

POPOMAN MTW510B

POPOMAN Cordless Circular Saw User Manual

Model: MTW510B

1. INTRODUCTION

This manual provides essential information for the safe operation, maintenance, and troubleshooting of your POPOMAN Cordless Circular Saw, Model MTW510B. Please read this manual thoroughly before using the tool to ensure proper and safe operation.

The POPOMAN MTW510B is a versatile 20V cordless circular saw designed for cutting various materials including wood, plastic, soft metal, and tile. It features a 4.0Ah battery, 4,500 RPM motor, integrated laser guide, and adjustable cutting depth and bevel angles.

2. GENERAL SAFETY INSTRUCTIONS

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury when operating power tools.

- **Work Area Safety:** Keep your work area clean and well-lit. Cluttered or dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Electrical Safety:** Avoid body contact with earthed or grounded surfaces. Do not expose power tools to rain or wet conditions.
- **Personal Safety:** Always wear eye protection, such as safety goggles, and hearing protection. Use a dust mask if operations create dust. Dress properly; avoid loose clothing or jewelry. Secure long hair.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.
- **Specific Circular Saw Safety:**
 - Keep hands away from cutting area and the blade.
 - Do not reach underneath the workpiece.
 - Check the lower guard for proper closing before each use.
 - Never hold the workpiece in your hand or across your leg while cutting. Secure the workpiece to a stable platform.
 - Use only blades recommended by the manufacturer.

3. COMPONENTS AND PACKAGE CONTENTS

The POPOMAN Cordless Circular Saw package includes the following items:

- 1 x POPOMAN 20V Cordless Circular Saw (Model MTW510B)
- 1 x 4.0 Ah Lithium-Ion Battery
- 1 x Fast Charger
- 3 x Blades (115mm / 4-1/2"):
 - 1 x 24T TCT Blade (for wood)
 - 1 x HSS Blade (for plastic & soft metal)
 - 1 x Grit Diamond Blade (for tile)
- 1 x Metal Guide Ruler
- 1 x Hex Wrench
- 1 x Dust Hose
- 1 x User Manual (this document)



Figure 3.1: Complete package contents including the circular saw, battery, charger, three blades, guide ruler, hex wrench, and dust hose.

