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Genmitsu GM7100E

Genmitsu 710W Compact Router GM7100E User Manual

Model: GM7100E

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1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Genmitsu 710W Compact Router. Please read this manual thoroughly before operating the device and retain it for future reference. The Genmitsu 710W Compact Router is designed for precision routing tasks, particularly as an upgrade or component for CNC engraving machines.

Key Features:

- Reliable Performance:** 710W power output with a rotation speed range of 6500-30000 RPM, adjustable in 1-6 speeds. Features constant torque control and a soft start mechanism. Typical run-out is less than 0.05mm.
- Precision Engineering:** Includes a customized 1/8" ER11 collet and nut for secure and precisely centered bit holding. Compatible with shank diameters from 1-8mm to 1/4".
- Durability:** Equipped with long-life carbon brushes and includes 4 high-quality spare carbon brushes for extended machine lifespan.
- Flexible Power Cord:** A 3.5m (11.48 ft) power cord with an included extension connector allows for flexible use in various workspaces.
- Easy Integration:** 65mm diameter design ensures compatibility with most CNC engraving machines for straightforward upgrades.

2. SAFETY GUIDELINES

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury when using this power tool. Failure to follow these instructions may result in serious injury or damage to the product.

General Safety:

- Read All Instructions:** Familiarize yourself with the tool's operation and potential hazards.
- Work Area:** Keep your work area clean, well-lit, and free from clutter. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- Electrical Safety:** Ensure the power supply matches the tool's requirements (110 Volts). Avoid body contact with grounded surfaces. Do not expose power tools to rain or wet conditions. Do not abuse the cord.
- Personal Safety:** Wear appropriate personal protective equipment (PPE), including safety glasses, hearing protection, and a dust mask. Secure loose clothing, jewelry, and long hair.

- **Tool Use and Care:** Do not force the tool. Use the correct tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.
- **Maintenance:** Maintain tools with care. Keep cutting tools sharp and clean. Follow instructions for lubricating and changing accessories.

3. PRODUCT COMPONENTS

The Genmitsu 710W Compact Router package includes the following items:

- Genmitsu 710W Compact Router
- 1/8" ER11 Collet and Nut
- 4 Spare Carbon Brushes
- 17mm Wrench
- 10mm Wrench
- Power Cord with Extension Connector



Figure 3.1: Genmitsu 710W Compact Router with included ER11 collet and four carbon brushes.



Figure 3.2: Genmitsu 710W Compact Router showing power cord, two wrenches (17mm and 10mm), and spare carbon brushes.



Figure 3.3: Dimensions of the Genmitsu 710W Compact Router.

Component Identification:

- **6-Level Speed Adjusting Dial:** Located on the top of the router, allows adjustment of rotation speed from 1 to 6.
- **ON/OFF Switch:** Main power switch for the router.
- **Carbon Brush Port:** Access points for inspecting and replacing carbon brushes.
- **Fast Heat Dissipation Vents:** Designed to prevent overheating during operation.
- **ER11 Collet:** Holds the router bit securely.

