



Select Mini Pro 3D Printer



P/N 33012

User's Manual

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SAFETY WARNINGS AND GUIDELINES

- Be careful not to damage the printing surface on the build plate.
- Do not remove the insulating tape on the extruder nozzle.
- Take care to avoid touching hot parts, including heat blocks, extruder nozzle, extruded filament, and the heated build plate.
- Do not wear gloves when operating or repairing to avoid entanglement.
- Keep the printer and all accessories out of reach of children.
- Do not remove or disconnect the USB cable when printing from a computer.
- Do not pull or twist the black cable at any time.
- Do not force or tear anything when during unpacking and setup. This may cause damage to the printer and/or its accessories.
- Do not reach inside the printer during operation.
- Always allow the printer and extruded filament to cool before reaching inside.
- Ensure that the printer is turned off and unplugged from its power source before making repairs or performing service.
- Do not install this device on an unstable surface where it could fall and cause either personal injury or damage to the device and/or other equipment.
- Do not subject the product to extreme force, shock, or fluctuations in temperature or humidity.
- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power outlet and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Use only in a well-ventilated area. Do not use in close, confined spaces.

- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device.
- Unplug this device from the power source when not in use.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head or adapter body.

INTRODUCTION

Thank you for purchasing this 3D printer from Monoprice! This printer features a single extruder, which is capable of printing in PLA, ABS, and other materials. You can print from a Windows® or Mac® PC using a USB connection or can print from 3D model files stored on a microSD™ card, without the need for a PC connection of any kind. This printer is easy to setup and easy to use following the instructions in this manual.

FEATURES

- Automatic or manual bed leveling
- Live leveling allows for gap adjustment while printing
- LCD touch screen interface
- Single extrusion print head
- Can print PLA, ABS, and other materials
- Open frame design for ease of use and maintenance
- Includes microSD™ card with Cura, Repetier-Host, and a sample 3D model
- Can print using USB connection, Wi-Fi® connection, or microSD card

CUSTOMER SERVICE

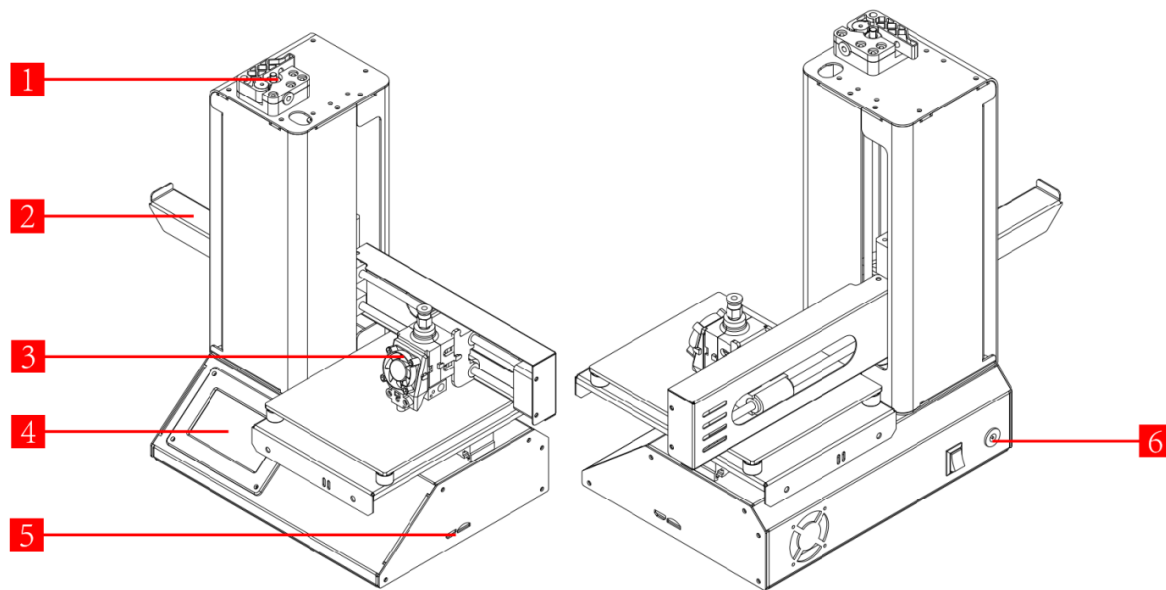
The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website **www.monoprice.com** during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at **support@monoprice.com**