Saw Parts Identification

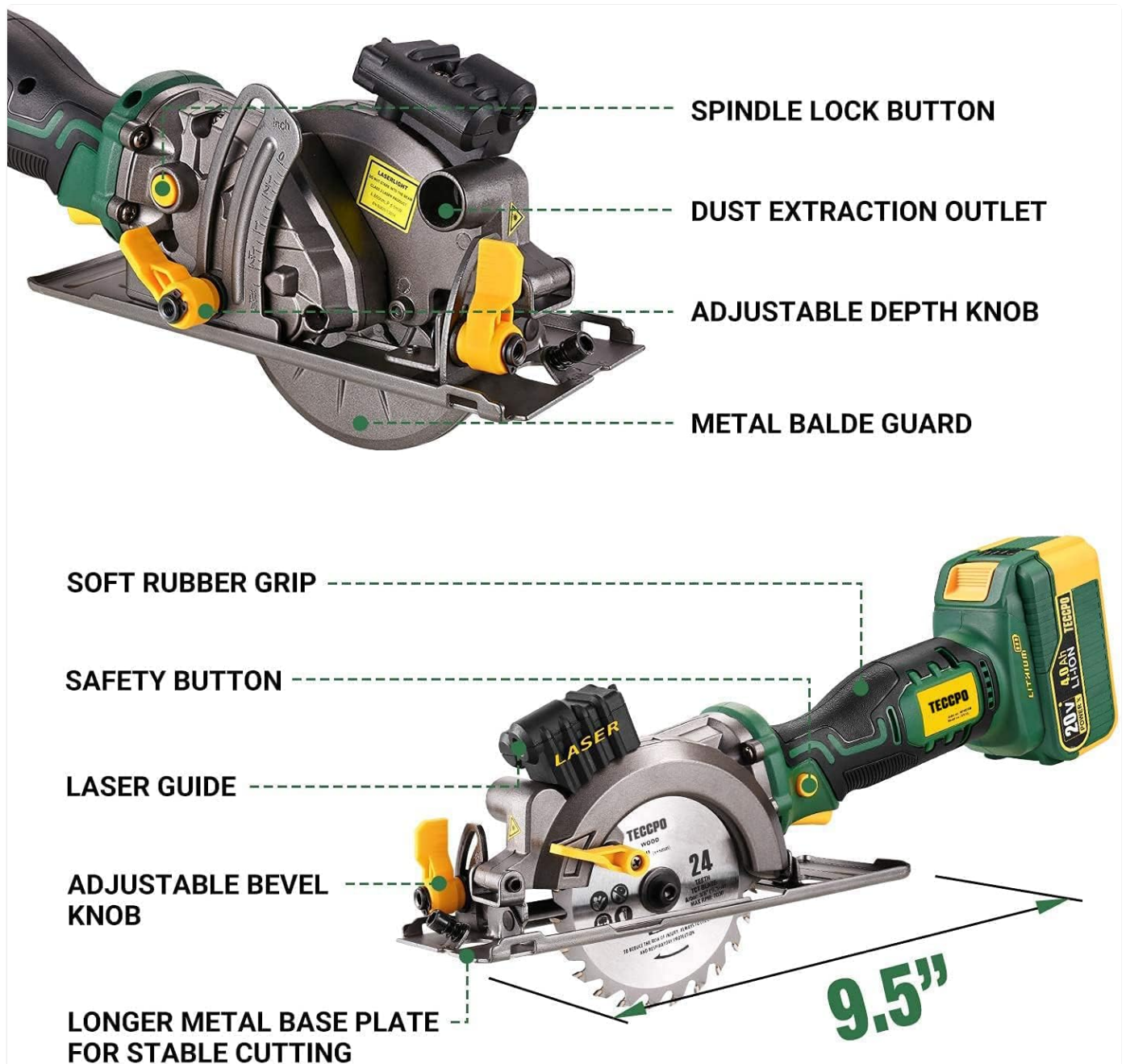


Figure 3.2: Key components of the circular saw, including the spindle lock button, dust extraction outlet, adjustable depth knob, metal blade guard, soft rubber grip, safety button, laser guide, adjustable bevel knob, and longer metal base plate.

- **Spindle Lock Button:** Used to lock the spindle for blade changes.
- **Dust Extraction Outlet:** Connects to the dust hose for debris collection.
- **Adjustable Depth Knob:** Controls the cutting depth.
- **Metal Blade Guard:** Provides protection from the blade.
- **Soft Rubber Grip:** Enhances comfort and control during operation.
- **Safety Button:** Prevents accidental startup.
- **Laser Guide:** Projects a laser line for precise cutting.
- **Adjustable Bevel Knob:** Allows for angle adjustments for bevel cuts.
- **Metal Base Plate:** Provides stability during cutting.

4. SETUP

4.1 Battery Charging

The 4.0Ah Lithium-Ion battery must be fully charged before first use. Use only the provided fast charger.

1. Connect the charger to a standard power outlet.
2. Slide the battery pack onto the charger until it clicks into place.
3. The charger indicator light will show the charging status. Refer to the charger's specific instructions for light indications (e.g., red for charging, green for fully charged).
4. Once fully charged, disconnect the battery from the charger and unplug the charger from the outlet.



Figure 4.1: The 4.0Ah Lithium-Ion battery connected to the 2.0A fast charger. The charger features protection systems against overcurrent, overvoltage, overheat, overcharge, and overdischarge.

4.2 Blade Installation and Replacement

Always ensure the battery is removed from the saw before installing or replacing the blade to prevent accidental startup.

1. Place the saw on a stable surface with the blade side facing up.
2. Press and hold the spindle lock button (refer to Figure 3.2 for location).
3. Using the provided hex wrench, loosen the blade bolt by turning it counter-clockwise.
4. Remove the blade bolt, outer flange, and the old blade.
5. Clean any dust or debris from the blade flanges.
6. Place the new blade onto the spindle, ensuring the teeth are pointing in the direction of rotation indicated by the arrow on the saw and blade.
7. Reinstall the outer flange and blade bolt.
8. While still pressing the spindle lock button, tighten the blade bolt securely with the hex wrench by turning it clockwise. Do not overtighten.
9. Release the spindle lock button and check that the blade is securely fastened and rotates freely.