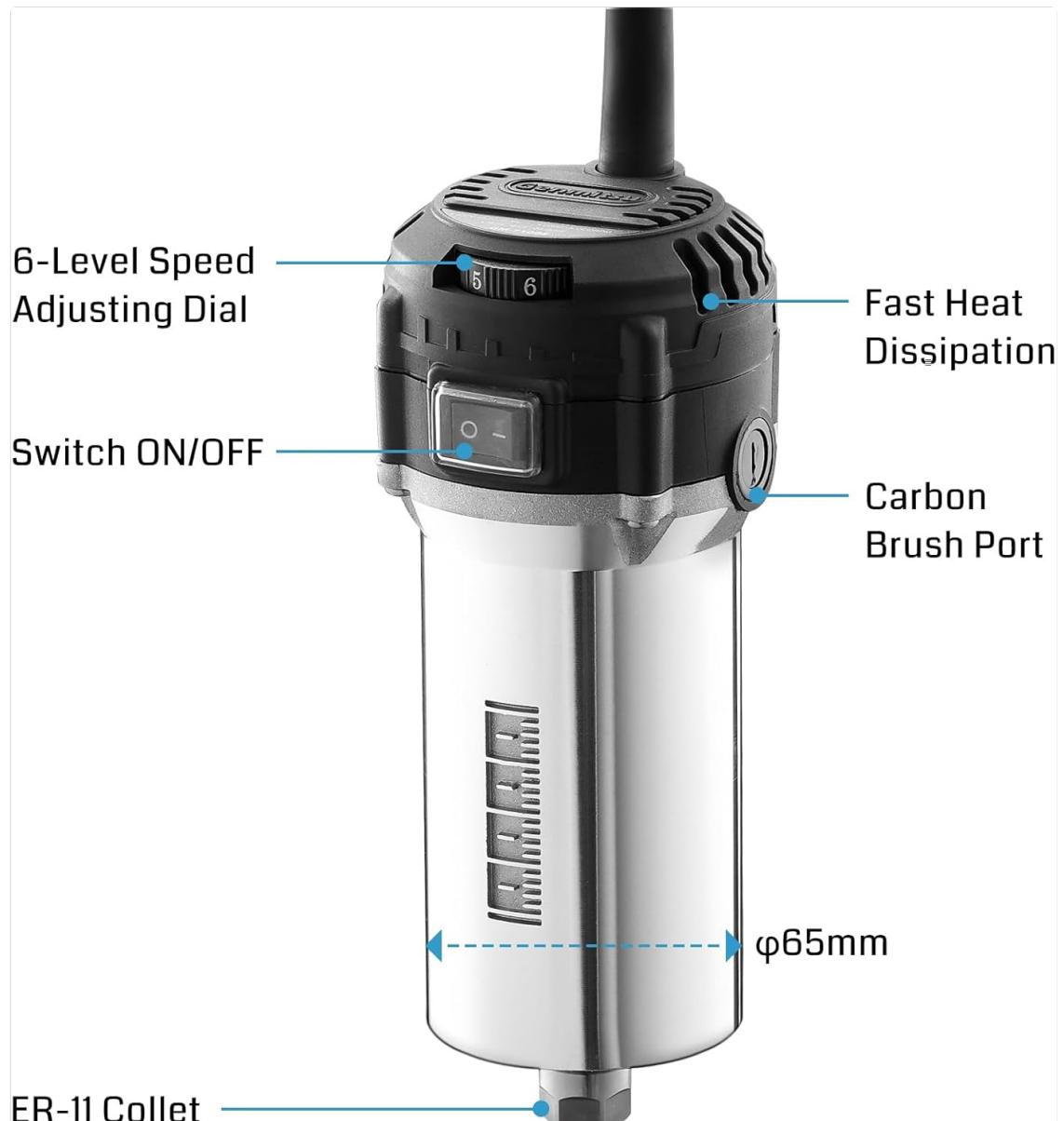


Figure 3.4: Key features of the Genmitsu 710W Compact Router.

4. SETUP AND INSTALLATION

4.1 Mounting the Router

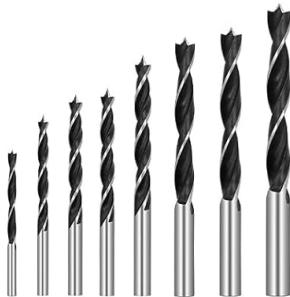
The Genmitsu 710W Compact Router features a 65mm diameter, making it compatible with most CNC engraving machine mounts. Ensure the router is securely fastened in its mount before operation to prevent vibration and ensure precision.

4.2 Installing the Collet and Router Bit

1. Ensure the router is unplugged from the power source.
2. Insert the desired router bit into the ER11 collet. The included collet is 1/8". *Note: 1/4" and 1-8mm collets are not included and must be purchased separately if needed.*
3. Place the collet with the bit into the router's spindle.
4. Tighten the collet nut using the provided 17mm and 10mm wrenches. Ensure the bit is held securely and precisely centered. Do not overtighten.



ER11 Collet Compatible with



1-8mm Shank



1/4" Shank



1/8" Shank

1/4" and 1-8mm collets are not included

Figure 4.1: ER11 Collet compatibility with various shank diameters.

4.3 Power Connection

Connect the router's power cord to a standard 110V electrical outlet. The 3.5m (11.48 ft) power cord and extension connector provide flexibility for placement. Ensure the power cord is routed safely to avoid entanglement or damage during operation.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

To power on the router, flip the ON/OFF switch to the 'ON' position. To power off, flip the switch to the 'OFF' position. The router features a soft start, which gradually increases speed upon startup.

5.2 Adjusting Speed

The router features a 6-level speed adjusting dial. Rotate the dial to select the desired speed setting, ranging from 1 (lowest speed, 6500 RPM) to 6 (highest speed, 30000 RPM). Adjust the speed according to the material being routed and the specific router bit in use.



Figure 5.1: Genmitsu 710W Compact Router in operation on a CNC machine.

5.3 Routing Techniques

Always perform test cuts on scrap material to determine optimal speed and feed rates. Ensure the workpiece is securely clamped. Move the router smoothly and consistently to achieve desired results. The router maintains constant torque control for consistent performance under load.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Genmitsu 710W Compact Router.

