DEWALT DCW620B

DEWALT 20V MAX XR 2-1/4 Peak HP Plunge Router

Model: DCW620B

User Instruction Manual

1. Introduction

Thank you for choosing the DEWALT 20V MAX XR 2-1/4 Peak HP Plunge Router (DCW620B). This cordless router is engineered for demanding applications, offering powerful performance and advanced features for precision woodworking. This manual provides essential information for the safe and effective operation, setup, maintenance, and troubleshooting of your new router.



Figure 1.1: DEWALT 20V MAX XR 2-1/4 Peak HP Plunge Router (DCW620B). This image shows the overall design of the router, highlighting its robust construction and ergonomic handles.

2. Safety Information

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury when operating power tools. Read and understand all instructions before using this product.

General Power Tool Safety Warnings

- **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. Use hearing protection when operating for extended periods. 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 battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.
- **Service:** Have your power tool serviced by a qualified repair person using only identical replacement parts.

Specific Router Safety Warnings

- Hold the power tool by insulated gripping surfaces when performing an operation where the cutting accessory may contact hidden wiring.
- Use clamps or another practical way to secure and support the workpiece to a stable platform.
- Always ensure the router bit is securely installed and tightened before operation.
- Keep hands clear of the cutting area and the router bit.
- Ensure the workpiece is free of nails, screws, or other foreign objects that could damage the bit or cause kickback.
- Always feed the router into the workpiece in the correct direction to prevent climb cutting and loss of control.

3. Components and Features

The DEWALT DCW620B Plunge Router is equipped with several features designed for performance, control, and user convenience.



Figure 3.1: Key Components of the DEWALT DCW620B Plunge Router. This diagram illustrates the location of the AIRLOCK compatibility port, plunge lock lever, anti-rotation system, variable speed dial, spindle lock, depth stop adjuster, and 3-position adjustable turret.

- **20V MAX* Cordless Power:** This router is part of the 20V MAX* system, offering powerful cordless operation for tough applications without the need for a cord.
- **High Productivity:** Capable of completing up to 256 linear feet of 5/8 inch roundovers in pine on a single charge (using DCBP520 battery, sold separately).
- **Integrated Dust Collection:** Features AIRLOCK compatibility, allowing for efficient dust collection (up to 97%) when cutting grooves in particleboard with a DCBP520 battery and DWV015 dust extractor (both sold separately).



Figure 3.2: Router in use with dust collection system. This image demonstrates the router connected to a dust extractor hose, highlighting its integrated dust collection capabilities.

- **Anti-Rotation System:** Enhances control by sensing excessive rotational motion and shutting down the tool. A red LED indicator illuminates when the system is engaged.
- **Variable Speed Dial:** Allows quick matching of the router speed to the specific application, with constant speed under load. Offers a no-load speed range of 11,000-23,000 RPMs.
- **Adjustable Turret Stop:** Provides a 3-position adjustable turret stop for quick and precise depth adjustments.
- **Tool-Free Depth Adjustment System:** Facilitates quick and accurate setup using a depth adjustment scale, depth stop, micro-fine depth stop adjuster, and micro-fine height adjuster.
- **Tool-Free Plunge Lock Lever:** Enables seamless engagement and disengagement of the lock lever without removing hands from the handles.
- **Dual LED Lights:** Provides additional illumination of the work surface for improved bit visibility.
- **Balanced Design:** Compact design (11.5 inches in height) and lightweight (8 lbs, tool only) for precise routing performance and comfortable handling.

4. Setup

Proper setup is crucial for safe and effective operation of your plunge router.

4.1 Battery Installation

1. Ensure the router is turned off.
2. Align the battery pack with the battery port on the router.
3. Slide the battery pack into the port until it clicks securely into place.
4. To remove, press the release button on the battery pack and slide it out.

4.2 Router Bit Installation

1. Ensure the router is disconnected from its power source (battery removed).
2. Press and hold the spindle lock button to prevent the spindle from rotating.
3. Loosen the collet nut using the provided wrench.
4. Insert the shank of the router bit into the collet. Ensure at least 3/4 of the shank length is inserted for proper grip and safety.
5. Tighten the collet nut firmly with the wrench while holding the spindle lock button. Do not overtighten.
6. To remove, reverse the process.

4.3 Depth Adjustment

The DCW620B features a tool-free depth adjustment system for precise control.