PACKAGE CONTENTS

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 1x 3D printer
- 1x Filament rack
- 1x Plastic scraper
- 1x USB cable
- 1x MicroSD™ card
- 1x Hex wrench
- 1x Power adapter
- 1x AC power cord (NEMA 1-15 to IEC 60320 C7)

PRODUCT OVERVIEW



1. Feed Mechanism
2. Filament Rack
3. Extruder
4. LCD Touch Screen
5. Micro USB and MicroSD Ports
6. Input Power Jack and Power Switch

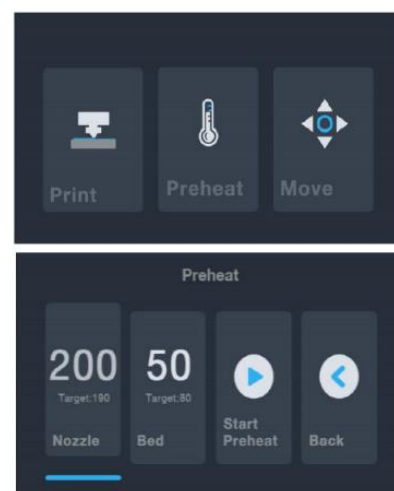
SETUP

Perform the following steps to prepare the printer for use.

1. Remove the printer from its packaging and place it on a flat, stable surface with plenty of ventilation and a nearby AC power outlet.
2. Open the Accessories box and remove the Filament Rack. Slide the tab at the flat end into the slot on the left side of the printer frame.
3. Ensure that the power switch on the rear panel is in the OFF position (**O** side depressed). Plug the AC Power Adapter into the power input jack on the printer. Next, plug C7 end of the included AC Power Cable into the C8 panel connector on the AC power adapter, then plug the other end into a nearby AC power outlet.
4. Insert the included microSD™ card into the slot on the right side of the printer.
5. Turn the printer on by depressing the **I** side of the power switch on the rear panel.




6. Once the printer has initialized and the home page is displayed, touch the **Preheat** button to enter the Preheat Menu.
7. Touch the **Nozzle** button, then set the temperature of the nozzle to the value appropriate for the type of filament being printed.
8. Touch the **Bed** button, then set the temperature of the build plate to the value appropriate for the type of filament being printed.

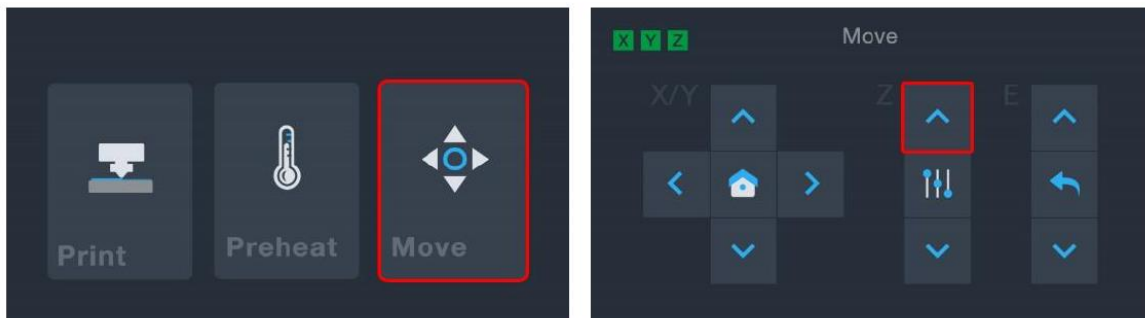


9. Touch the **Start Preheat** button to start preheating the nozzle and build plate. Once the target temperatures are reached, the button will change to **Stop Preheat** and the displayed nozzle and bed temperatures should be at or near your target values.

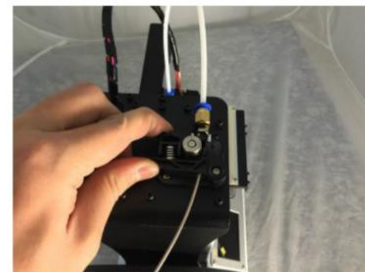
10. While the printer is heating, open your filament. Using a pair of scissors or side cutters, diagonally snip the end of the filament to make a point, as shown in the images below.




