

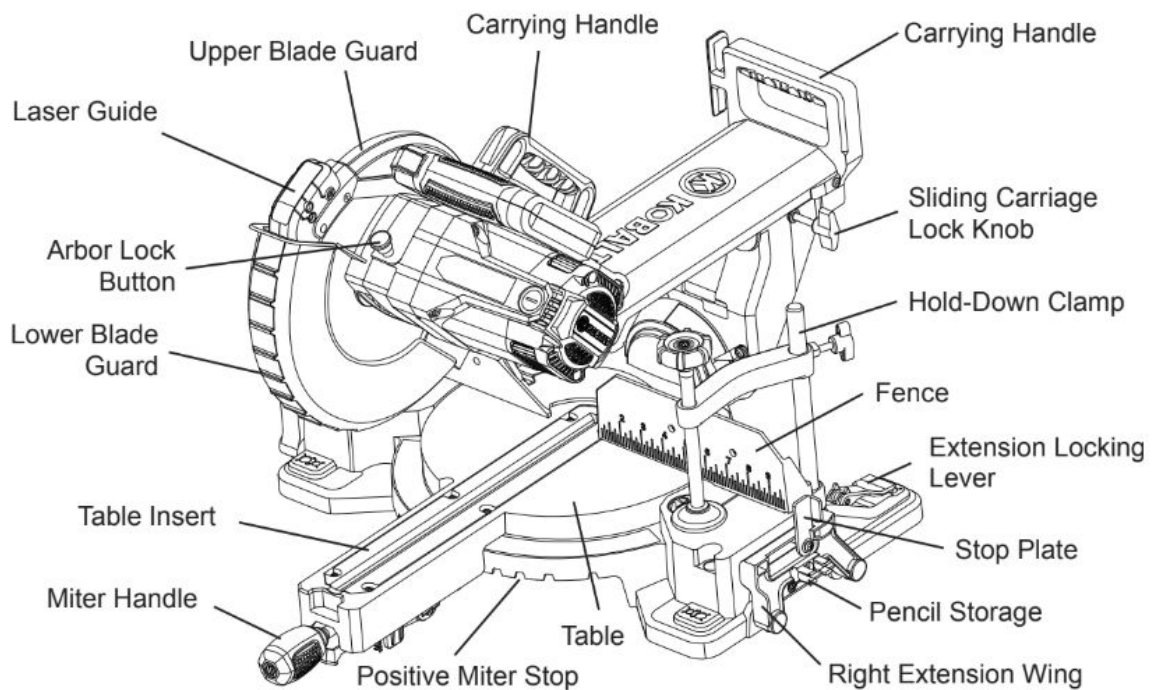
COMPOUND MITER SAW MANUAL

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Safety Rules

1. Wear proper personal protection equipment (safety glasses).
2. Keep loose clothing, hair, and jewelry away from the spinning blade
3. Do not bypass any safety devices
4. Keep hands clear of the area near the blade as marked on the tool
5. Bring blade up to speed prior to lowering handle and uncovering the blade
6. If something is broken or breaks, notify one of the wood shop leads at (woodshop@sparkmakerspace.org).



Compound Miter Saw Syllabus

1. Tool Location in Shop
2. Uses for Tool:
 - a. Good for:
 - i. Cross-cutting long boards
 - ii. Miter (angle cut) on boards
 - iii. Wood materials
 - b. OK for:
 - i. Plastics
 - ii. Tubular materials
 - c. Bad for:
 - i. Sheet goods (plywood, panels, etc)
 - ii. Metals
 - iii. Small pieces
 - iv. Rip cuts
3. Parts of the saw (refer to diagram)
4. Important Variables
 - a. Blade tooth count
 - b. Blade tooth type
 - c. Miter angle
5. Important Setup Steps
 - a. Cut plan
 - b. Secure Workpiece
 - c. Miter angle
 - d. Dust collection
6. Operational Guidance
 - a. Line up cut
 - i. Dry run
 - b. Start saw with blade clear of workpiece
 - c. Cut away from operator
 - d. Even feed force
7. Cleanup