6.1 Carbon Brush Replacement

The router is equipped with long-life carbon brushes, and 4 spare brushes are included. Carbon brushes wear down over time and need replacement when they become too short or if the motor performance degrades. To replace:

1. **Disconnect Power:** Always unplug the router from the power source before performing any maintenance.
2. **Locate Brush Ports:** Identify the carbon brush ports on the side of the router housing.
3. **Remove Old Brushes:** Unscrew the brush caps and carefully pull out the old carbon brushes.
4. **Install New Brushes:** Insert the new carbon brushes, ensuring they are oriented correctly. Replace the brush caps and tighten them securely.

6.2 Cleaning

After each use, clean the router to remove dust and debris. Use a soft brush or compressed air to clear vents and the collet area. Do not use solvents or harsh chemicals that could damage plastic parts.

6.3 Collet Care

Periodically inspect the ER11 collet and nut for wear or damage. Clean any accumulated dust or resin from the collet to ensure proper bit seating and prevent bits from getting stuck. Ensure wrenches are used correctly and are not bent or damaged, as this can lead to improper tightening and potential issues.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Genmitsu 710W Compact Router.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Router does not start	No power supply; ON/OFF switch is off; Worn carbon brushes; Loose brush holders.	Check power connection; Ensure switch is ON; Replace carbon brushes; Tighten brush holders securely.
Reduced power or inconsistent speed	Worn carbon brushes; Overload; Incorrect speed setting.	Replace carbon brushes; Reduce load; Adjust speed dial to a higher setting.
Excessive vibration or noise	Loose router bit; Unbalanced bit; Loose mounting; Axial play in spindle.	Ensure bit is securely tightened in collet; Use balanced bits; Check router mounting; If axial play is significant, contact support.
Router bit gets stuck in collet	Collet or nut is dirty; Overtightened collet.	Clean collet and nut thoroughly; Ensure proper tightening, do not overtighten.
Short circuit or tripping breaker	Internal electrical fault; Damaged power cord.	Immediately discontinue use. Do not attempt to repair. Contact qualified service personnel or Genmitsu support.

8. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	Genmitsu
Model Number	GM7100E
Power Source	Corded Electric
Voltage	110 Volts
Power Output	710W
Maximum Rotational Speed	30000 RPM
Speed Settings	6 Variable Speeds (6500-30000 RPM)
Collet Type	ER11 (1/8" included)
Spindle Diameter	65mm
Typical Run-out	Less than 0.05mm
Power Cord Length	3.5m (11.48 ft)
Item Weight	2.04 Kilograms (4.49 pounds)
Product Dimensions	13.39 x 7.87 x 5.12 inches
Material	Metal
UPC	816550029251

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Genmitsu customer service. Refer to your purchase documentation or the official Genmitsu website for the most current contact details and warranty terms.

Genmitsu products are manufactured by SainSmart. For direct support, you may visit the [Genmitsu Store on Amazon](#)

Related Documents - GM7100E

	Genmitsu 710W Compact Router Installation Guide This guide provides essential information for the installation and safe operation of the Genmitsu 710W Compact Router. It details package contents, dimensions, specifications, and maintenance procedures like collet and carbon brush replacement. For support, contact SainSmart at support@sainsmart.com or join the Genmitsu CNC Users Group on Facebook.
	Genmitsu PROVerXL 4X4 CNC Router Kits User Guide Comprehensive installation and user guide for the Genmitsu PROVerXL 4X4 CNC Router Kit. Learn about unboxing, assembly, setup, operation, and safety for your precision CNC machine. Access resources at SainSmart.
	Genmitsu 710W Compact Router with Digital Display Screen Installation Guide This installation guide provides detailed instructions for setting up and using the Genmitsu 710W Compact Router with Digital Display Screen. It covers safety precautions, package contents, specifications, and maintenance procedures.
	Genmitsu PROVerXL 4030S CNC Router Kit User Guide Comprehensive user guide for the Genmitsu PROVerXL 4030S CNC Router Kit, covering setup, installation, software configuration, and operation. Includes specifications and support resources.
	Genmitsu 5.5W Compressed Spot Fixed Focus Laser Module User Manual User manual for the Genmitsu 5.5W Compressed Spot Fixed Focus Laser Module, detailing its features, compatibility with Jinsoku and Genmitsu CNC machines, installation, software setup with LaserGRBL, and focusing instructions.
	Genmitsu 4040-PRO CNC Router User Manual User guide for the Genmitsu 4040-PRO CNC Router Kits. This 3-axis CNC machine is designed for wood, acrylic, and MDF carving/cutting, with a working area of 400 x 400 x 78mm. Features GRBL control and support for 4-axis operation. Includes detailed specifications, installation, setup, and operational instructions.