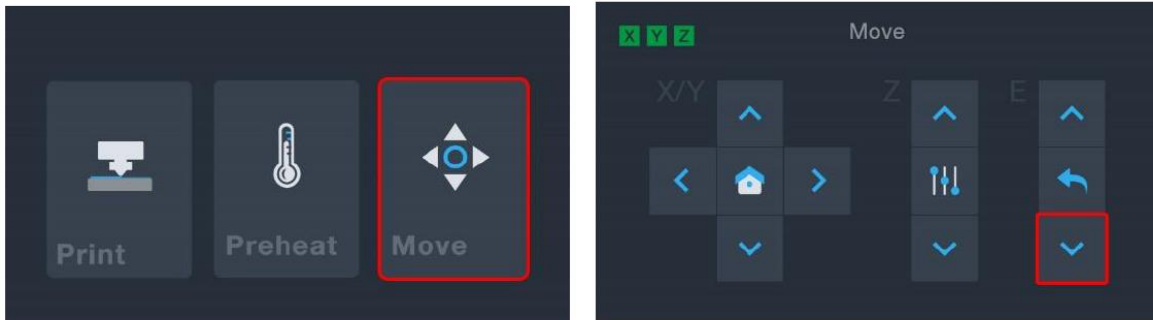
11. Touch the **Back** button on the Preheat Menu to return to the Main Menu, then touch the **Move** button on the Main Menu to enter the Move Menu. Touch the  button to raise the extruder above the build platform.




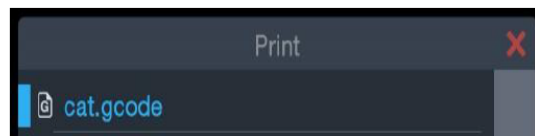
12. Place the filament reel on the filament rack on the left side of the printer.
13. While squeezing the lever on the feed mechanism, insert the filament and push it into the opening. Keep pushing until you feel resistance as it hits the extruder, then release the lever.



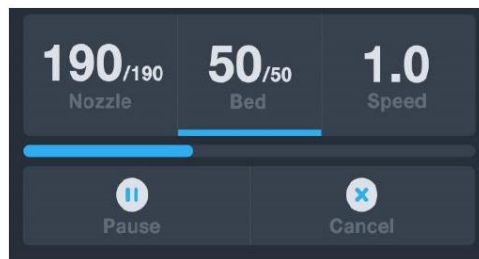
14. If the Main Menu is displayed, touch the **Move** button to enter the Move Menu. If already on the Move Menu, touch the  button (enclosed in red in the image below) to start feeding filament into the extruder. Continue touching the button until several centimeters of filament have been extruded.



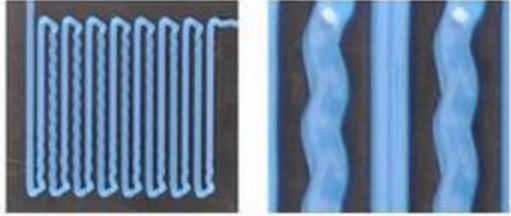
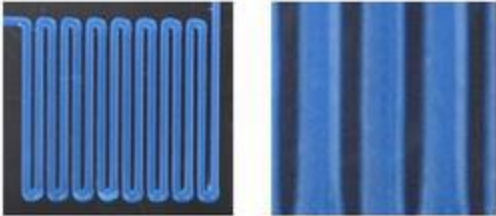
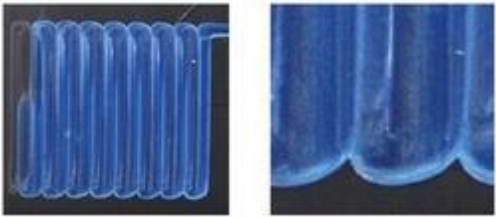
15. Using the included plastic scraper, clean the extruded filament from the nozzle and build platform.
16. Touch the  button to return to the Main Menu, then touch the **Print** button to display the contents of the microSD™ card. Touch the **cat.gcode** entry to begin printing the model.