Instructions for Use

Before Use

1. Wear personal protective equipment.
 - a. Safety glasses
 - b. No gloves may be worn while operating the compound miter saw.
 - c. Hearing protection is recommended.
 - d. Tie long hair back
 - e. Roll loose sleeves above elbow
2. Inspect the circular saw blade for damage. If damage is observed report to a woodshop lead.
3. Unlock the sliding carriage and the cutter head.
 - a. Loosen the sliding carriage knob to allow the blade to travel axially.
 - b. Push down on the switch handle, and release the stop latch knob.
4. Prepare a cutting plan.
 - a. Determine what miter angle and bevel angle are needed.
 - b. Mark the material as necessary.
5. Adjust the miter angle.
 - a. Turn the miter handle counterclockwise to loosen the miter table.
 - b. Lift up on the miter handle and rotate the miter table to the desired miter angle.
 - c. Release the miter handle and turn the handle clockwise to secure the table.
6. Adjust the saw bevel angle.
 - a. Loosen the bevel lock handle and tilt the blade.
 - b. The miter saw has stops at 45 degrees and 33.9 degrees.
 - i. For 45 degrees, tilt the blade to the hard stop.
 - ii. For 33.9 degrees, engage the bevel detent pin and tilt the blade until the bevel detent pin is engaged.
 - c. Secure the bevel lock handle.
 - d. Verify with a measuring tool that the bevel is set to the desired angle.
7. Move the hold-down clamp to the proper side of the saw.
 - a. Move the mounting clamp to the right side of the saw for right handed use.
 - b. Move the mounting clamp to the left side of the saw for left handed use.
8. Dust Collection
 - a. Press fit the shop vacuum hose into the miter saw's dust collection system.
 - b. Turn on the shop vacuum.
9. Plug in the compound miter saw.

During Use

1. Position and secure the material on the miter table
 - a. If possible, use a hold down clamp to secure the material
 - i. If using a length stop, ensure clamp is on the same side of the cut as the stop to prevent kickback

- b. Use your non-dominant hand to hold the material outside the exclusion zone (marked on the saw table)
2. Without powering up the saw, lower the blade until it touches the material
 - a. Verify that the material is positioned properly and that the miter and bevel angles are set correctly.
 - b. Be aware of the saw kerf.
 - i. "Kerf" is gap left by the thickness of the blade; verify that the cut line is on the correct side of the blade before cutting
3. Return the blade to its upper position.
4. Power up the blade.
 - a. Press and hold trigger lock button
 - b. Squeeze trigger to operate saw
5. After the blade is spinning at its working RPM, make the cut.
 - a. Slide the carriage to its forward most position.
 - b. Lower the blade into the material.
 - c. Push the blade forward to complete the cut.
 - i. Feed slowly enough to let the saw do the work

After Use

1. Power down the shop vacuum, and detach from the miter saw dust collection system.
2. Return the miter angle to 90 degrees.
 - a. Turn the miter handle counterclockwise to loosen the miter table.
 - b. Lift up on the miter handle and rotate the miter table to 90 degree position.
 - c. Release the miter handle and turn the handle clockwise to secure the table.
3. Return the bevel angle to 90 degrees.
 - a. Loosen the bevel lock handle and tilt the blade back to the 90 degree position.
 - b. Secure the bevel lock handle.
 - c. Verify with a measuring tool that the bevel is set to 90 degrees.
4. Lock sliding carriage and the cutter head.
 - a. Without powering the tool, lower the cutting head and secure the stop latch knob.
 - b. Push the carriage to the aft end of the tool and lock the sliding carriage knob
5. Unplug the tool.
6. Clean up sawdust from around the tool.

Baseline Configuration Identification

1. Bevel angle is set to 90 degrees
2. Miter angle is set to 90 degrees
3. Cutting head locked in the down position
4. Sliding carriage locked
5. Tool unplugged

Compound Miter Saw Competencies

Trained User Competencies

Setup

- Blade type check
- Clamping

Operation

- Square cuts
- Miter cuts (single angle via table)

Changes and Adjustments

- Miter angle (table)

Maintenance and Care

- Cleanup of saw and surround space

Advanced User Competencies

Setup

- Blade depth stop adjustment

Operation

- Compound miter cuts (via head and table)
- Partial depth cuts (via depth stop)
- Safe use of length stops

Changes and Adjustments

- Head angle
- Miter stop adjustment (head)

Maintenance and Care

- Blade replacement