits included in this set are only to be used in a table mounted router. Do not attempt to use these bits in any hand held operation.

Suggested Router Speeds

Bit Diameter	Maximum Speed
1" (25mm)	24,000 RPM
1-1/4" - 2" (30-50mm)	18,000 RPM
2-1/4" - 2-1/2" (55-65 mm)	16,000 RPM
3" - 3-1/2" (75-90 mm)	12,000 RPM

CMT's New Crown Molding Set designed by Lonnie Bird allows you to shape elegant moldings with your tablesaw and router table. Unlike commercially available crown molding, molding made with this set is easy to install and creates a finished appearance. This set is perfect for shaping moldings for fine furniture and other casework.

The set consists of a cove cutter and six router bits with inverted profiles. The cove cutter mounts on your tablesaw and is used in conjunction with a pair of angled fences. Simply changing the fence angle and cutter height allows you to create an almost infinite variety of cove shapes and sizes. Best of all, the finished surface requires very little sanding. After shaping the cove, you can use the special router bits with inverted profiles to complete the molding.

Using Your CMT Crown Molding Set

Shaping Coves

This process is very similar to cutting coves with a standard saw blade on a table saw. You will be utilizing a dual fence set up and run your material at an angle to the cutting blade. If this operation is new to you or if you have questions beyond the instructions, we highly recommend you take time to further study this technique in either a woodworking class or a woodworking book that teaches the safest way to perform this operation.

Always begin the process by shaping the cove first while the stock has the greatest mass. Afterwards, use the router bits to shape the small profiles which flank the cove. To safely use the cove cutter, it's necessary to have a dado head insert plate for your saw. Also, you'll need two large strips of wood to serve as fences, which guide and support the workpiece as the cove is shaped.

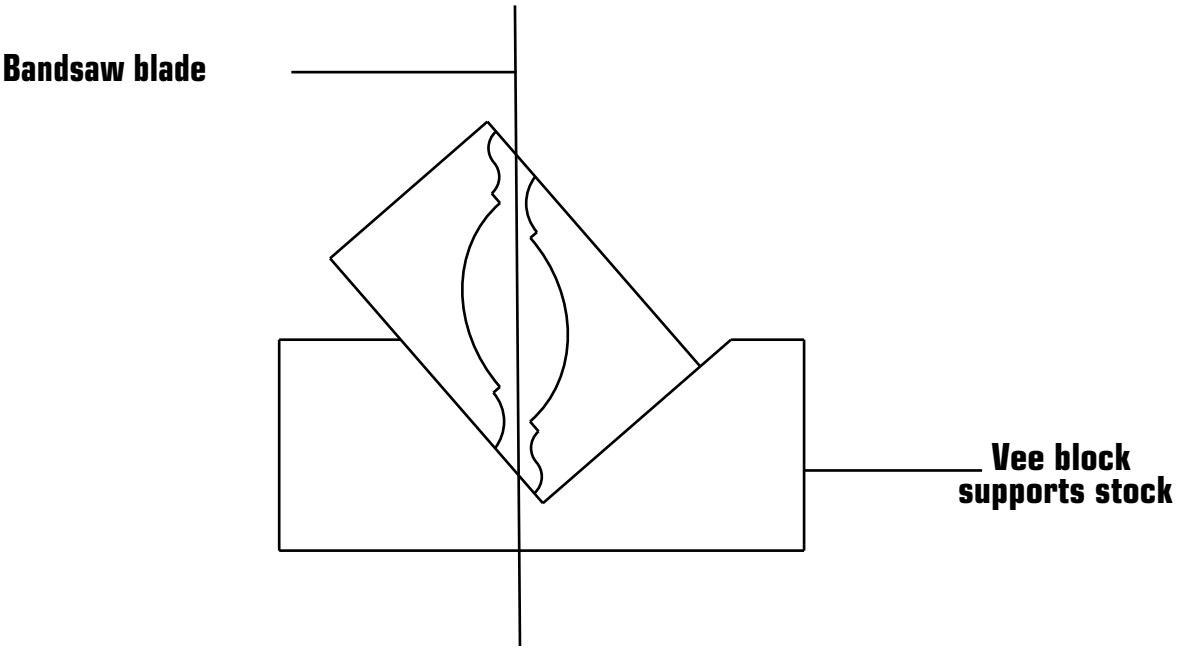
Mounting the Cutterhead

Begin by disconnecting the tablesaw from its power source and removing the blade. To mount the cutterhead, first position the 2-5/8" diameter spacer that came with the set against the flange on the saw arbor. The spacer will center the cutterhead within the throat plate opening. Next, position the cutterhead on the arbor and secure the assembly with the washer and arbor nut. Finally, place the dado throat plate in position.