17. After the first layer has been printed, touch the **Pause** or **Cancel** button to stop the print process.



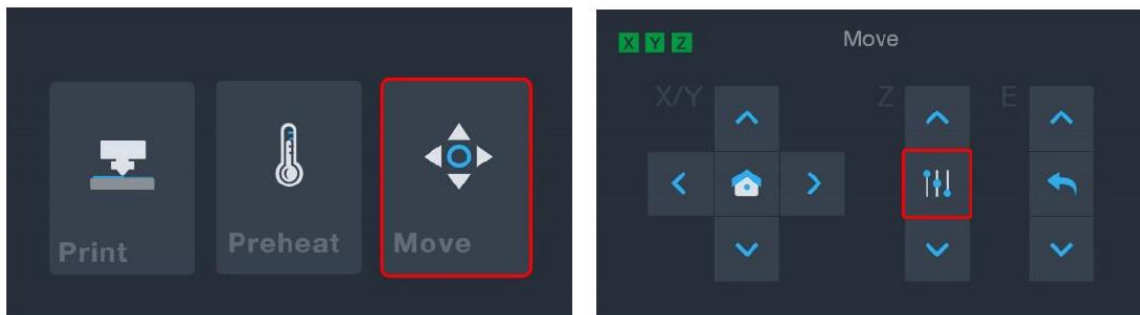
18. Compare the first layer with the images in the table below to determine whether the build platform needs to be leveled or not. If it does need adjustment, touch the **Cancel** button, then perform the steps in the *AUTO LEVELING* section.


Wrong		The nozzle is too far from the platform. This can result in the extruded material not sticking to the build platform.
Correct		The nozzle is at the correct height above the platform.
Wrong		The nozzle is too close to the platform. This can result in damage to the nozzle and build platform.

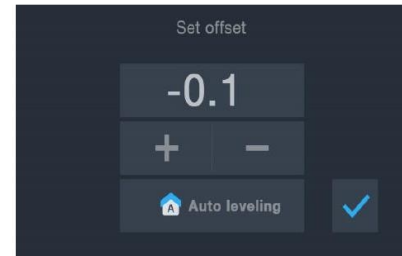
AUTO LEVELING

If the gap between the nozzle and the build platform is not correct, use the Auto Level function to adjust the gap. You will want to perform Auto Leveling after you unbox the printer or move it.

1. With the printer powered on and the Main Menu displayed, touch the **Move** button on the Main Menu, then touch the  button to enter the Set Offset Menu.

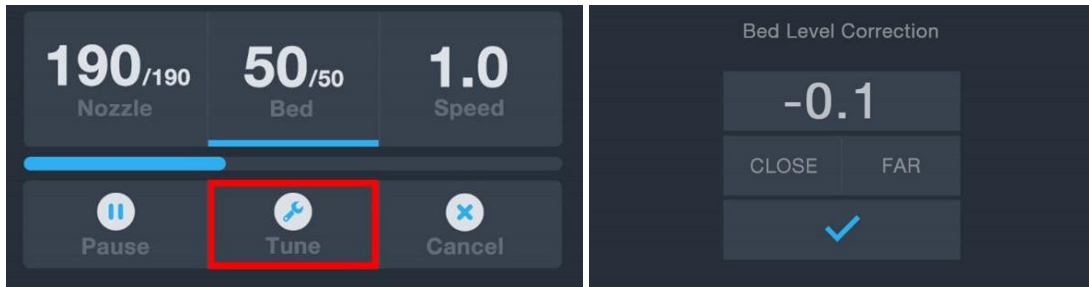


2. Touch the **Auto leveling** button. The printer will measure the distance between the build platform and the nozzle and will automatically set the gap to the proper value.
3. If you have added something to the build surface (e.g., glass sheet, steel sheet, etc.), you will need to account for the thickness of the surface to prevent the extruder from driving into it. With the ability to adjust the offset locally in the menu system, swapping surfaces is much easier than managing the process through software and sliced with the model. If you wish to adjust the gap, touch the + or - buttons. *Note that the offset must be less than zero.*
4. Once the gap is where you want it, touch the  button to save the data and exit the menu.