1. Place the router on a flat surface with the desired bit installed.
2. Release the plunge lock lever.
3. Lower the router until the bit touches the surface.
4. Adjust the depth stop adjuster to the desired depth using the depth adjustment scale.
5. Utilize the micro-fine depth stop adjuster and micro-fine height adjuster for precise adjustments.
6. Engage the plunge lock lever to secure the depth.

5. Operating Instructions

Follow these guidelines for effective and safe operation of your DEWALT plunge router.

5.1 Powering On and Off

- To turn on, slide the switch to the 'ON' position.
- To turn off, slide the switch to the 'OFF' position.

5.2 Adjusting Speed

The variable speed dial allows you to match the router's RPM to the material and bit type.

- Rotate the variable speed dial to increase or decrease the RPM.
- Refer to bit manufacturer recommendations for optimal speed settings for different materials.

5.3 Routing Techniques

- **Plunge Routing:** With the router bit above the workpiece, turn on the router. Once the motor reaches full speed,

depress the plunge lock lever and slowly lower the router into the workpiece to the set depth. Engage the plunge lock lever to secure the depth.

- **Feed Direction:** Always feed the router against the rotation of the bit. For most operations, this means moving the router from left to right when routing along an edge.
- **Workpiece Securement:** Always secure your workpiece firmly with clamps to prevent movement during routing.
- **Multiple Passes:** For deep cuts, make several shallow passes instead of one deep pass. This reduces strain on the router and bit, improves cut quality, and enhances safety.



Figure 5.1: Router in operation on a wooden workpiece. This image shows the router being used to create a profile on a piece of wood, demonstrating its application in woodworking tasks.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your DEWALT router.

6.1 Cleaning

- Always disconnect the battery pack before cleaning.
- Use a soft brush or compressed air to remove dust and debris from the ventilation openings and around the collet area.
- Wipe the housing with a damp cloth. Do not use harsh chemicals or abrasive cleaners.

6.2 Router Bit Care

- Keep router bits sharp and clean. Dull bits can cause overheating, poor cut quality, and increased strain on the router.
- Clean resin and pitch buildup from bits using a specialized bit cleaner.
- Store bits in a protective case to prevent damage to the cutting edges.

6.3 General Inspection

- Periodically inspect the router for any signs of damage, loose screws, or worn parts.
- Ensure the plunge mechanism operates smoothly. If stiff, clean the plunge posts and apply a thin coat of dry lubricant.
- If any damage is found, do not operate the tool. Contact a DEWALT service center for repair.

7. Troubleshooting

This section addresses common issues you might encounter with your router.

Problem	Possible Cause	Solution
Router does not start	Battery not charged or improperly installed; Tool switch in OFF position; Anti-rotation system engaged.	Charge battery and ensure it is fully seated; Move switch to ON; Check for red LED, if lit, reset tool by turning off and on.
Poor cut quality / Burning wood	Dull bit; Incorrect feed rate; Incorrect RPM setting.	Replace or sharpen bit; Reduce feed rate; Adjust RPM according to material and bit type.
Excessive vibration	Loose bit; Damaged bit; Bent spindle.	Ensure bit is securely tightened; Replace damaged bit; If spindle is bent, seek professional service.
Plunge mechanism is stiff	Accumulated dust/debris on plunge posts; Lack of lubrication.	Clean plunge posts thoroughly; Apply a thin coat of dry lubricant (e.g., silicone spray).

8. Specifications

Key technical specifications for the DEWALT DCW620B Plunge Router.

Specification	Value
Brand	DEWALT
Model	DCW620B

Specification	Value
Power Source	Battery Powered
Voltage	20 Volts (MAX*)
Peak HP	2-1/4 HP
No-Load Speed	11,000-23,000 RPM
Item Weight (Tool Only)	8 lbs
Material	Aluminium, Blend
Compatible Shank Sizes	1/2 in. & 1/4 in.

**Maximum initial battery voltage (measured without a workload) is 20 volts. Nominal voltage is 18 volts.*

9. Warranty and Support

DEWALT stands behind its products. For detailed warranty information, including terms and conditions, please refer to the warranty card included with your product or visit the official DEWALT website.
For technical support, service, or to locate an authorized service center, please visitwww.dewalt.com or contact DEWALT customer service directly.

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