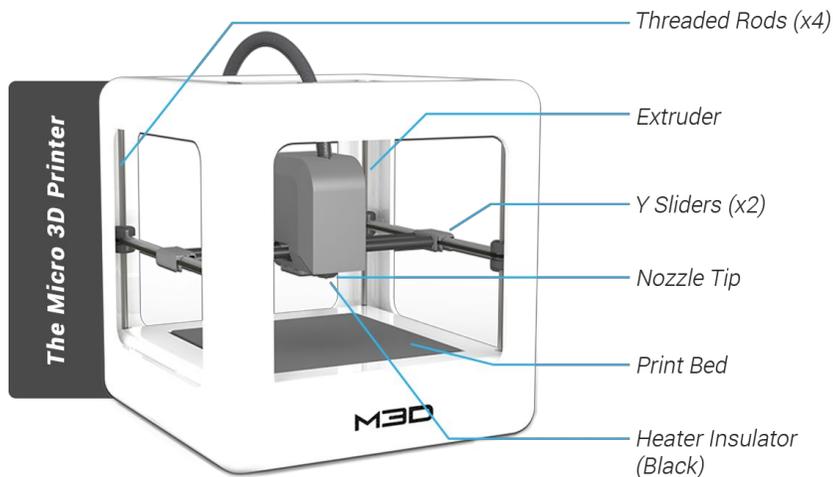




The Micro 3D Printer User Manual

**Welcome to 3D Printing!** Thank you for purchasing The Micro 3D Printer, the first truly consumer 3D printer. The Micro is ready right out of the box to make your custom creations come to life. Just plug in the printer, download the models, hit print, and watch as you bring an object into the world through 3D printing. Let's see what you print!



## Specifications

*Lower Build Volume: 110 mm x 107 mm x 73.5 mm*  
*Upper Build Volume: 80 mm x 68 mm x 38 mm*  
*Layer Resolution: 50 to 350 Microns*  
*Filament Diameter: 1.75 mm*  
*Nozzle Diameter: 0.35 mm*  
*Layer Thickness: 0.05 mm*  
*Speed: Up to 55 mm/s*  
*Position Precision: XY - 15 microns; Z - 3 Microns*  
*Software: M3D*  
*Supported File Types: .STL and .OBJ*  
*System Compatibility: Windows/Mac*  
*Power Supply: 20W UL/CE listed power supply*  
*USB: M3D Model 410*  
*Weight: 2.0 lbs*

**[www.PrintM3D.com](http://www.PrintM3D.com)**

Visit and explore our website for new content, features, and news related to The Micro!

**[www.PrintM3D.com/Downloads](http://www.PrintM3D.com/Downloads)**

Find new software, 3D models, and in-depth documentation.

**[www.PrintM3D.com/Support](http://www.PrintM3D.com/Support)**

View our expansive customer support network, technical articles, and FAQ.

*This Manual is subject to change. For updated specifications, languages, and information visit [www.printM3D.com/support](http://www.printM3D.com/support).*

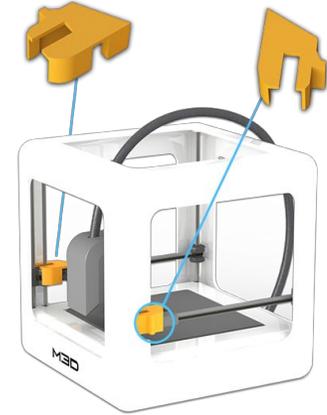
# 1.0 Unboxing The Micro



M3D Power Adapter



M3D USB (A-B)



1. Lift The Micro from its packaging box. Remove all bubble wrap, foam, and tape (may require scissors).
2. Inside The Micro is an accessories box with a USB A-B cable and your country specific power supply.

*Be sure to remove the "Gantry Clips" located on the front left and front right corners of the printer.*



## Safety Considerations

Caution: Hot! Keep your fingers away from the Nozzle Tip and Black Insulator when the printer is on as these areas reach temperatures over 200 degrees Celsius. Always be sure to keep your hands away from moving parts when The Micro is in operation.