LIVE LEVELING

While printing the model, you can use this function to fine tune the gap between the nozzle and the bed. Touch the **Tune** button to enter the Bed Level Correction menu, then touch the **FAR** button to increase the gap between the nozzle and the bed or the **CLOSE** button to decrease the gap. *Note that the Bed Level Correction value must be less than zero.*



WI-FI SETUP

You can connect the printer wirelessly to a 2.4GHz Wi-Fi® network to print models from your Android™ or iOS® phone or tablet. Perform the following steps to setup the Wi-Fi connection for your device.

1. Download the free **MP 3D Printer WiFi Connect** app from the Google Play Store or from iTunes, depending on which type of mobile device you have.
2. Disconnect the USB cable from the printer. You cannot use USB and Wi-Fi connections at the same time.
3. Power on the printer.
4. Start the **MP 3D Printer WiFi Connect** app.
5. The SSID of your Wi-Fi network should be displayed on screen. If a different SSID is displayed, open your device's Wi-Fi settings and select the appropriate Wi-Fi network.
6. Enter your wireless password.
7. Press and hold the **Move** button on the Main Menu for 3 seconds. Release the button when **Smart config started** is displayed on screen.

8. Press the **Connect to WiFi** button on your mobile device. The connection will be completed within 10 ~ 60 seconds, the message **MP Select Mini Pro is now connected to Wi-Fi** will be displayed on your device's screen, and the IP address will be displayed at the top of the printer's LCD screen.

Note that you may have difficulty connecting to the Wi-Fi network if you have a 2.4GHz and 5GHz network with the same SSID. Try changing the SSID of the 5GHz network if this occurs. For best results, move the printer to a location closer to the Wi-Fi router or access point.

SOFTWARE INSTALLATION AND SETUP

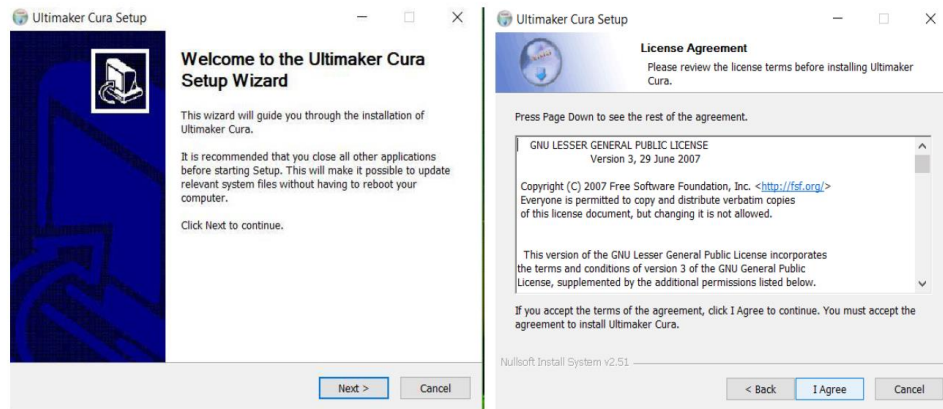
As you've seen, you can print a model directly from a gcode file on a microSD™ card and this is the preferred method, as it does not require a continuous connection to your computer. You can download gcode files to the microSD card and print them without having to build any model files.

However, you can create your own gcode files using an open source program, such as Cura or Repetier-Host, which are pre-installed on the microSD card that comes with the printer. These programs use MP Select Mini V2 models (typically .STL or .OBJ files) and, using machine specific information, generate a gcode file with detailed instructions for the printer to create the selected model. We recommend you start with Cura, since it includes a Slicing Engine.

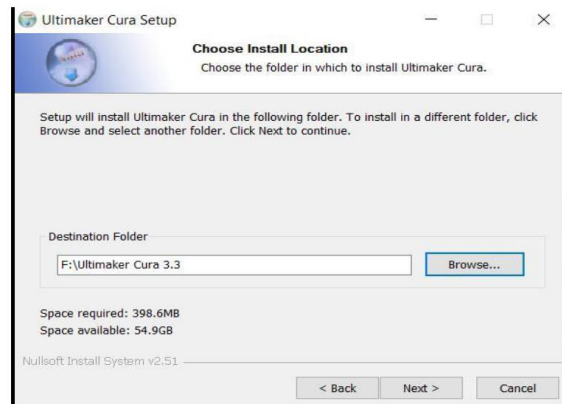
Installing Cura

1. Use a card reader to read the contents on the included microSD™ card. Locate and double-click the **Cura_3.3.1.exe** file to start the setup program.

