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> Axiscreat CNC Router Machine 6060 Instruction Manual

## Axiscreat A6060

# Axiscreat CNC Router Machine 6060 Instruction Manual

Model: A6060

## INTRODUCTION

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This manual provides essential information for the safe and efficient operation, setup, and maintenance of your Axiscreat CNC Router Machine 6060. This 3-axis CNC milling machine is designed for engraving and carving various materials such as wood, acrylic, and MDF, featuring a 710W power trimmer router, linear rails, and belt-driven axes. Please read this manual thoroughly before using the machine.

## SAFETY INFORMATION

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Always prioritize safety when operating the CNC router. Failure to follow safety guidelines can result in injury or damage to the machine.

- Wear appropriate personal protective equipment (PPE), including safety glasses, hearing protection, and dust masks.
- Ensure the work area is clean, well-lit, and free from obstructions.
- Keep hands and loose clothing away from moving parts and the cutting tool.
- Always disconnect power before performing maintenance or making adjustments.
- Securely clamp all workpieces to prevent movement during operation.
- Do not operate the machine under the influence of drugs or alcohol.
- Familiarize yourself with the emergency stop button location and function.

## SETUP AND ASSEMBLY

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The Axiscreat CNC Router Machine 6060 features a modular design for simplified assembly. Most components are pre-assembled, allowing for setup in approximately 20 minutes with minimal steps and electrical connections.



Figure 1: Overview of the CNC Router Machine 6060, highlighting its modular components for easy assembly.

## Power Supply Configuration

The machine is factory-set for 110V operation. If your mains power is 220V, you **must** switch the Power Switch on the control box to 220V **before** powering on the machine. This protects the control box from damage. The included router spindle is designed for 110V only. For safety and to prevent damage, it is strongly recommended to use a step-down transformer to convert 220V mains power to 110V before connecting both the control box and the spindle.

