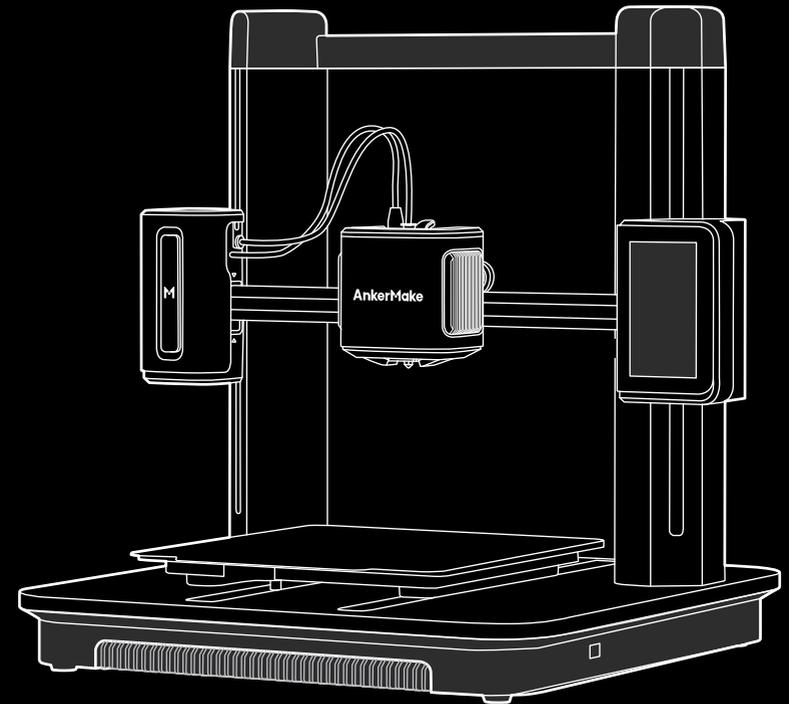


AnkerMake

3D Printers by Anker

USER MANUAL

AnkerMake M5 FDM 3D Printer



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Product Name: AnkerMake M5
Model: V8111

V01_EN

M5 5X Faster, Extra Intelligent.

Important Safety Instructions

- The power cord shall be connected to socket-outlet with earthing connection.
- The power supply should be installed near the equipment, and the socket-outlet must be easily accessible.
- Only use the power cord provided by the manufacturer. Using unauthorized power cords may cause danger and violate the authorization of the product and the guarantee.
- The power cord plug is considered as the disconnect device. Once unplugged, the product is considered to be disconnected from the power source.
- Do not use the device in an environment where the temperature is too high or low. Never expose the device to strong sunshine or wet environments.
- The suitable temperature range for the product and its accessories is 59 °F - 95 °F / 15°C -35°C .
- It is recommended to operate the device in an environment with a temperature that ranges from 59 °F /15°C to 77 °F /25°C .
- When operating, place the device in an environment that has a normal room temperature and good ventilation.
- This equipment is not suitable for use in locations where children are likely to be present. This equipment is not intended for use by children.



CAUTION - Moving parts. Keep body parts away from moving parts.

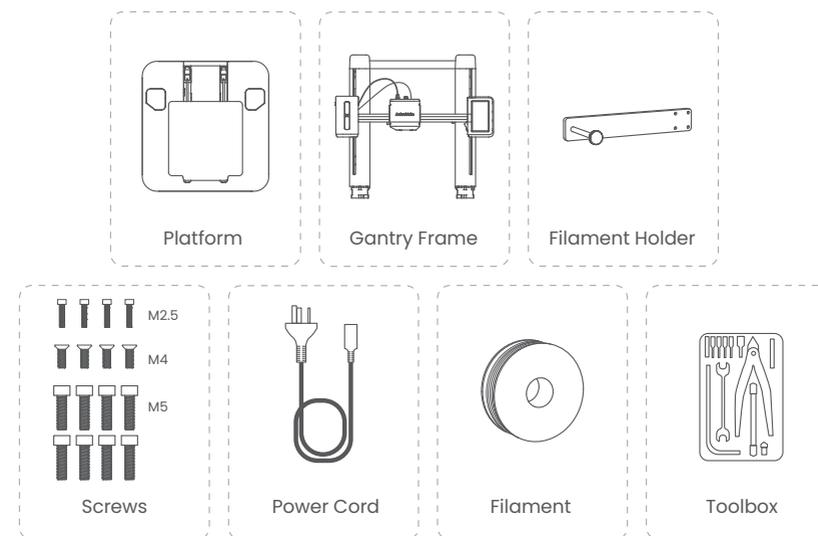


CAUTION - Hot parts. Do not touch.

- Do not use the product in any way other than described herein in order to avoid personal injury or property damage.
- User should comply with the laws and regulations of his/her corresponding country and region where the equipment is located (used), abide by professional ethics, pay attention to safety obligations, and strictly prohibit the use of our products or equipment for any illegal purposes. Our company will not be responsible for any violators' legal liability under any circumstances.

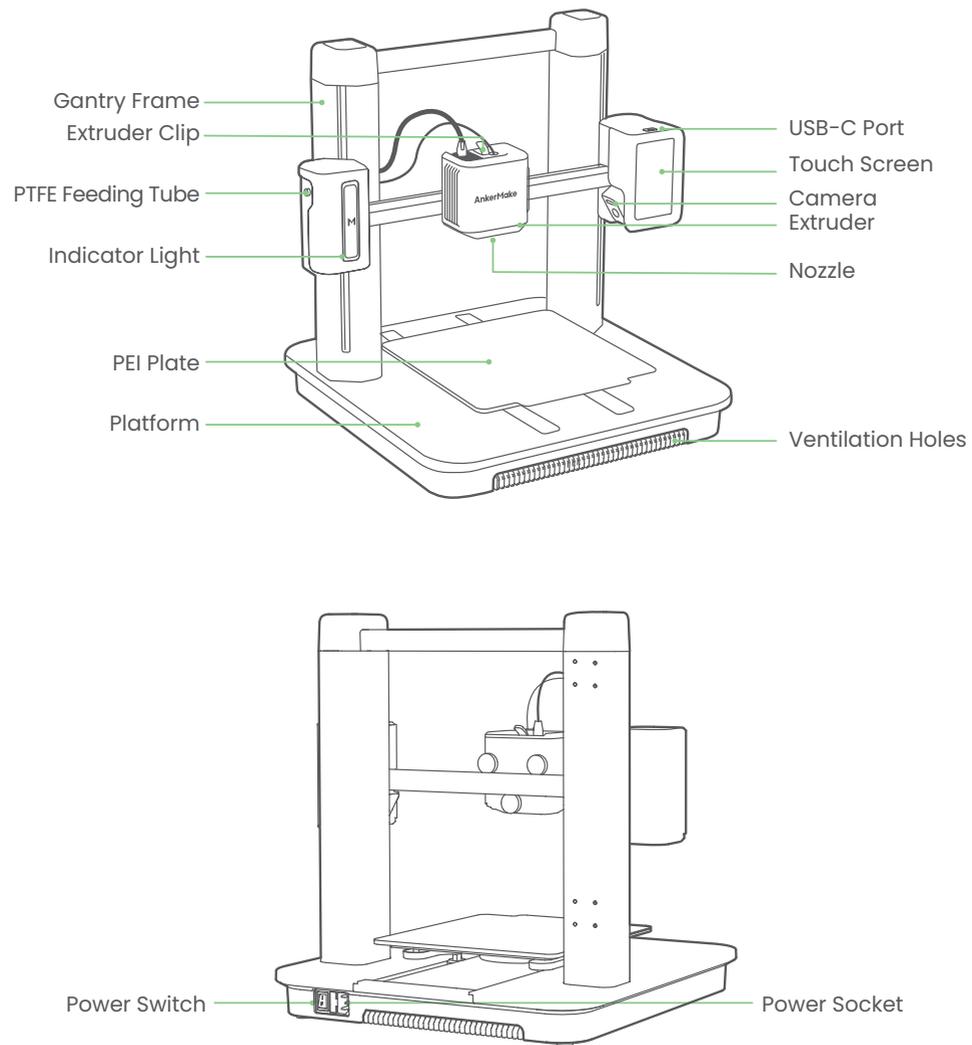
What's in the Box

Check if all items below are included while unboxing. If anything is missing, please contact our customer service.