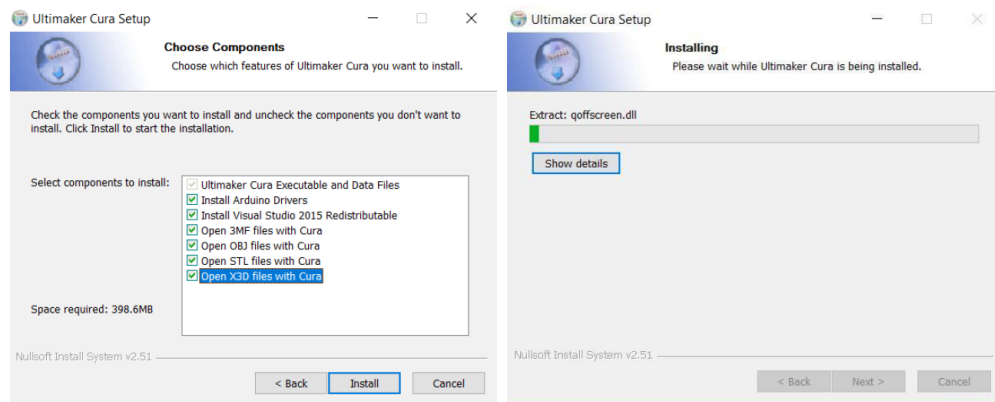
2. Click the **Next** button on the Welcome screen, then click the **I Agree** button on the License Agreement screen.



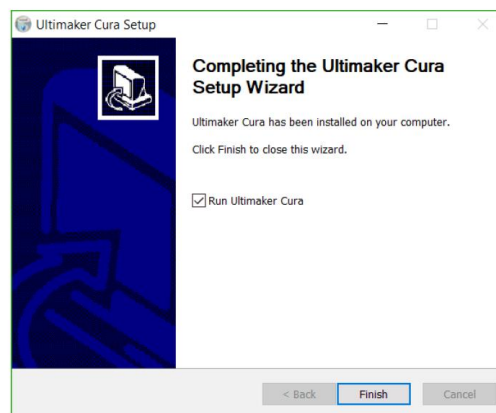
3. Use the file browser to select an install directory or accept the default directory (recommended). Click the **Next** button to continue.



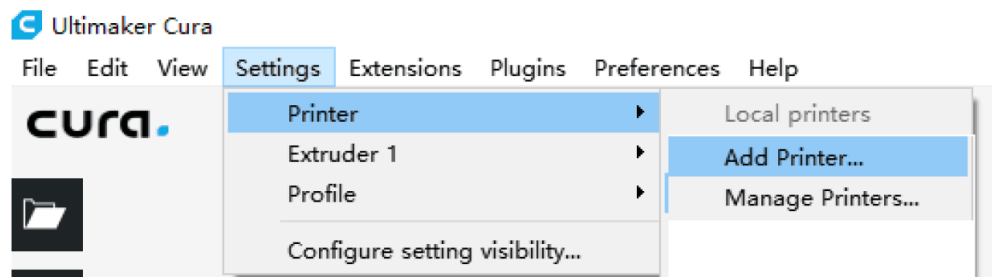
4. Ensure that all boxes are checked, then click **Install** to continue.



5. Click **Finish** to complete the installation and launch the Cura program.



6. Click **Printer > Printer > Add Printer...**



7. Click the **Other** option, then choose the **Monoprice Select Mini V2 (E3D)** entry. Click the **Add Printer** button to continue.

8. The Machine Settings screen will display. Click the **Finish** button to continue. You can now use Cura to print models and create gcode files for your printer.