Before turning on the power, rotate the cutterhead by hand to be certain that it clears the throat plate. The fences are clamped to the top of the tablesaw and the stock passes between them.

Begin with a drawing of your design or use one of the designs shown on page 5 provided. Next, sketch the cove outline on each end of the stock. Now you're ready to set up the tablesaw.

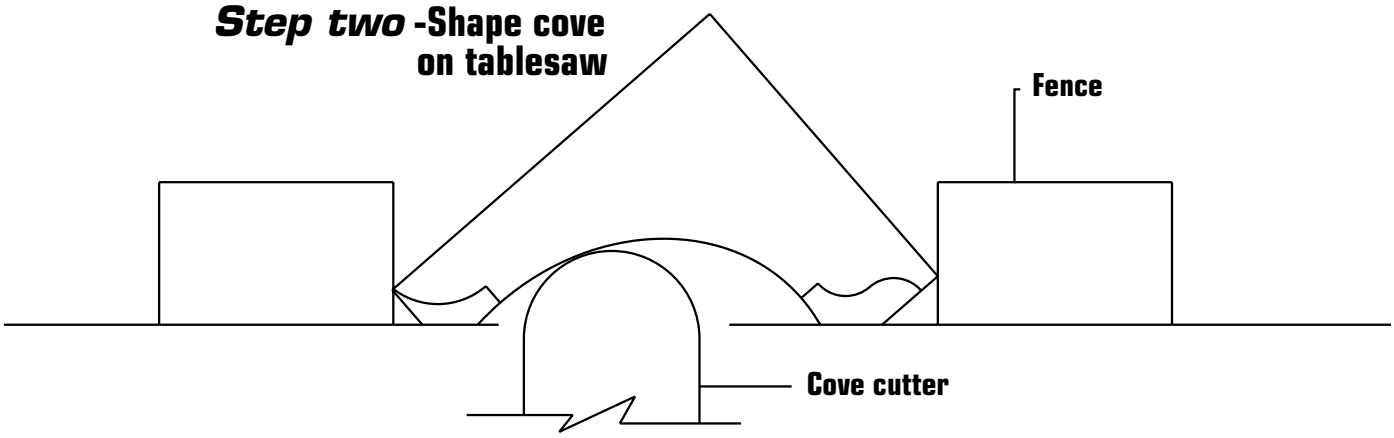
Step one **-Rip stock diagonally on bandsaw**