The power cord plug may vary by country or region.

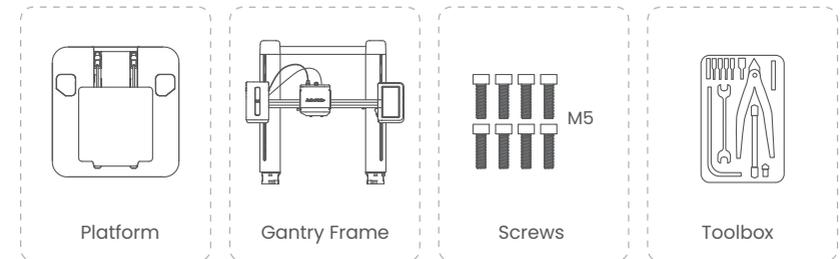
At a Glance



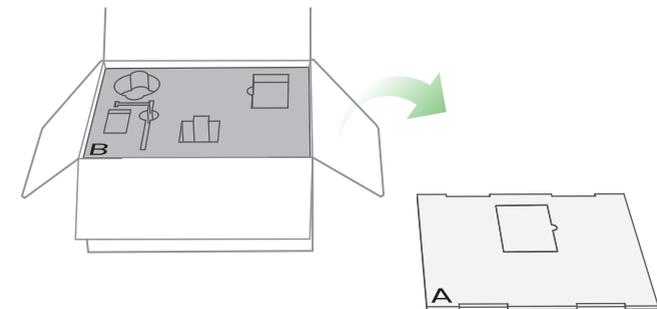
Assembling the Printer

Step 1. Installing Gantry Frame

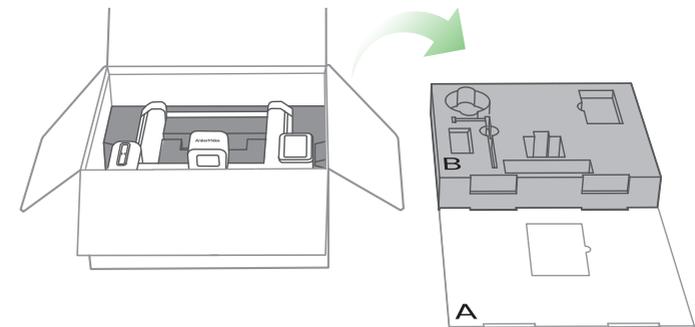
What You Need



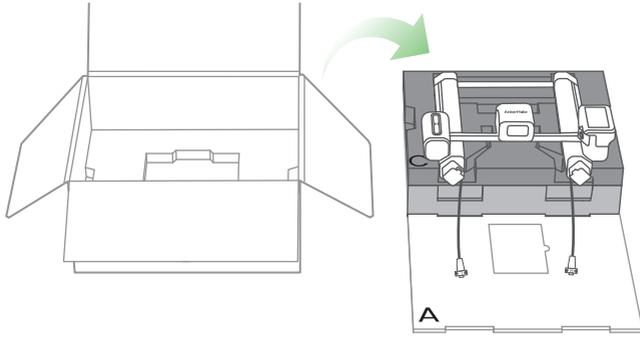
1 Open the box, then place the **foam cover (A)** on a flat, stable surface.



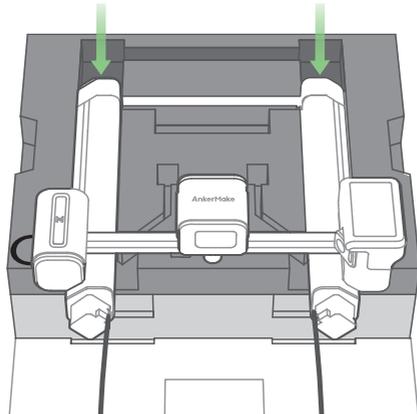
2 Take out all the accessories in the **foam (B)**, then place the **foam (B)** next to the **foam cover (A)** as support.



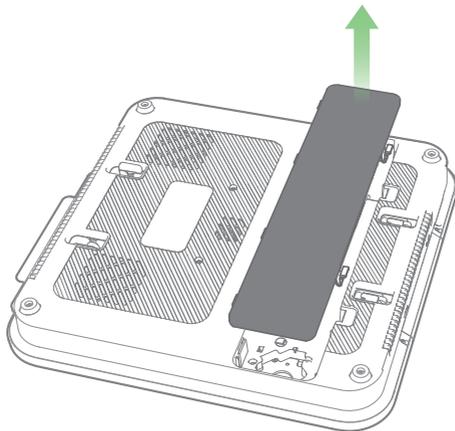
3 Take out the gantry frame with its **packaging foam (C)** and place it on the **foam (B)**.



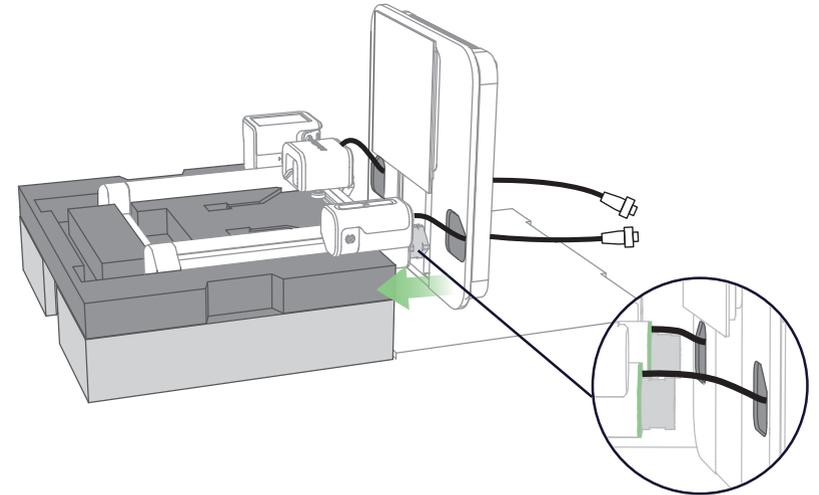
4 Move the gantry frame as shown below.



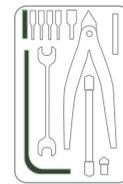
5 Detach the bottom cover from the platform.