CORRECT STEPS OF REPLACING THE BLADE



PUT THE BLADE, METAL GASKET AND BLADE BOLT IN RIGHT PLACE IN ORDER



PRESS THE SPINDLE LOCK



TIGHTEN THE BLADE BOLT WHILE KEEPING PRESSING SPINDLE LOCK

Figure 4.2: Correct steps for replacing the blade: 1) Put the blade, metal gasket, and blade bolt in order. 2) Press the spindle lock. 3) Tighten the blade bolt while pressing the spindle lock.

5. OPERATING INSTRUCTIONS

5.1 Basic Operation

1. Ensure the battery is fully charged and securely inserted into the saw.
2. Adjust the cutting depth and bevel angle as required for your material (see sections 5.2 and 5.3).
3. Position the workpiece securely.
4. To start the saw, press the safety button and then squeeze the trigger switch. Release the safety button once the saw is running.
5. Allow the blade to reach full speed before contacting the workpiece.
6. Guide the saw smoothly through the material, maintaining a firm grip. Do not force the saw.
7. To stop the saw, release the trigger switch.

5.2 Adjusting Cutting Depth

The cutting depth can be adjusted to match the thickness of your material. This helps prevent kickback and ensures a cleaner cut.

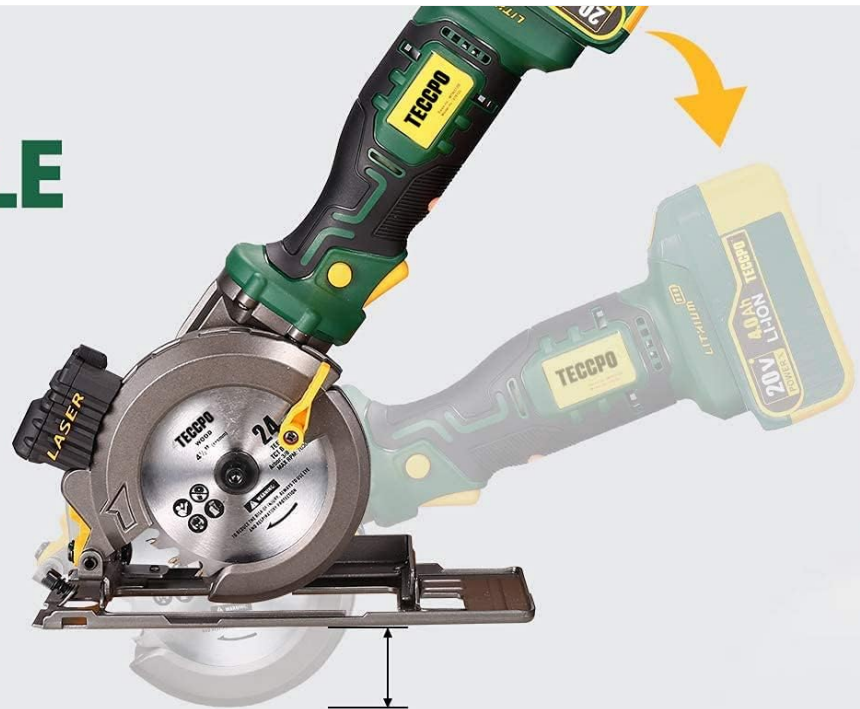
1. Loosen the adjustable depth knob (refer to Figure 3.2).
2. Raise or lower the base plate to achieve the desired cutting depth. The maximum cutting depth is 1-11/16" at 90°.
3. Tighten the adjustable depth knob securely.

5.3 Adjusting Bevel Angle

The saw allows for bevel cuts from 0° to 45°.

1. Loosen the adjustable bevel knob (refer to Figure 3.2).
2. Tilt the base plate to the desired angle. The maximum cutting depth at 45° is 1-1/8".
3. Tighten the adjustable bevel knob securely.