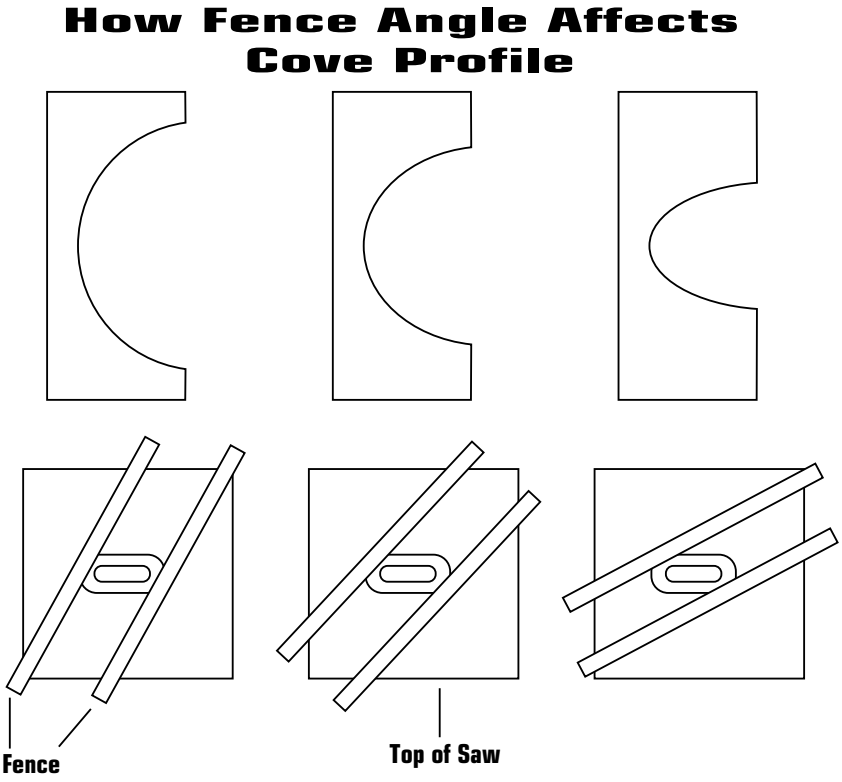


Shaping Coves (cont'd)

You should already have the cutterhead mounted on the table saw arbor. Next, raise the cutterhead height to equal the depth of the cove being cut. Then position a fence at an angle so that the stock enters the cutter along the left leading edge and exits the stock along the right trailing edge.

To make the cut, first lower the cutterhead to 1/16" above the table top. Turn on the power and feed the stock slowly between the fences; after each pass raise the cutterhead another 1/16". Remember to use a guard and push blocks for added safety.





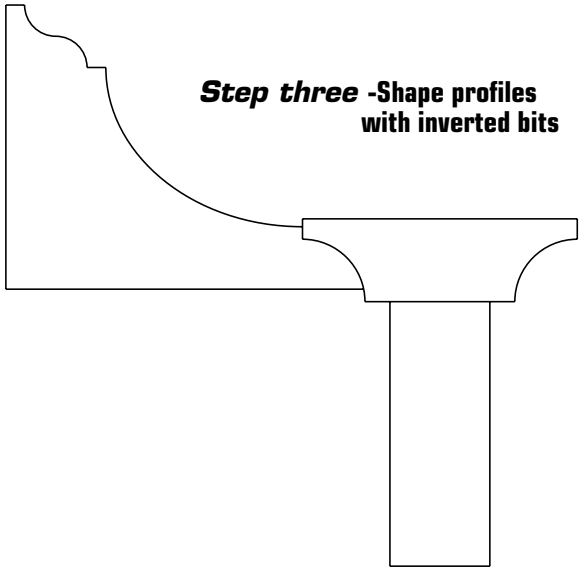
Shaping Moldings with the Inverted Bits

Because the profiles are inverted on the shank, you can shape large moldings that are impossible to shape with ordinary router bits.

Before shaping, always begin with a drawing of the molding that you would like to produce. Begin by shaping the cove with the cove cutter on your tablesaw.

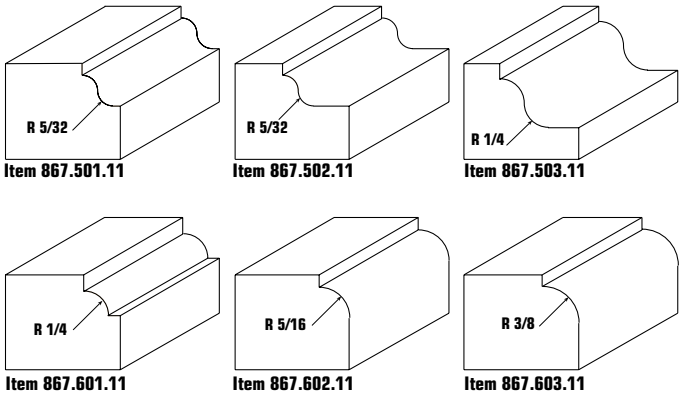
Afterwards, shape the profiles that flank each side of the cove. Use your router table and a fence for the best support of the stock.

For added safety and the smoothest possible surface, always take multiple light cuts and support the workpiece with featherboards.



Step three **-Shape profiles with inverted bits**

Below are drawings of the six inverted profiles included in set 800.523.11



Shaping Curved Moldings

The inverted router bits each have a bearing mounted on the shank. This feature allows you to shape curved profiles such as gooseneck and circular moldings.

When shaping curved moldings, first attach a plywood template to the workpiece to serve as a guide for the bearing to ride on.

The inverted profiles included in this set can be applied in many ways. Below are just some of the design possibilities you can create with the Lonnie Bird Crown Molding Set