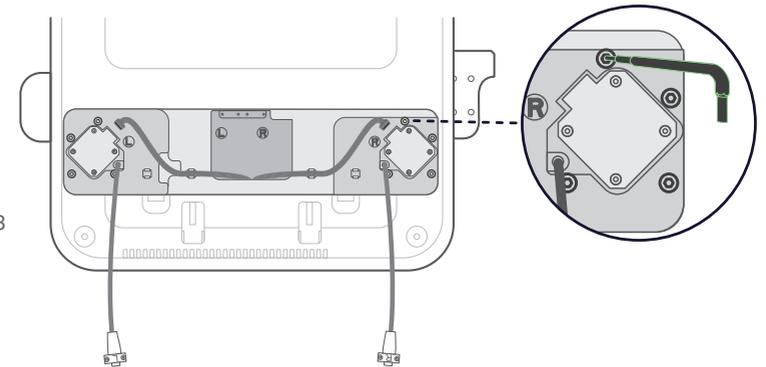
6 Route the USB-C cables through the holes, then insert the two supports of the gantry frame into the base holes.



7 Fasten 8 screws into the platform to firmly fix the gantry frame.

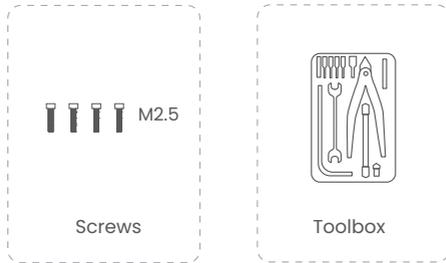


⊙ — M5×8

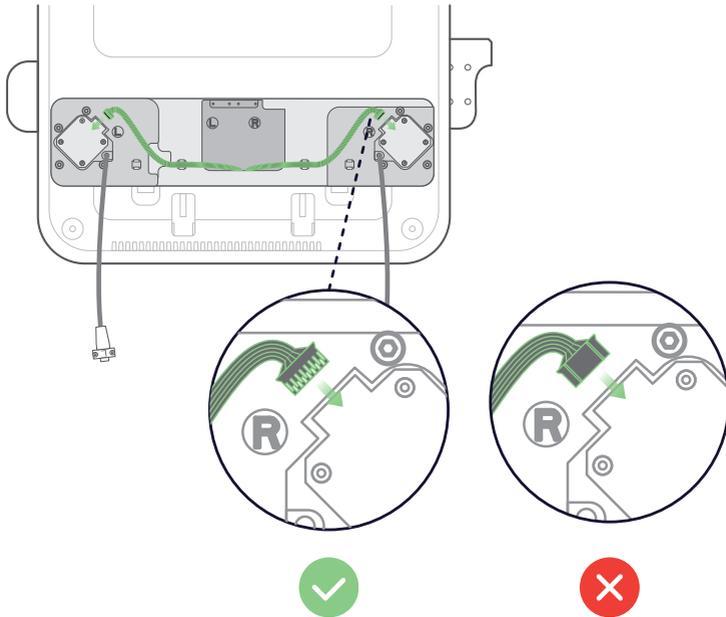


Step 2. Wiring

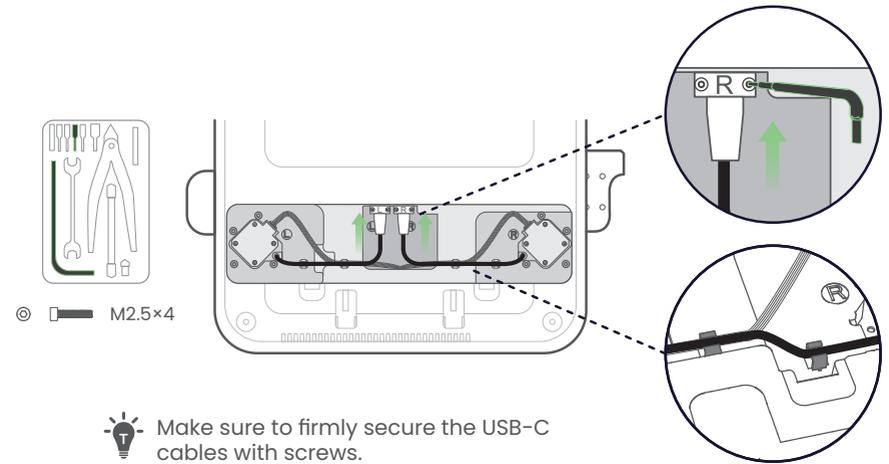
What You Need



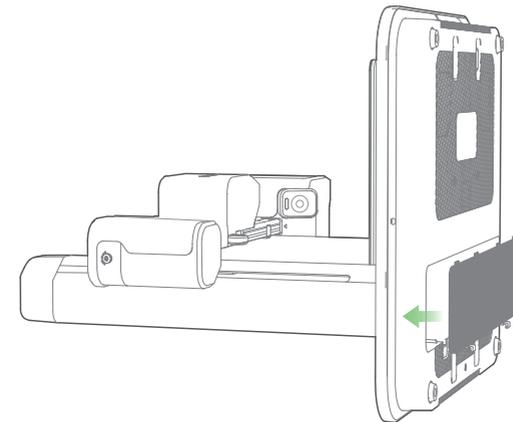
- 1 Connect the motor wires and make sure that the connector's pin side is facing outside.



- 2 Connect and secure the USB-C cables with screws.



- 3 Put the bottom cover back onto the platform.



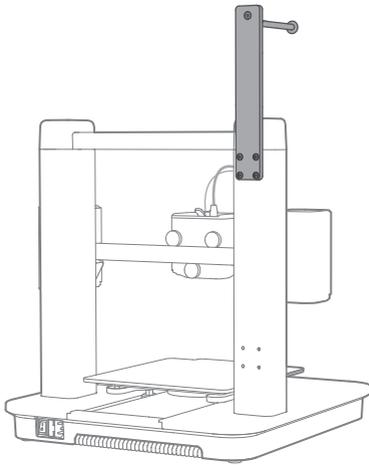
Step 3. Installing Filament Holder

What You Need

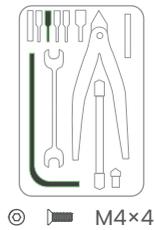
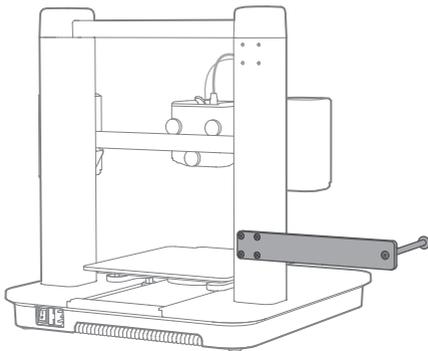


Secure the filament holder with screws.

