

GEEETECH Mizar S

GEEETECH Mizar S FDM 3D Printer User Manual

Model: Mizar S

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your GEEETECH Mizar S FDM 3D Printer. Please read this manual thoroughly before using the printer to ensure proper setup, operation, and maintenance.

Key Features

- **Dual Leveling System (ABL & GML):** Features both automatic bed leveling (ABL) and a creative manual leveling mode (GML) for precise calibration.
- **Fixed Heated Bed:** The print bed is securely fixed with 12 screws, ensuring stability and preventing deformation due to temperature changes. It includes a magnetic steel plate for strong adhesion and easy model removal.
- **Large Build Volume:** Offers a generous print size of 255 x 255 x 260 mm (10.0 x 10.0 x 10.2 inches) for diverse creative projects.
- **Dual Z-Axis:** Enhances printing smoothness and improves print quality, resulting in more delicate models.
- **Ultra-Silent Operation:** Equipped with TMC2208 stepper motor drivers and a high-performance 32-bit MCU, reducing noise levels to below 50 decibels.
- **Dual Gear Extruder:** Provides reliable and consistent filament feeding.
- **Power Failure & Filament Detection:** Automatically pauses and saves print progress upon power loss, filament exhaustion, or blockage, allowing for seamless resumption.



Image: Overview of the GEEETECH Mizar S 3D Printer, highlighting its innovative dual leveling system and other core features.

2. SAFETY INSTRUCTIONS

- Always operate the printer in a well-ventilated area.
- Keep the printer away from flammable materials and heat sources.
- Do not touch the nozzle or heated bed during operation or immediately after, as they can reach high temperatures.
- Ensure the power supply is correctly connected and grounded.
- Keep children and pets away from the printer during operation.
- Do not attempt to modify or disassemble the printer without proper authorization.
- Use only recommended filaments and accessories.
- In case of emergency, immediately disconnect the power supply.

3. SETUP GUIDE

3.1 Unpacking and Inspection

Carefully remove all components from the packaging. Inspect for any damage that may have occurred during transit. Ensure all items listed in the packing list are present.



Image: Detailed packing list showing all included components and tools for the GEEETECH Mizar S 3D Printer.

3.2 Assembly

The GEEETECH Mizar S comes largely pre-assembled. Follow these steps for final assembly:

1. Attach the Z-axis gantry to the base unit using the provided screws and tools.
2. Mount the filament spool holder.
3. Install any belt tensioners if not already pre-installed.
4. Connect all necessary cables. Ensure they are securely plugged into their respective ports.

Note: The assembly process is designed to be straightforward, typically taking less than 15 minutes. Refer to the included quick start guide for visual instructions.

3.3 Initial Power-On and Checks

After assembly, connect the printer to a power outlet. Power on the printer and perform a quick visual check:

- Verify that the touchscreen display powers on and responds to touch.
- Check for any unusual noises or movements from the motors.
- Ensure all axes move freely without obstruction.

4. OPERATING INSTRUCTIONS

4.1 Filament Loading

To load filament:

1. Place the filament spool onto the spool holder.
2. Preheat the nozzle to the recommended temperature for your filament type (e.g., 200°C for PLA).
3. Insert the filament into the extruder's input hole. The printer's automatic filament feeding mechanism will draw the

filament in.

4. Confirm that filament is extruding smoothly from the nozzle.



Image: Close-up view of the dual gear extruder, illustrating the filament feeding path.

4.2 Bed Leveling

The Mizar S features a dual leveling system for optimal print adhesion.

- **Automatic Bed Leveling (ABL):** Access the ABL function via the touchscreen. The printer will automatically probe 9 points on the print bed to calibrate its level. Ensure the nozzle is clean before initiating ABL.
- **Manual Bed Leveling (GML):** For fine-tuning or specific needs, the GML mode allows for manual adjustment. Refer to the on-screen prompts for guidance.



Image: Illustration of X and Y axis adjustment points, relevant for manual leveling or calibration.

4.3 Starting a Print

1. Prepare your 3D model using a slicing software (e.g., Cura) and save it as an STL file.
2. Transfer the G-code file to the provided MicroSD card.
3. Insert the MicroSD card into the printer's card slot.
4. Navigate the touchscreen interface to select your desired G-code file and initiate the print.



Image: The printer's intuitive touchscreen interface for navigation and print control.