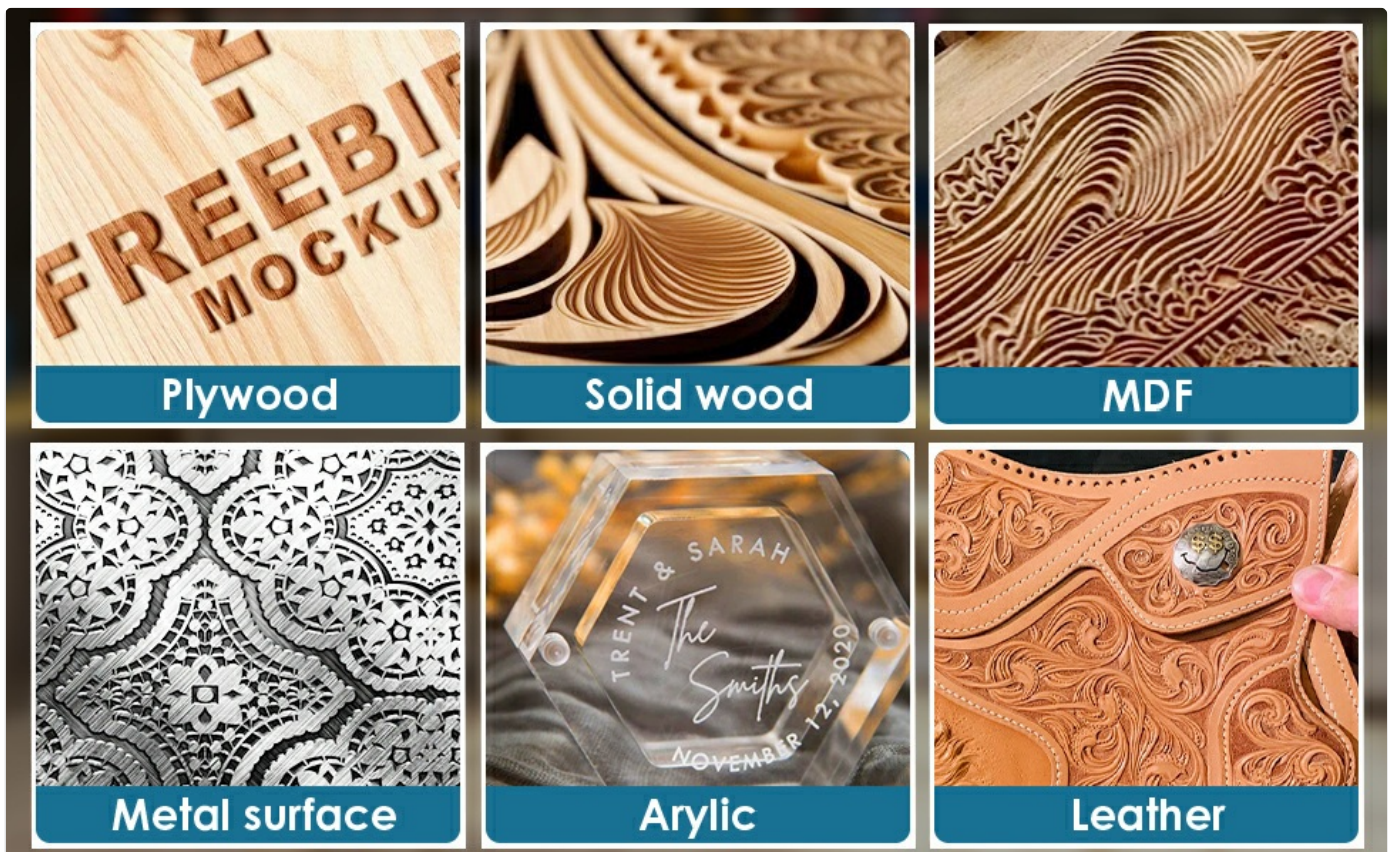


Figure 2: Control box with power switch and input/output interfaces. Ensure the voltage switch is correctly set for your region's power supply.

## OPERATION

### Work Area and Spindle

The machine offers a generous working space of 23.6 × 23.6 × 2.95 inches (600 × 600 × 75 mm), providing ample room for various projects. It is equipped with a 710W trim router spindle, featuring an adjustable speed range of 6000-30000 RPM with 6 preset speeds. This

powerful spindle ensures efficient carving and deeper cuts on materials like wood, acrylic, and MDF.



Figure 3: Diagram showing the generous working area of the CNC Router Machine 6060.