Option 1

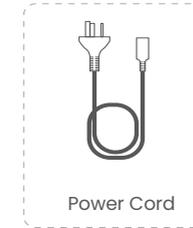


Option 2



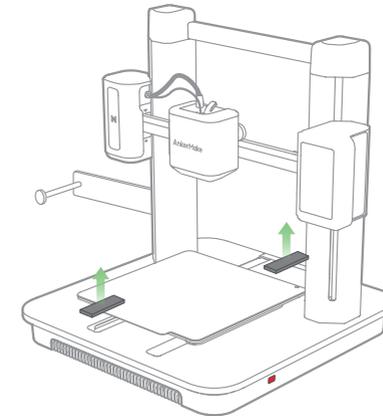
Step 4. Connecting to Power

What You Need

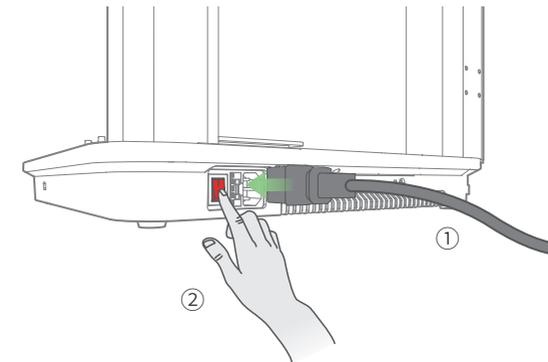


1 Check if the voltage (115V for the USA, Canada and Japan; 230V for the EU) matches and remove the foam from the platform.

💡 Visit [ankermake.com/support](https://www.ankermake.com/support) to learn how to switch voltages.



2 Connect the printer to a power outlet with the power cord, then switch on the printer. The power light will turn steady red.

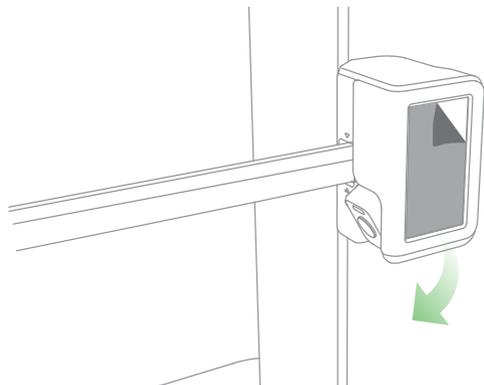


3 Follow instructions on the touch screen to complete the initial setup.

Leveling Heatbed

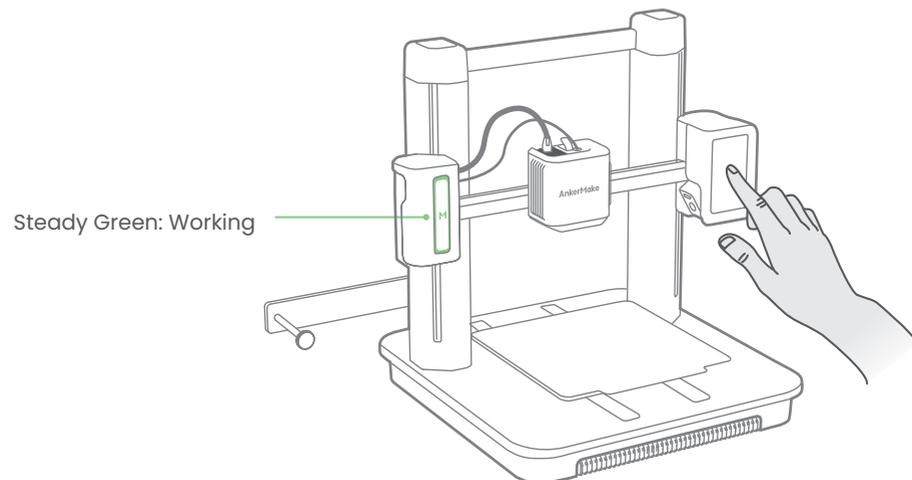
The heatbed calibration is the most important step for successful printing as it ensures part adhesion on the first layer. Ideally, the distance between the nozzle and the heatbed is constant, but it varies at different positions, which could cause warping on prints or even a complete failure.

- 1 Tear off the protective films on the touch screen.



- 2 On the touch screen, follow the onscreen instructions to complete the leveling and other operations.

⚠️ Avoid moving the printer during the auto-leveling process.



💡 You can tap **Skip**, but make sure to level the heatbed before the first use.
Please set up the system in the AnkerMake app while waiting for leveling to finish.

AnkerMake App

The AnkerMake app enables you to try the best of this 3D printer and enhances your experience.

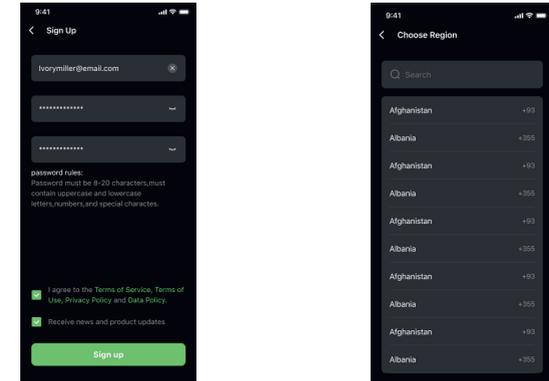
- The app will update from time to time.

Functions	Description
Bluetooth Connection	Connects the 3D printer to your phone via Bluetooth.
Multi-Terminal Connection	Connects the 3D printer to Wi-Fi to enable remote wireless operation.
Device Sharing	Share the 3D printer with others (Up to 2 persons).
Remote Controls	Remotely control the 3D printer, including remote printing, temperature adjustment during printing, network switch, renaming, and more.
Remote Printing	Remotely operate the printing work, enable one-key printing or remotely print the local files.
Live Video	Streams live video.
Time-Lapse Video	Synthesizes time-lapse short video using photos taken during printing.
AI Monitoring	Intelligently monitors the printing process for error conditions.
Warning Sending	Sends warning messages during printing.

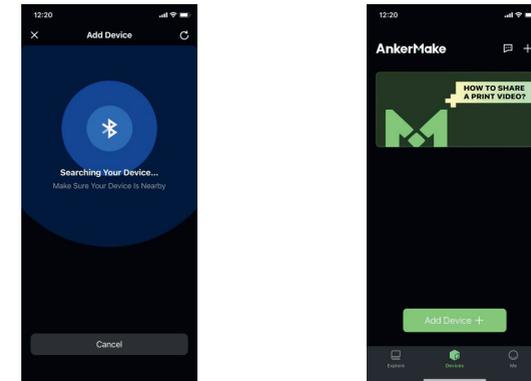
- 1 Download and install the AnkerMake app from App Store (iOS devices) or Google Play (Android devices).



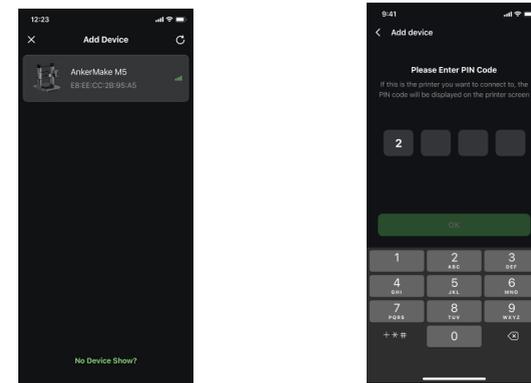
- 2 When you sign up for an account, you are requested to choose your country or region.



