

MAGNATE 3817

Magnate 3817 Raised Panel Router Bit Instruction Manual

Model: 3817

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Magnate 3817 Raised Panel Router Bit. Please read these instructions carefully before operation and retain them for future reference.

The Magnate 3817 is a carbide-tipped router bit designed for creating convex profiles on raised panels. It features a 1-5/8" cutting height and a 1/2" shank diameter, suitable for various woodworking applications including softwoods, hardwoods, chipboard, and plywood.

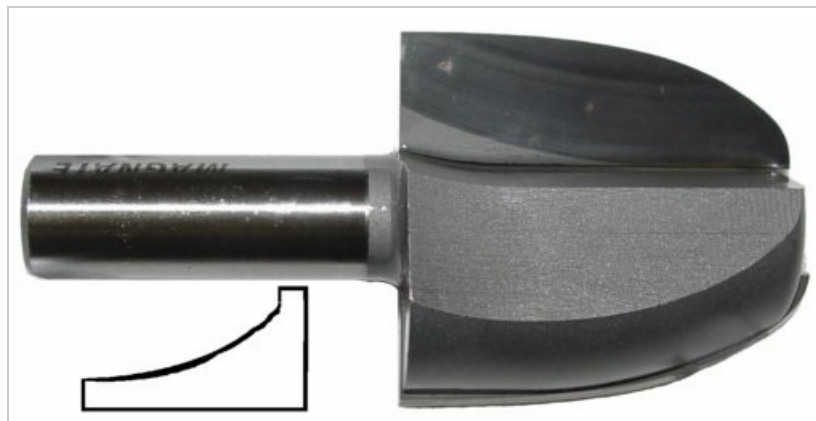


Figure 1: Magnate 3817 Raised Panel Router Bit. This image displays the router bit with its 1/2-inch shank and the cutting head, which features a convex profile. A small diagram next to the shank illustrates the convex shape of the cut this bit produces.

2. SAFETY INSTRUCTIONS

Always prioritize safety when operating power tools. Failure to follow these instructions may result in serious injury or damage to the tool.

- Wear appropriate personal protective equipment (PPE), including safety glasses, hearing protection, and dust mask.

- Ensure the router bit is securely installed in the router collet before operation.
- Always disconnect power to the router before changing bits or performing maintenance.
- Use a router table or secure the workpiece firmly to prevent movement during routing.
- Never force the router bit into the material. Allow the bit to cut at its own pace.
- Keep hands and fingers clear of the rotating bit.
- Inspect the router bit for damage or dullness before each use. Replace damaged bits immediately.
- Ensure proper ventilation to clear wood dust.

3. SETUP

3.1 Unpacking and Inspection

Carefully remove the router bit from its packaging. Inspect the bit for any signs of damage that may have occurred during shipping. If any damage is found, do not use the bit and contact your supplier.

3.2 Router Bit Installation

1. Ensure your router is unplugged from the power source.
2. Clean the router collet and the shank of the Magnate 3817 router bit to remove any dust or debris.
3. Insert the router bit shank into the collet. For optimal grip and to minimize vibration, insert the shank as far as possible, then back it out approximately 1/16 to 1/8 inch. Do not bottom out the shank in the collet.
4. Tighten the collet nut firmly using the appropriate wrenches. Do not overtighten.
5. Verify the bit is securely held and does not wobble.

3.3 Router Table and Fence Setup

For raised panel operations, a router table is highly recommended for stability and control. Adjust the router table fence to guide the workpiece accurately. Perform test cuts on scrap material to fine-tune the depth of cut and fence position before routing your final workpiece.

4. OPERATING INSTRUCTIONS

4.1 Material Compatibility

The Magnate 3817 router bit is suitable for use with softwoods, hardwoods, chipboard, and plywood. Always ensure the material is free of knots, nails, or other foreign objects that could damage the bit.

4.2 Routing Technique for Raised Panels

- **Depth of Cut:** For best results and to reduce strain on the bit and router, make multiple shallow passes instead of one deep pass. Gradually increase the depth of cut until the desired profile is achieved.
- **Feed Rate:** Maintain a consistent and moderate feed rate. Feeding too slowly can cause burning, while feeding too quickly can lead to a rough cut and excessive strain on the bit.
- **Direction of Cut:** Always feed the workpiece against the rotation of the router bit. This provides better control and reduces the risk of kickback.
- **Workpiece Support:** Use featherboards and push blocks to keep the workpiece firmly against the fence and router table, ensuring a smooth and safe operation.

Important Note: To minimize vibration and achieve maximum cutting quality, select a router bit with the shortest possible cutting edge and overall length that meets your project requirements. Excessive overall length can lead to increased vibration and potential tool damage.

5. MAINTENANCE

5.1 Cleaning

After each use, clean the router bit to remove resin and wood residue. Buildup can cause friction, heat, and a dulling effect. Use a specialized router bit cleaner or a mild solvent and a brush. Avoid using abrasive materials that could damage the carbide tips.

5.2 Storage

Store the Magnate 3817 router bit in its original case or a dedicated bit storage tray. This protects the carbide tips from damage and prevents rust. Store in a dry environment.

5.3 Sharpening

When the bit becomes dull, it should be professionally sharpened. Attempting to sharpen carbide tips without proper equipment and expertise can damage the bit and compromise its performance and safety.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Burning on workpiece	Dull bit, too slow feed rate, excessive depth of cut, resin buildup.	Clean or sharpen bit, increase feed rate, reduce depth of cut, clean bit.
Rough cut surface	Dull bit, too fast feed rate, bit wobble, incorrect router speed.	Sharpen bit, reduce feed rate, ensure bit is securely tightened, adjust router speed.
Excessive vibration	Bit not properly seated, damaged bit, excessive bit length for application.	Re-seat bit, inspect for damage and replace if necessary, use shortest possible bit for task.
Chipping or tear-out	Incorrect feed direction, dull bit, material type.	Ensure correct feed direction (against rotation), sharpen bit, use backing board for fragile materials.

7. SPECIFICATIONS

Model: 3817
Brand: MAGNATE
Type: Raised Panel Router Bit, Vertical - Convex Profile
Flutes: 2
Tip Material: Carbide
Cutting Height: 1-5/8 inches
Shank Diameter: 1/2 inch
Overall Diameter: 1-1/8 inches
Shank Length: 1-1/2 inches
Material: Heat-treated high-carbon steel body with micrograin carbide tips
Item Weight: Approximately 5.3 ounces
Product Dimensions: Approximately 3.5 x 1.5 x 1.5 inches
UPC: 637881838172

8. WARRANTY AND SUPPORT

For information regarding warranty coverage or technical support for your Magnate 3817 Raised Panel Router Bit, please contact Magnate, Inc. directly. Refer to the product packaging or the official Magnate website for current contact details.

Manufacturer: Magnate

Seller: Magnate, Inc.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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