

Kobalt 12 Amp Router with Table

Volunteer Checkout Guide

Purpose of This Guide

This guide helps volunteers review the Kobalt tabletop router with members who want to use the machine. It covers essential safety points and operating procedures.

Quick Overview

The Kobalt K11RTA-03 is a 12-amp fixed-base router that can be used handheld or mounted in its included router table. It operates at 25,000 RPM and accepts both 1/4-inch and 1/2-inch shank router bits.

Note on use as a hand router. This router should stay in the table configuration. There is a separate hand router that is stored under the Miter saw. It is in a black case and is a Dewalt brand.

CRITICAL SAFETY REMINDER

Router bits spin at 25,000 RPM. At this speed, they will instantly cut through skin, bone, and anything else in their path. Members must understand that this is an extremely dangerous tool that demands absolute attention and respect.

Pre-Operation Safety Checklist

Review these items with every member before as part of the checkout:

- ☐ Safety glasses are on and properly fitted
- ☐ Hearing protection is available (router is very loud)
- ☐ No loose clothing, jewelry, gloves, or long hair that could catch
- ☐ Member knows location of power switch
- ☐ Dust collection system is connected (if desired)
- ☐ Work area is clear and shop lighting is on.

Router Mode vs. Table Mode

This tool can be used in two ways. Help members understand which mode is appropriate for their project:

Mode	Best For
Handheld Router, Use Dewalt hand router or Milwaukee trim router.	Edge profiles, decorative cuts, inlay work, and situations where the workpiece is too large to move. Members should use the Dewalt hand router if this mode is needed.
Router Table	Small workpieces, repeated cuts, edge jointing, and operations requiring precise control

Installing Router Bits - Critical Steps

This is one of the most important procedures to demonstrate. Improper bit installation can cause serious injury.

1. Unplug the router

- NEVER change bits with the router plugged in
- This is a zero-tolerance rule

2. Select the correct collet

- 1/4-inch collet for 1/4-inch shank bits
- 1/2-inch collet (pre-installed) for 1/2-inch shank bits
- Never force a bit into the wrong size collet

3. Lock the spindle

- Press and hold the spindle lock button on the motor housing
- Use the wrench to loosen the collet nut (turn counterclockwise)

4. Insert the bit correctly

- Insert bit shank at least 5/8 inch into the collet
- Leave 1/8 to 1/4 inch between cutting edge and collet face
- Never insert bit all the way to the cutting edges

5. Tighten securely

- Hold spindle lock button, tighten collet nut firmly with wrench
- Bit must not slip or rotate in the collet
- Do not overtighten - firm is sufficient

Setting Cutting Depth

Proper depth setting is critical for safe operation and good results.

Router Table Depth Adjustment:

- Use the Z-wrench through the access hole in the table
- Loosen motor clamp first
- Turn wrench to adjust bit height
- Tighten motor clamp when depth is set

Critical Safety Rules - Zero Tolerance

Members must follow these rules without exception:

NEVER exceed 1/8 inch cutting depth in a single pass

Deep cuts must be made in multiple passes. Single deep cuts can break bits, burn wood, cause kickback, or lead to loss of control.

NEVER use bits larger than 1-1/4 inch diameter in handheld mode

Large bits create dangerous forces. Use table mode or smaller bits.

ALWAYS clamp/guide the workpiece securely

Use clamps, vise, or feather boards.

NEVER wear gloves when operating the router

Gloves can catch on the spinning bit and pull your hand into the cutter.

ALWAYS wait for bit to reach full speed before cutting

Let motor reach 25,000 RPM before contacting workpiece. Starting cut before full speed causes grab and kickback.

ALWAYS wait for bit to stop completely before adjusting.

Spinning bit can catch on anything nearby. Wait for complete stop after turning off.

Feed Direction - Essential Concept

This is one of the most important safety concepts to teach. Incorrect feed direction causes kickback and loss of control. Feed direction is from right to left.