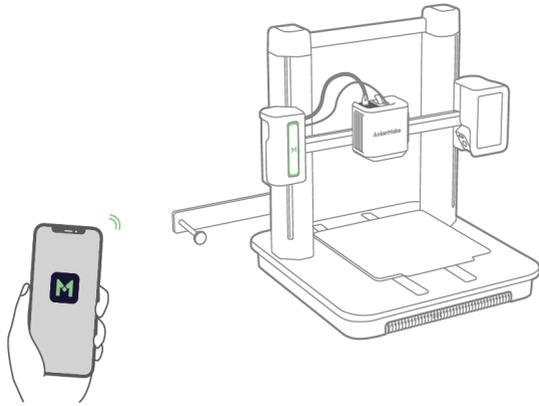
- 3 Add device. Make sure your phone's Bluetooth is enabled and close to your AnkerMake M5.



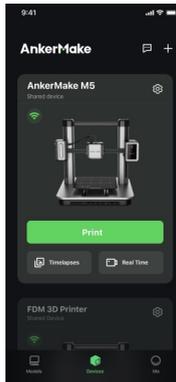
- 4 Add AnkerMake M5 from the device list and enter the PIN code that is displayed on the printer's touch screen.



- 5 Connect your AnkerMake M5 to Wi-Fi and rename it.
- Any Wi-Fi that needs authentication is not supported like the public Wi-Fi in airports, subways, hotels, etc. It only supports 2.4GHz network.

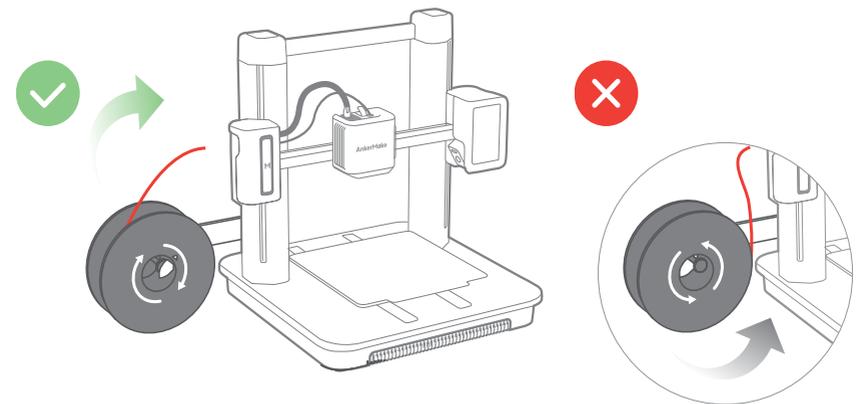
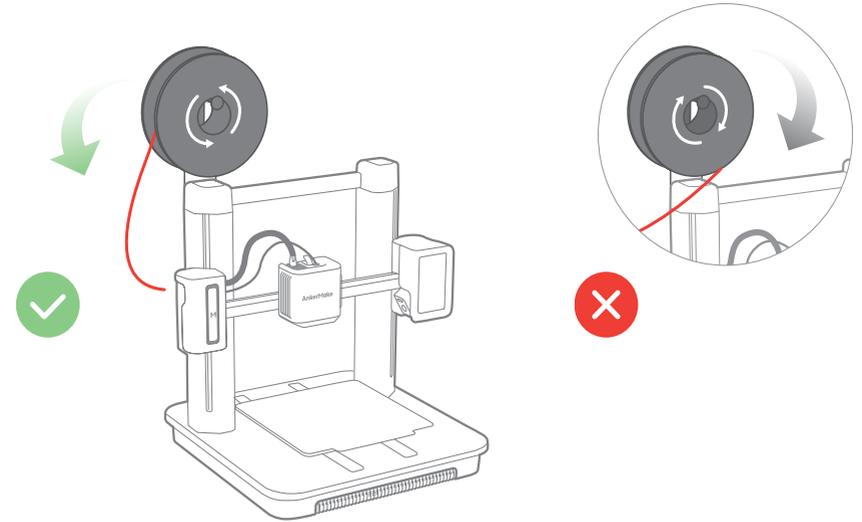


- 6 Now access the home page of AnkerMake M5.

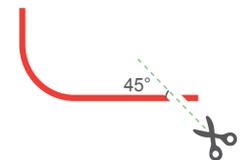


Loading Filament

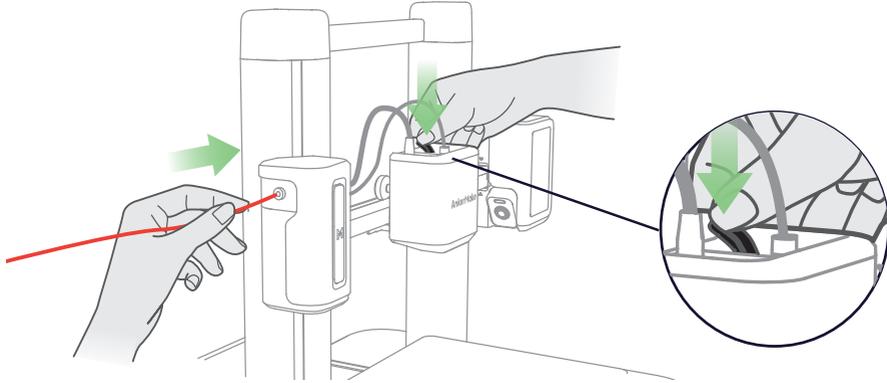
- 1 Place the filament onto the holder.



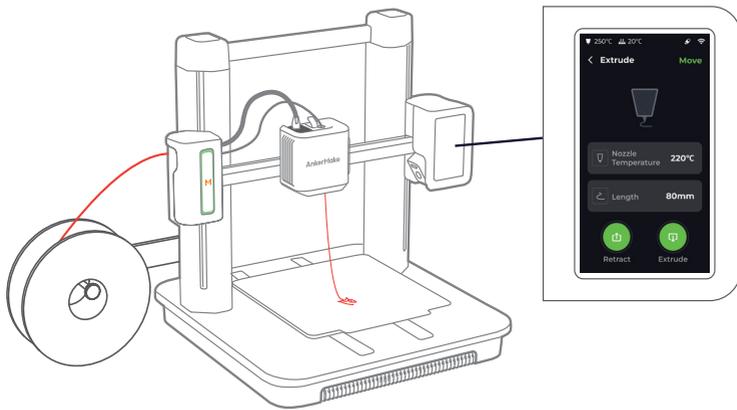
- 2 Straighten the filament at least 0.78 inches / 2 cm and cut the tip of the filament at a 45° angle.



3 Insert the filament. Then press and hold the extruder clip while continuing to insert the filament. Stop when you feel some resistance.