Machine Settings

Printer Extruder

Printer Settings

X (Width) 120 mm

Y (Depth) 120 mm

Z (Height) 120 mm

Build plate shape Rectangular

☐ Origin at center

☒ Heated bed

G-code flavor Marlin

Start G-code

```
G21;(metric values)
G90;(absolute positioning)
M82;(set extruder to absolute mode)
M107;(start with the fan off)
G28;(Home the printer)
G92 E0;(Reset the extruder to 0)
G0 Z5 E5 F500;(Move up and prime the nozzle)
G0 X-1 Z0;(Move outside the printable area)
G1 Y60 E8 F500;(Draw a priming/wiping line to the r
G1 X-1;(Move a little closer to the print area)
G1 Y10 E16 F500;(draw more priming/wiping)
G1 E15 F250;(Small retract)
G92 E0;(Zero the extruder)
```

Printhead Settings

X min 20 mm

Y min 10 mm

X max 10 mm

Y max 10 mm

Gantry height 999999999 mm

End G-code

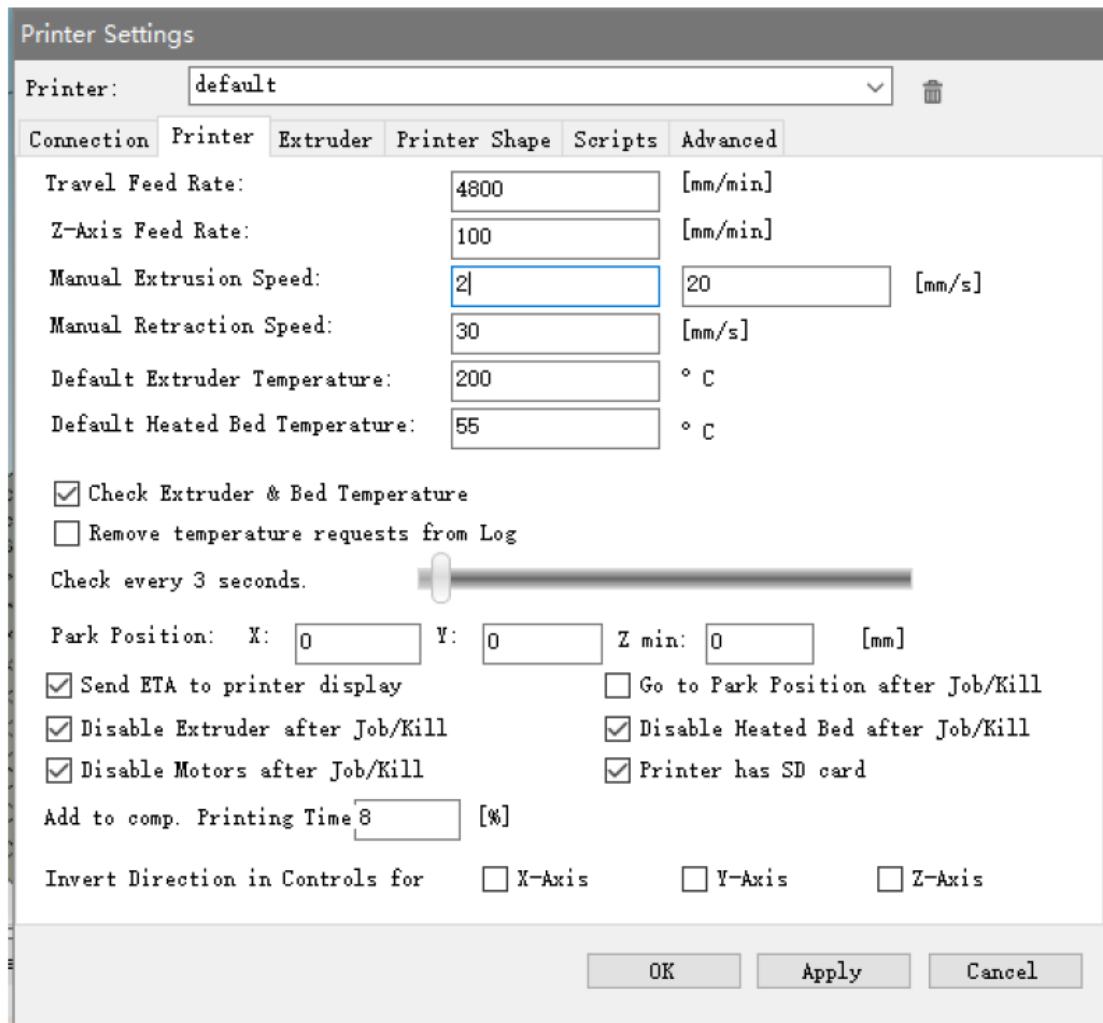
```
G0 X0 Y127;(Stick out the part)
M190 S0;(Turn off heat bed, don't wait.)
G92 E10;(Set extruder to 10)
G1 E7 F200;(retract 3mm)
M104 S0;(Turn off nozzle, don't wait)
G4 S300;(Delay 5 minutes)
M107;(Turn off part fan)
M84;(Turn off stepper motors.)
```