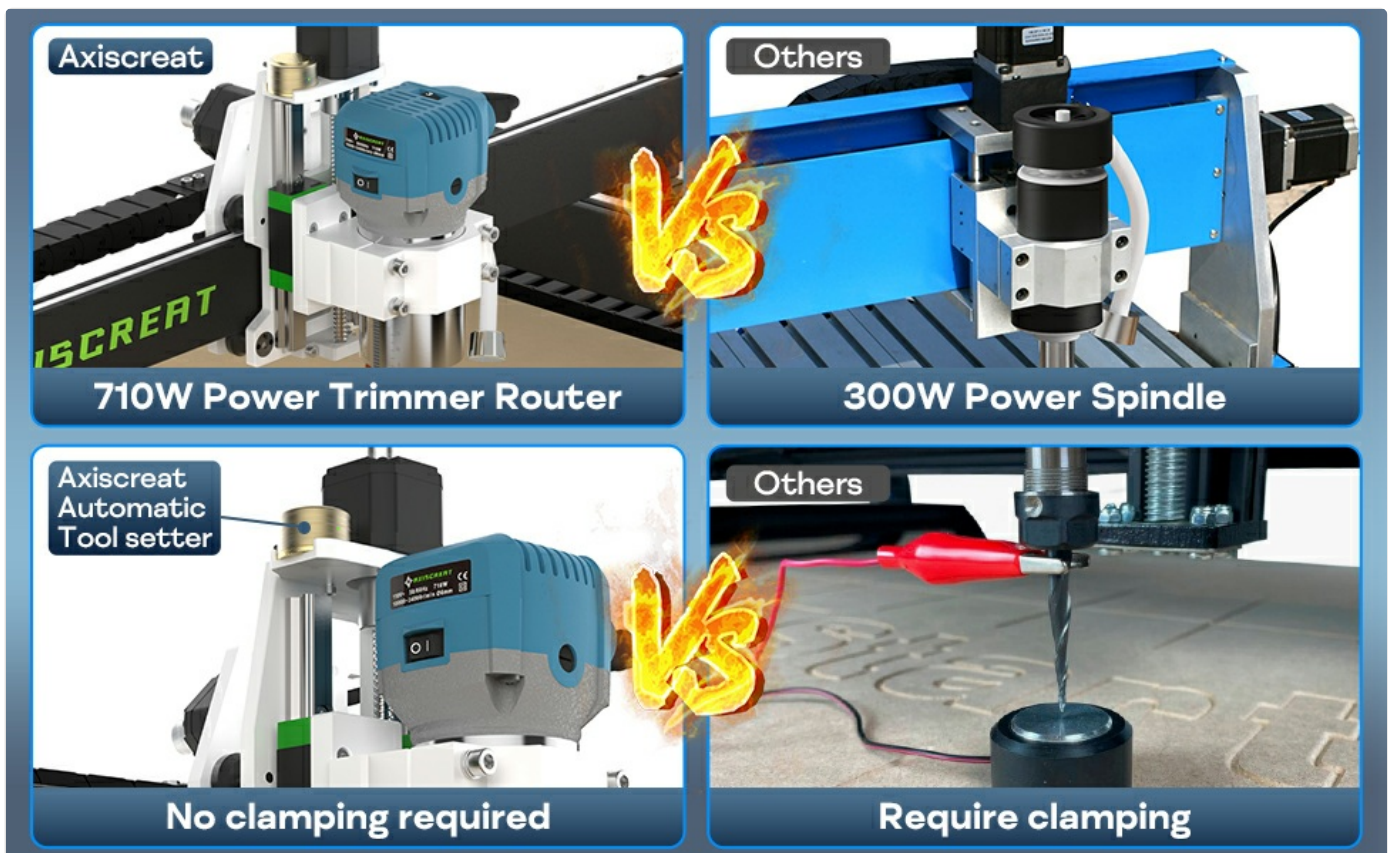


Figure 4: Detailed view of the 710W power trimmer router, automatic tool setter, and linear rails, contributing to stability and accuracy.

## Control Methods

The CNC machine can be controlled using several methods:

- **4.3-inch Touchscreen Offline Controller:** Standard equipment for direct machine control.
- **PC Application:** Connect to a computer for software-based control.
- **Smartphone or Tablet:** Operate the machine wirelessly via a dedicated application.

The power box includes two 110V sockets that can be managed via the offline controller to switch the trim router and vacuum on or off.

## Automatic Tool Setter

The Axiscreat A6060 features an automatic tool setter and optical touch signal. This allows for precise tool setting without the need to power the spindle, enhancing efficiency and accuracy in production.



Figure 5: Closed-loop stepper motor details, ensuring precise movement and control during operation.

## Material Compatibility

The Axiscreat CNC Router Machine 6060 is suitable for carving and engraving a variety of materials, including plywood, solid wood, MDF, metal surfaces, and acrylic.



Figure 6: Examples of compatible materials for carving and engraving with the machine.

## Demonstration Video

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Video 1: A short showcase demonstrating the Axiscreat CNC machine in action, performing carving operations on wood.

## MAINTENANCE

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## Belt Inspection and Tensioning

Regularly inspect the condition and tension of the belts on all three axes (X, Y, and Z). If you observe any fraying or curling of the belts, replace the 2GT 6mm timing belt promptly. If a belt is loose, loosen its mounting screws, re-tension the belt to the appropriate tightness, and then re-secure the screws. Proper belt tension is crucial for stable machine operation and maintaining carving accuracy.

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## TROUBLESHOOTING

- **Missed Steps or Positional Deviations:** If you experience missed steps or the machine deviates from its intended path, first check the feed rate. For entry-level users or during initial learning, avoid setting the feed rate too high. Gradually increase the feed rate as you gain experience and confidence with the machine and material.
- **Machine Not Powering On (220V Regions):** Ensure the Power Switch on the control box is correctly set to 220V if you are using a 220V mains power supply. Incorrect voltage selection can prevent the machine from starting or cause damage. Remember to use a step-down transformer for the 110V router spindle if operating on 220V mains.
- **Software Connection Issues:** If the machine is not connecting to your PC application (e.g., Easel) or the USB connection is unstable, verify that all necessary drivers are installed. Try connecting to a different USB port or using a different cable. If issues persist, consult the software documentation or contact support.
- **Inaccurate Carving:** Check belt tension as described in the Maintenance section. Loose belts can lead to inaccuracies. Also, ensure your workpiece is securely clamped and the cutting tool is properly installed and tightened.

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## SPECIFICATIONS

Feature	Specification
Model	A6060 (AT-CNC-A6060-1)
Brand	Axiscreat
Working Area (X×Y×Z)	23.6 × 23.6 × 2.95 inches (600 × 600 × 75 mm)
Spindle Power	710W
Spindle Speed Range	6000-30000 RPM (6 preset speeds)
Axes Drive System	X/Y axes: Belt-driven, Z axis: Linear rail
Control Methods	4.3-inch Touchscreen Offline Controller, PC Application, Smartphone/Tablet
Material Compatibility	Wood, Acrylic, MDF, and other similar materials
Power Source	Corded Electric
Voltage	24 Volts (Machine), 110V (Spindle)
Item Weight	56.9 pounds
Package Dimensions	35.5 x 17 x 13.5 inches

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## WARRANTY AND SUPPORT

### Warranty Information

For detailed warranty information, please refer to the documentation included with your product or contact Axiscreat customer support directly. Additional protection plans may be available for purchase separately.

### Customer Support

If you encounter any issues or have questions regarding your Axiscreat CNC Router Machine 6060, please contact Axiscreat customer

support. Support can typically be reached through the platform where the product was purchased or via the manufacturer's official website.

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