4 On the touch screen, tap **Control > Extrude > Load**. Wait until filament flows out of the nozzle, then tap **Stop**.



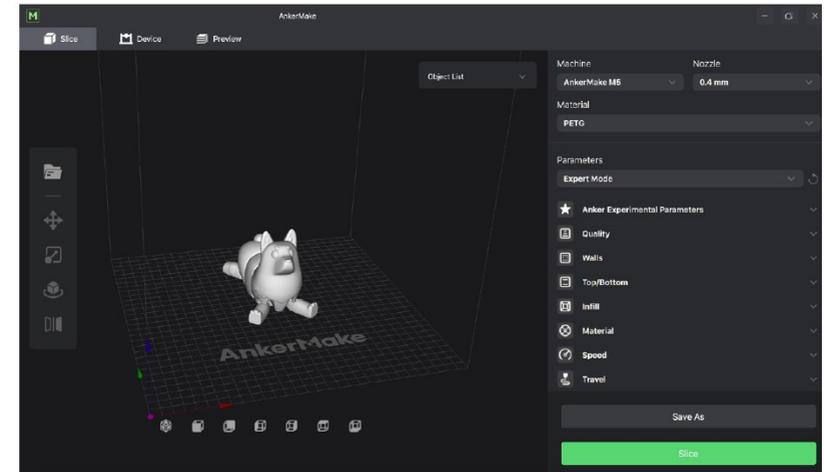
	Indicator Light*	Description
	Flashing Orange Slowly	Heating Up
	Fading Green Repeatedly	Printing
	Flashing Red	Alert
	Steady Green	Normal

Installing the AnkerMake Slicer

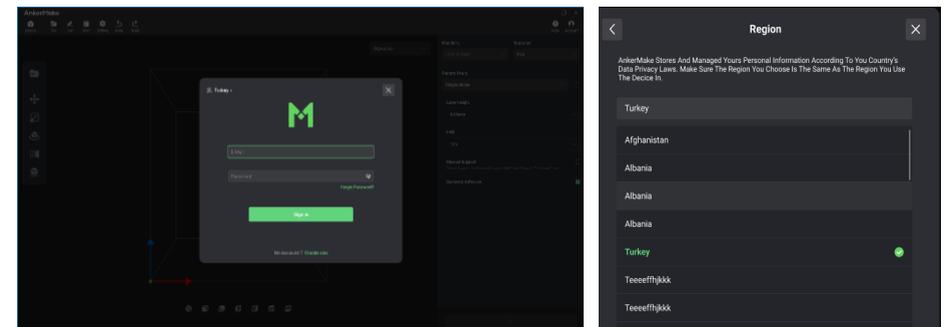
For the best printing experience, download and install the AnkerMake Slicer to your computer from



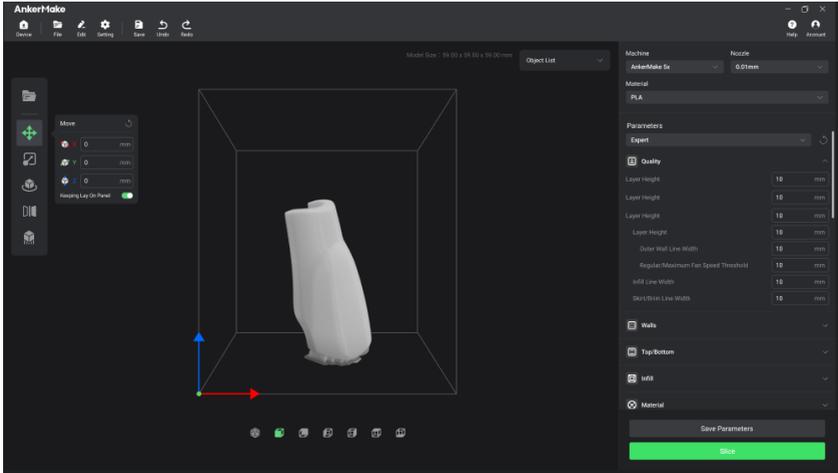
💡 The AI recognition capabilities will be not available when the printer works with other 3D slicer software, such as Cura.



1 When you sign up for an account, you are requested to choose your country or region.

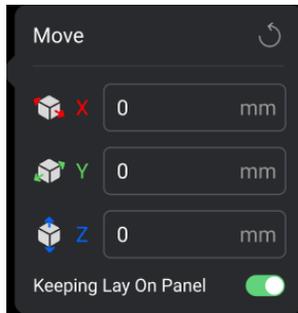


2 Import a file to be sliced.

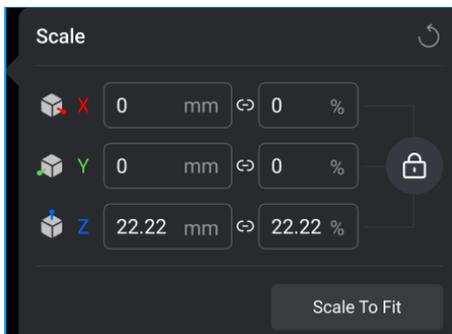


3 Operating Interface

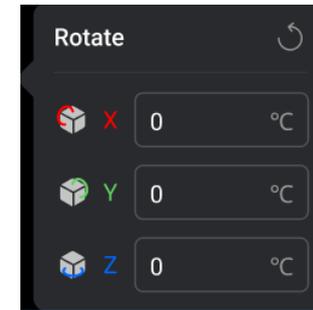
- Move: Choose the direction of movement, then input a specific value or choose a preset value for the distance of movement.



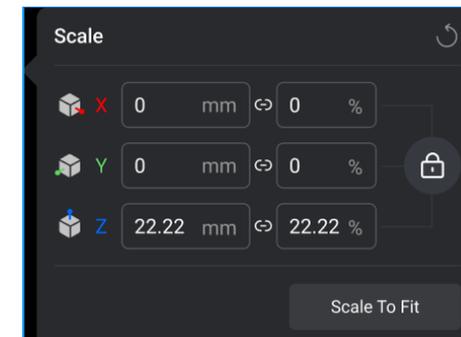
- Scale: Choose a specific axis for scaling, then input a specific scaling factor or choose a preset value.



- Rotate: Input a specific value or choose a preset value for rotation axes.

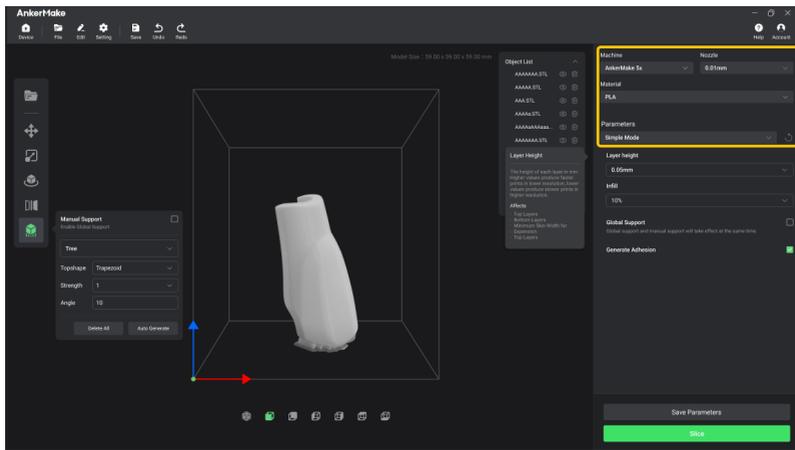


- Mirror: Choose a specific axis for mirroring.



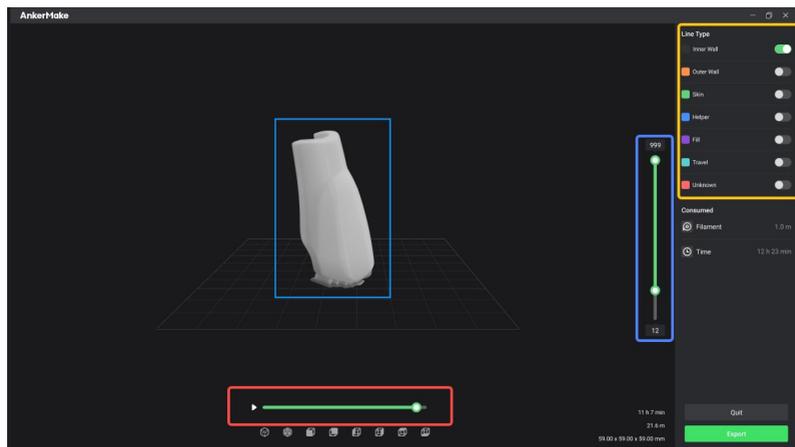
4 Select your device, materials and preset parameters to slice.