0-45° ADJUSTABLE BEVEL CUTTING



MAX CUTTING DEPTH: 1-11/16"
CUTTING ANGLE: 90°



MAX CUTTING DEPTH: 1-1/8"
CUTTING ANGLE: 45°

Figure 5.1: Illustration of 0-45° adjustable bevel cutting. Max cutting depth is 1-11/16" at 90° and 1-1/8" at 45°.

5.4 Using the Laser Guide

The integrated laser guide assists in making precise and straight cuts. Activate the laser by pressing the laser button (refer to Figure 3.2). Align the laser line with your marked cutting line on the workpiece.

5.5 Dust Extraction

For a cleaner working environment, connect the provided dust hose to the dust extraction outlet on the saw and to a vacuum cleaner.



DUST REMOVAL TUBE CONNECTING SAW TO VACUUM CLEANER KEEPS WORKING AREA CLEANING

Figure 5.2: The dust removal tube connected to the saw and a vacuum cleaner helps maintain a clean working area.

5.6 Material Specific Blades

The saw comes with three different blades for various materials:

- **24T TCT Blade:** Ideal for cutting wood.
- **HSS Blade:** Suitable for cutting plastic and soft metals.
- **Grit Diamond Blade:** Designed for cutting tiles.



Figure 5.3: The circular saw demonstrating its versatility by cutting tile with a diamond blade, soft metal with an HSS blade, and wood with a TCT blade.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your circular saw.

- **Cleaning:** After each use, remove the battery and clean the saw with a soft, dry cloth. Use compressed air to clear dust from vents and the motor housing. Do not use harsh chemicals or abrasive cleaners.
- **Blade Care:** Inspect blades regularly for sharpness and damage. Replace dull or damaged blades immediately. Store blades properly to prevent damage.
- **Battery Care:** Store batteries in a cool, dry place away from direct sunlight. Do not store fully discharged batteries for extended periods.
- **General Inspection:** Periodically check all screws and fasteners for tightness. Ensure the blade guard operates smoothly and returns to its closed position automatically.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Saw does not start	Battery not charged or improperly inserted; Safety button not pressed; Faulty switch.	Ensure battery is charged and correctly inserted. Press safety button before trigger. If problem persists, contact support.
Blade binds or cuts slowly	Dull or incorrect blade; Improper cutting depth; Forcing the saw; Workpiece not secured.	Replace blade with a sharp, appropriate one. Adjust cutting depth. Do not force the saw. Secure workpiece firmly.
Excessive vibration	Loose blade or components; Damaged blade.	Check blade bolt tightness. Inspect blade for damage and replace if necessary. Ensure all components are secure.
Laser guide not working	Laser battery depleted (if separate); Laser switch off; Obstruction.	Check laser power source. Ensure laser switch is on. Clear any obstructions.

8. SPECIFICATIONS

Feature	Detail
Model	MTW510B
Brand	POPOMAN
Voltage	20 Volts (DC)
Battery Capacity	4.0 Ah Lithium-Ion
No-Load Speed	4500 RPM
Blade Diameter	115mm (4-1/2 inches)
Max Cutting Depth (90°)	1-11/16 inches
Max Cutting Depth (45°)	1-1/8 inches
Bevel Capacity	0-45°
Item Weight	2.7 Kilograms (5.94 pounds)
Product Dimensions	18.7"L x 6.3"W x 5.3"H
Included Blades	24T TCT (Wood), HSS (Plastic & Soft Metal), Grit Diamond (Tile)
Special Features	Laser Guide, Dust Extraction Outlet, Safety Trigger Button, Soft Rubber Handle

9. WARRANTY AND SUPPORT

The POPOMAN Cordless Circular Saw comes with a Limited Warranty. For specific warranty terms and conditions, please refer to the warranty card included in your package or contact POPOMAN customer support. If you encounter any issues or require assistance with your product, please contact POPOMAN customer support. Contact information can typically be found on the product packaging or the official brand website. You can visit the official POPOMAN store for more information and support:[POPOMAN Store](#)