4.4 Removing a Print

Once printing is complete and the print bed has cooled:

- Carefully remove the magnetic steel plate from the heated bed.
- Gently flex the steel plate to detach the printed model. Avoid using excessive force or sharp tools that could damage the plate.

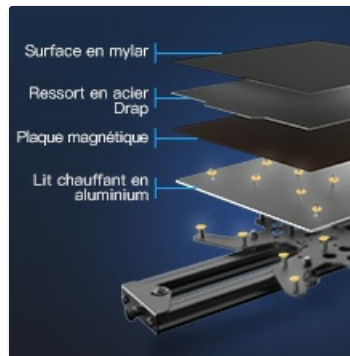


Image: Exploded view of the print bed layers, showing the magnetic spring steel plate for easy print removal.

5. MAINTENANCE

5.1 Regular Cleaning

- **Print Bed:** Clean the print surface with isopropyl alcohol after each print to ensure optimal adhesion for subsequent prints.
- **Nozzle:** Periodically check the nozzle for clogs. Use the provided needle or a brass brush to gently clean any residue.
- **Printer Body:** Wipe down the exterior of the printer with a soft, dry cloth to remove dust and debris.

5.2 Lubrication

Apply a small amount of lithium grease or similar lubricant to the Z-axis lead screws and smooth rods every few months, or as needed, to ensure smooth movement.

5.3 Belt Tension

Periodically check the tension of the X and Y axis belts. They should be taut but not overly tight. Adjust if necessary using the belt tensioners.

6. TROUBLESHOOTING

6.1 Print Not Sticking to Bed

- Ensure the print bed is clean and free of grease or dust.
- Re-run the automatic bed leveling (ABL) process.
- Adjust the initial layer height and print bed temperature in your slicing software.
- Consider using an adhesive aid (e.g., glue stick) if issues persist.

6.2 Filament Not Extruding

- Check if the nozzle is clogged. Clean it using the provided needle.
- Verify that the filament is correctly loaded and not tangled.
- Ensure the extruder gear is gripping the filament properly.

- Confirm the nozzle temperature is appropriate for the filament type.

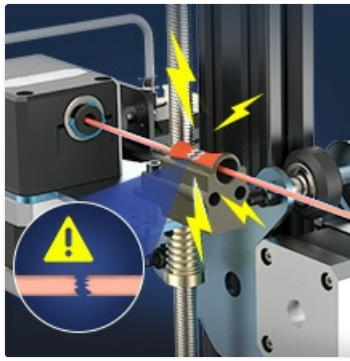


Image: The filament break detection sensor, which automatically pauses printing if filament runs out or breaks.

6.3 Power Outage Recovery

The GEEETECH Mizar S features a power failure detection function. If power is interrupted during a print:

- Upon power restoration, the printer will prompt you to resume the interrupted print.
- Confirm the resumption to continue printing from where it left off.



Image: Visual representation of the printer's ability to pause and resume prints, particularly useful after power interruptions.

7. SPECIFICATIONS

Brand	GIANTARM (GEEETECH)
Model Number	UsedFBA05-800-001-0727
Technology	FDM (Fused Deposition Modeling)
Build Volume	255 x 255 x 260 mm
Print Bed	Fixed Heated Bed with Magnetic Spring Steel Plate
Leveling System	Dual ABL & GML Automatic Leveling
Extruder Type	Dual Gear Extruder
Stepper Drivers	TMC2208 (Ultra-Silent)
Motherboard	32-bit MCU
Supported Filaments	PLA, PETG, etc. (1.75mm)
Connectivity	USB, MicroSD Card

Compatible OS	Windows, macOS, Linux
Power Consumption	300 Watt
Product Dimensions	51P x 51l x 27H cm
Item Weight	4.5 Kilograms

8. WARRANTY AND SUPPORT

8.1 Warranty Information

For detailed warranty information, please refer to the warranty card included with your product or visit the official GEEETECH / GIANTARM website. Keep your proof of purchase for warranty claims.

8.2 Technical Support

If you encounter any issues or require technical assistance, please contact GEEETECH / GIANTARM customer support through their official website or the contact information provided in the product packaging.

- **Online Resources:** Check the manufacturer's website for FAQs, firmware updates, and community forums.
- **Contact Support:** Have your model number and purchase date ready when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

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