	Easy Mode	Professional Mode
Definition	<ul style="list-style-type: none"> • Get started quickly. • Built-in profile. 	<ul style="list-style-type: none"> • All parameters can be customized to meet professional requirements. • Meet all slicing requirements.
Materials Supported	<ul style="list-style-type: none"> • PLA+, ABS, PETG, TPU by default. • Customized materials. 	
Adjustable Parameters	Layer height, Infill type, Global support, General Adhesion.	All



5 Slice, preview and export a file with Gcode format.

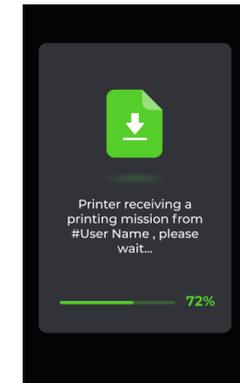
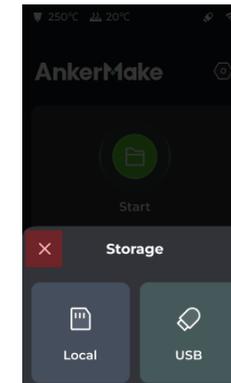
- Yellow Frame: Shows different structures.
- Red Frame: Scans planning path of current layer.
- Blue Frame: Previews different heights.



Importing Files

You have three options for importing files to be printed.

- 1 Plug your USB flash drive that stores files into the USB-C port, then tap **Print** > **USB** and select a file to print.
- 2 Transfer the Gcode file to this device through the AnkerMake app, then tap **Print** > **Local** and select a file to print.
- 3 Transfer the Gcode file to this device through the AnkerMake Slice software, then tap **Print** > **Local** and select a file to print.



💡 No documents can be received during printing.

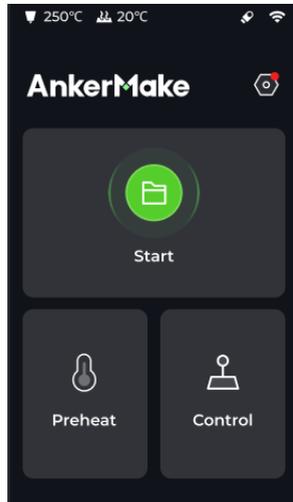
Printing

On the touch screen or in the AnkerMake app, select a file from **Local/Internal** or **USB** to start printing, then follow the onscreen instructions to complete the printing. You can also start printing via the AnkerMake Slicer.

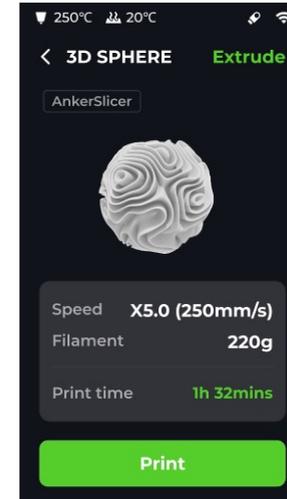


- Always check and update the firmware to the latest version before use.
- Make sure that the 3D printer is placed on a flat, stable surface.
- The recommended ambient temperature is 59°F-95°F/15°C-35°C and the relative humidity should be ranged from 30% to 70%.
- When printing with ABS materials, place the device in a well-ventilated area as it will emit pungent fumes.
- Remove any object from the PEI Plate before printing.
- The PEI Plate should not be cleaned with bare hands, as grease and sweat will impair print adhesion. Remove dust and grease from the PEI Plate by rubbing alcohol to enhance its adhesion. If necessary, wash the plate with soapy water and dry it completely.
- Check whether there is any wire residue in the groove of the Y-axis double belts before printing.

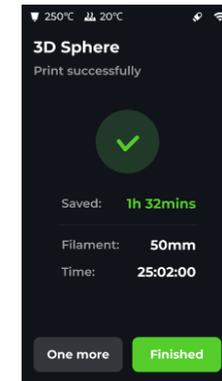
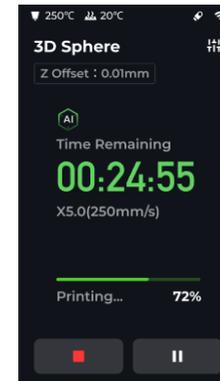
1 Go to **Start** and select the file to be printed for a preview.



2 Adjust the parameters.



3 Start printing.



4 When the printing is completed, remove the PEI flexible steel plate, then gently bend the folded steel plate to remove the workpiece.

5 Remove the model support.

Maintenance

If you encounter any failure or issue, it is imperative to fix it quickly and correctly. Regular maintenance can make your device last longer and avoid unnecessary outlays.

If you use the printer very frequently, smaller parts will wear and need replacing to keep it running to the best of its function. You are recommended to change them as soon as they need replacing, as this will prevent damage or wear to other parts.

Please visit support.ankermake.com for more detailed information whenever in need.

Spare Parts	Illustration	Potential Failure or Issue	Solutions
Nozzle		<ul style="list-style-type: none"> The nozzle is jammed by foreign objectives, and the extrusion is uneven. The nozzle is blocked and nothing can be extruded. 	<ul style="list-style-type: none"> Regular Maintenance https://support.ankermake.com/s/article/Routine-Maintenance-of-Nozzles Spare Part Replacement <p>Video: https://support.ankermake.com/s/article/How-to-Exchange-the-Nozzles</p> <p>Article: https://ankertechnologycompanyltd.my.site.com/ankermakerenexternal/s/article/How-to-Replace-the-Nozzle</p>
Hot End		<ul style="list-style-type: none"> Hot end jam. Malfunction. Abnormal temperature display. 	<p>Video: https://support.ankermake.com/s/article/How-to-Replace-the-Hotend</p> <p>Article: https://ankertechnologycompanyltd.my.site.com/ankermakerenexternal/s/article/How-to-Replace-the-Hotend-of-M5</p>
Silicone Shell		Cracked.	Replace with a new one.
Extrusion Motor / Reduction Gear		Debris buildup causes insufficient extrusion or nozzle jams.	https://support.ankermake.com/s/article/Maintenance-of-extrusion-motor-reduction-gear
X/Y-axis Belts		<ul style="list-style-type: none"> Sounds abnormal noise in the direction of the X/Y-axis. Misplacement issue of the print model. 	<p>Video: https://support.ankermake.com/s/article/X-and-Y-Axis-Belt-Adjustment</p> <p>Article: https://support.ankermake.com/s/article/How-to-Adjust-Belts-on-the-X-and-Y-Axis</p>