Back Finish Cancel

Congratulations, you have installed Cura and connected to your PC to your new 3D printer. Refer to Cura's documentation for operating instructions.

Repetier-Host

You can also install Repetier-Host from the file on the included microSD™ card. The screenshots below show the proper Repetier-Host settings to use for this printer.



The screenshot shows the 'Printer Settings' dialog box in Repetier-Host. The 'Printer' tab is selected, and the printer name is 'default'. The settings are as follows:

Setting	Value	Unit
Travel Feed Rate:	4800	[mm/min]
Z-Axis Feed Rate:	100	[mm/min]
Manual Extrusion Speed:	2	[mm/s]
Manual Retraction Speed:	30	[mm/s]
Default Extruder Temperature:	200	° C
Default Heated Bed Temperature:	55	° C

Check Extruder & Bed Temperature: ☒
Remove temperature requests from Log: ☐
Check every 3 seconds. (Slider set to 3)

Park Position: X: 0 Y: 0 Z min: 0 [mm]


Send ETA to printer display: ☒
Go to Park Position after Job/Kill: ☐
Disable Extruder after Job/Kill: ☒
Disable Heated Bed after Job/Kill: ☒
Disable Motors after Job/Kill: ☒
Printer has SD card: ☒

Add to comp. Printing Time: 8 [%]


Invert Direction in Controls for: ☐ X-Axis ☐ Y-Axis ☐ Z-Axis

Buttons: OK, Apply, Cancel

Printer Settings

Printer: default 

Connection Printer **Extruder** Printer Shape Scripts Advanced

Number of Extruder: 1 


Max. Extruder Temperature: 250

Max. Bed Temperature: 60

Max. Volume per second 12 [mm³/s]


☐ Printer has a Mixing Extruder (one nozzle for all colors)

Extruder 1

Name:			
Diameter:	0.4	[mm]	Temperature Offset: 0 [° C]
Color:			
Offset X:	0	Offset Y:	0 [mm]

OK Apply Cancel

Printer Settings

Printer: 

Connection Printer Extruder **Printer Shape** Scripts Advanced

Printer Type:

Home X: Home Y: Home Z:

X Min: X Max: Bed Left:

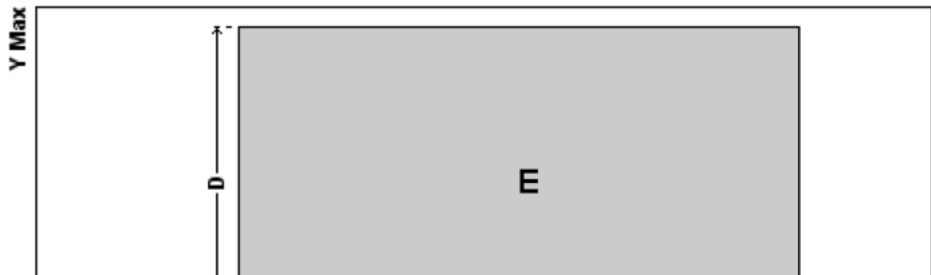
Y Min: Y Max: Bed Front:

Print Area Width: mm

Print Area Depth: mm

Print Area Height: mm

The min and max values define the possible range of extruder coordinates. These coordinates can be negative and outside the print bed. Bed left/front define the coordinates where the printbed itself starts. By changing the min/max values you can even move the origin in the center of the print bed, if supported by firmware.



OK Apply Cancel

TECHNICAL SUPPORT

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website www.monoprice.com during regular business hours, 7 days a week. You can also get assistance through email by sending a message to tech@monoprice.com

REGULATORY COMPLIANCE

Notice for FCC



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.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class A digital devices. In that event, your

right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

Notice for Industry Canada

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

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