Router Table Mode:

- Bit rotates COUNTERCLOCKWISE when mounted in table
- ALWAYS feed workpiece RIGHT TO LEFT
- This is opposite of handheld mode - very important
- Feeding wrong direction will grab the workpiece violently

Router Table Setup Points

When demoing to members how to set up the router table, cover these key points:

Table Insert Selection

- Three inserts included: 1-1/4 inch, 1-7/8 inch, 2-1/8 inch opening
- Select insert with opening 3/4 inch larger than bit diameter
- Smaller opening provides better workpiece support
- Never use a bit larger than the insert opening

Fence Setup

- Position fence as close to bit as possible (about 1/4 inch)
- In-feed and out-feed faces can be adjusted independently
- For edge jointing, offset out-feed fence by amount being removed
- Ensure fence cannot contact spinning bit

Feather board Use

- Two feather boards included - can mount to fence or table. Note that the magnetic feather board will not work on this machine because the table top is Aluminum.
- Position so workpiece moves with resistance but not excessive force
- Keeps workpiece pressed against fence and table
- Check direction arrows on feather boards - must face feed direction

Switch Operation

- Router plugs into switch box on table
- Safety key must be inserted to operate
- Remove key to lock out power
- A second outlet on the switch box is available for vacuum (max 3 amps)

Common Mistakes to Watch For

- Cutting too deep in one pass
- Feeding in wrong direction
- Not letting bit reach full speed before cutting
- Forcing the router through the cut too quickly
- Not securing/guiding workpiece properly
- Forgetting to tighten motor clamp after depth adjustment
- Using dull or damaged bits
- Starting router with bit touching workpiece
- Making adjustment to the router before bit stops spinning

Proper Feed Rate

Understanding what proper feed rate sounds and feels like:

Feeding Too Fast:

- Motor bogs down, pitch drops from high whine to lower sound
- Router becomes harder to control
- Cut is rough with large chips
- Can cause motor overheating and bit breakage

Feeding Too Slow:

- Bit scrapes instead of cuts, creating fine dust instead of chips
- Burns the wood and glazes the bit
- Creates rippled finish instead of smooth cut
- Router wants to bounce or chatter

Correct Feed Rate:

- Motor maintains steady high-pitched whine
- Small, consistent chips are produced
- Cut is smooth and clean
- Router moves smoothly without fighting

Importance of Test Cuts

Emphasize to members that test cuts are essential, not optional:

- Always make test cuts on scrap wood first
- Use scrap similar to final workpiece material
- Test cuts verify depth, feed rate, and bit selection
- Better to ruin scrap than final workpiece
- Even experienced users make test cuts

Specific Operations to Review

- Demo setup for simple groove cut.
 - * Line up bit with fence as appropriate
 - * Use feather board
- Advocate making multiple shallow passes where it makes sense for the bit.

Check Items before each use

- ☐ Collet is clean and grips bits securely
- ☐ Power cord is in good condition
- ☐ Motor clamp operates smoothly and locks tight
- ☐ Router base slides smoothly in adjustment mechanism
- ☐ Table inserts seat properly and are not cracked
- ☐ Fence locks securely in position
- ☐ Switch box operates correctly
- ☐ Dust collection port is clear

Router Bit Care

Inspect bits before use:

- Check for chips, cracks, or damage
- Cutting edges should be sharp and clean
- Remove pitch buildup with mineral spirits
- Never use damaged bits - they can shatter at high speed
- Store bits properly to protect cutting edges

If a Bit Breaks:

- Turn off immediately and unplug
- Do not touch anything until motor stops
- Carefully remove broken pieces
- Inspect collet for damage before installing new bit

Quick Specifications Reference

Motor	12 Amp, 25,000 RPM
Collet Capacity	1/4 inch and 1/2 inch
Max Bit Diameter	1-1/4 inch (handheld)
Max Cutting Depth	1/8 inch per pass (max)
Table Size	26.5 x 15-1/8 inches
Max Table Load	50 pounds

Emergency Procedures

Make sure members know what to do in emergencies:

- Where fire extinguishers are located
- Where the first aid and eye wash kits are located

If Router Grabs Workpiece:

- Turn off the router immediately
- Do not try to force router - let it stop
- Assess what went wrong before continuing

Additional Resources

- [Full manual](#)
- Model: K11RTA-03
- Item: 0857432
- Please post in Slack #woodshop if you have any issues with any tools in the shop. We don't know there are issues unless a member lets us know.

Remember: Routers are among the most dangerous power tools. It is important to take time to ensure you understand the risks and procedures before using any tool.

Members when in doubt, stop and ask questions, be safe!