Spare Parts	Illustration	Potential Failure or Issue	Solutions
Eccentric Nuts of the Extruder and Printing Platform		<ul style="list-style-type: none"> Sounds abnormal noise when the X-axis moves. The nozzle vibrates. 	<p>Video: https://support.ankermake.com/s/article/V-Wheel-Adjustment</p> <p>Article: https://support.ankermake.com/s/article/How-to-Adjust-the-Eccentric-Nut-of-the-Extruder-and-Printing-Platform#content5</p>
V-Wheel		<ul style="list-style-type: none"> Fuzzy and frayed. Wears. Sounds abnormal noise or vibrates when working. 	<p>Video: https://support.ankermake.com/s/article/How-to-Replace-the-V-Wheel-of-X-Axis https://support.ankermake.com/s/article/How-to-Replace-the-V-Wheel-of-Y-Axis</p> <p>Article: https://support.ankermake.com/s/article/How-to-Replace-the-V-Wheel-of-X-and-Y-Axis</p>

Troubleshooting

Common Failures or Issues	Illustration	Causes	Solutions
No Filament Extruded		<ul style="list-style-type: none"> Filament issue (depleted, entangled, broken, unclean). Nozzle clogged. Gcode file issue. 	https://support.ankermake.com/s/article/How-to-Fix-the-Extruder-Filament-Feeding-Issue
Initial Layer Not Sticky		<ul style="list-style-type: none"> PEI plate is stained with dust and grease. Abnormal auto-leveling. Incorrect Z offset value. Printing overspeed. Low temperature of the nozzle and hot bed. 	https://support.ankermake.com/s/article/How-to-Fix-the-Initial-Layer-Is-Not-Sticky-Issue
Flowing or Falling		<ul style="list-style-type: none"> The filament is wet, resulting in poor print quality. The E-axis retraction distance is short or the retraction speed is slow. The printing temperature is too high, causing the filament to flow and fall due to gravity during idle driving. The floating distance is too long, causing the filament to fall due to gravity. The nozzle is worn. 	https://support.ankermake.com/s/article/How-to-Fix-Filament-Drawing-Sagging-on-the-Print-Model
Layers Dislocation		<ul style="list-style-type: none"> The acceleration and jerk speed parameters are set beyond the optimal printing range. Caused by mechanical movement during printing process. The small-angle suspended surface structure of the print model is not conducive to high-speed printing, resulting in layers dislocation. 	https://support.ankermake.com/s/article/How-to-Fix-the-Layer-Shifting-Issue-of-the-Print-Model
Nozzle Jams		<ul style="list-style-type: none"> Unclean filament and dust cause nozzle jams. Unsuccessful printing causes nozzle jams. 	https://support.ankermake.com/s/article/How-to-Fix-the-Burrs-and-Residues-in-Nozzles

Common Failures or Issues	Illustration	Causes	Solutions
Spaghetti Effect		<ul style="list-style-type: none"> Filament entangled. The initial layer of the print model is not sticky. Partial warping of the print model causes the collision of the nozzle and movement of the print model. 	https://support.ankermake.com/s/article/How-to-Fix-the-Spaghettification-Issue

Specifications

- Specifications are subject to change without notice.

General	
Power Input	AC 100~240V 50/60Hz
Power Consumption	350 W
Printing Parameters	
Print Volume (LxWxH)	235×235×250 mm ³
Standard Speed	250 mm/s, 2,500 mm/s ² (Acceleration)
Operation Speed	50-250 mm/s
Print Precision	+/-0.1 mm (50x50x50 mm Box)
Nozzle Diameter	0.4 mm (Compatible with 0.2/0.6/0.8 mm)
Filament Diameter	1.75 mm
Print Materials	PLA/PETG/TPU/ABS
Printing Features	
Extruder	Ultra Direct Extruder
Heated Plate	PEI Soft Magnetic Steel
Extruder Temperature	Maximum 500°F (260°C)
Heating Plate Temperature	Maximum 212°F (100°C)
Auto-Leveling	Auto 49 (7×7) Points
Filament Sensor	Broken Material Detection
Resume Printing	Supported
Operation Noise Level	50 dB
Interactive Features	
CPU	Core: Dual XBurst®(1.2GHz) + XBurst®0(240MHz) Marlin: STM32F407
Operation System	Linux
Connection	Wi-Fi (App, AnkerMake Slicer), USB Flash Drive; OTA Upgrade
AI Recognition Camera	1080p Image Match, Real-Time Monitoring Stream: 1MB Timelapse Videos Supported at 1080p for MP4 Files. Frame Rate: 30fps
Night Vision	Infrared + White Light
Remote Control	AnkerMake App, AnkerMake Slicer; The Google Assistant, Amazon Alexa
Slicer Software	AnkerMake Slicer (macOS, Windows), Ultimaker Cura, PrusaSlicer
Supported File Formats	STL, OBJ
Size (without Filament Holder)	502x438x470 mm
Net Weight	27.8 lb / 12.6 kg (varies by region)
Gross Weight	34.6 lb / 15.7 kg (varies by region)

Notice

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and receiver. (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. (4) Consult the dealer or an experienced radio/TV technician for help.

FCC Radio Frequency Exposure Statement

The device has been evaluated to meet general RF exposure requirements. The device can be used in fixed/mobile exposure condition. The min separation distance is 20cm.

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

The following importer is the responsible party

Company Name: Fantasia Trading LLC

Address: 5350 Ontario Mills Pkwy, Suite 100, Ontario, CA 91764

Telephone: 1-800-988-7973

IC Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil n' doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

IC RF Statement:

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

Lors de l'utilisation du produit, maintenez une distance de 20cm du corps afin de vous conformer aux exigences en matière d'exposition RF.

 This product complies with the radio interference requirements of the European Community.

Declaration of Conformity

Hereby, Anker Innovations Limited declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. For the declaration of conformity, visit the Web site: <https://ankermake.com>.



This product complies with the radio interference requirements of the United Kingdom

Declaration of Conformity

Hereby, Anker Innovations Limited declares that this device is in compliance with Radio Equipment Regulations 2017(SI 2017/1206). The full text of the UK declaration of conformity is available at the following internet address: <https://ankermake.com>.

RF exposure information:

The Maximum Permissible Exposure (MPE) level has been calculated based on a distance of d=20cm between the device and the human body. To maintain compliance with RF exposure requirement, use product that maintain a 20cm distance between the device and human body. Frequency bands and power are as below:

Function	Bands	Operation Frequency	Max.Power
Wi-Fi	2.4GHz	2412-2472MHz	EIRP 19.10 dBm
Bluetooth	2.4GHz	2402-2480 MHz	EIRP 8.0 dBm

The following importer is the responsible party (contract for EU matters):

Anker Innovations Deutschland GmbH | Georg-Mueller-Strasse 3, 80807 Munich, Germany

The following importer is the responsible party (contract for UK matters):

Anker Technology (UK) Limited | GNR8, 49 Clarendon Road, Watford, Hertfordshire, WD17 1HP, United Kingdom



Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.



This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Proper disposal and recycling helps protect natural resources, human health and the environment. For more information on disposal and recycling of this product, contact your local municipality, disposal service, or the shop where you bought this product.

Trademarks



The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Anker Innovations Limited is under license. Other trademarks and trade names are those of their respective owners.



12-month limited warranty | 12 Monate eingeschränkte Garantie | Garantía limitada de 12 meses | Garantie limitée de 12 mois | 12 mesi di garanzia limitata | 12 meses de garantia limitada | 通常保証 12 ヶ月 | 12 개월 제한 보증 |

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