## 2.0 Downloading M3D Software

1. Please visit <http://www.PrintM3D.com/downloads> to download your Operating System specific M3D Software. Download the M3D Software to a known location, like your Desktop. Run the installer and continue through all windows and prompts.
2. Run the M3D Software after it has fully installed. Your computer is now ready to automatically detect any M3D printers that are connected.
3. Please allow your printer to update to the most recent firmware. DO NOT turn off your printer or computer during firmware and software updates.

## 3.0 Connect and Power The Micro

1. Insert the provided M3D USB cable into the USB port at the back of the printer.
2. Insert the other end of the USB cable into an available USB port on your computer. *If you have issues with USB 3.0, go to our support page at [www.PrintM3D.com/support](http://www.PrintM3D.com/support) and search "USB 3" for solutions.*
3. Insert the provided genuine M3D power supply into the round hole on the back of the printer. DO NOT use another power supply!
4. Plug the country-specific external power supply into a wall socket, and the M3D logo on the front of The Micro should light up.

**\*Power Off\*** To power off The Micro, disconnect the USB first. Then, wait at least 10 seconds before detaching the power supply from the back of the printer.

### **\*Turn Windows Automatic Updates to Inform Only\***

When running a Windows PC, turn Automatic Updates to "Check for updates, but let me choose whether to download and install them" from the Control Panel; this will prevent Windows Automatic Updates from restarting your computer (resulting in a print failure) while The Micro is in operation.

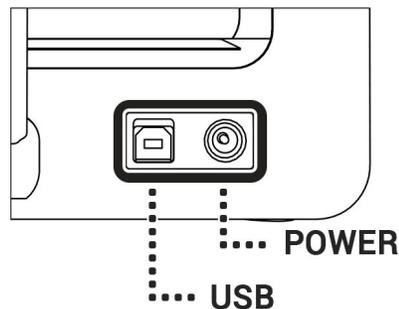
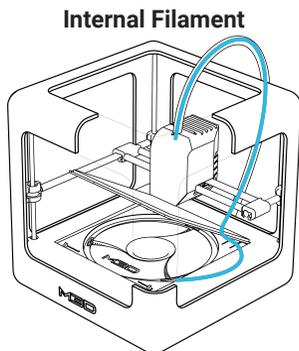


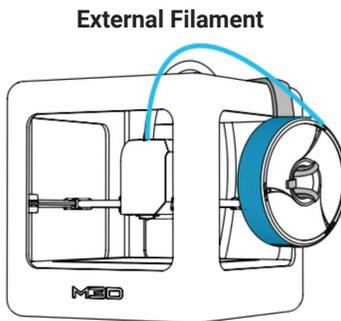
Figure. Rear view of The Micro showing the USB and Power ports.

## 4.0 Installing 3D Ink™ (Filament)

Filament Installation is accessed by selecting the **3D Ink** button in the top left corner of the M3D Software. You will be guided to install filament **Externally** or **Internally**. DO NOT attempt to load both ports at the same time during printing.



*Figure. Showing the filament path taken when installing internal filament. The path begins underneath the print bed through the black filament tube.*



*Figure. An example of an ideal external filament path. External filament is installed via the external feed port located at the top of the extruder head. Always keep a clear path between your filament spool and the print head.*

### **\*NOTE Factory Filament \***

*There may be factory filament installed externally, let the printer extrude this first and then insert your filament of choice.*

### **Notes for Loading Filament**

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In both scenarios, you need to feel the filament "catch" the extruder gear. When you are loading filament, apply constant force on the filament to push it forward into the extruder gear. A good way to test if the filament is "caught" is to lightly pull back and forth on the filament. If the filament does not pull out, then you have engaged with the gear.

### **3D Ink™ Cheat Code**

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Your 3D Ink™ Cheat Code is written on the front of your Micro Spool. If it is not, you can type in either ABS or PLA depending on which filament type you are using.

## 5.0 The First Print!

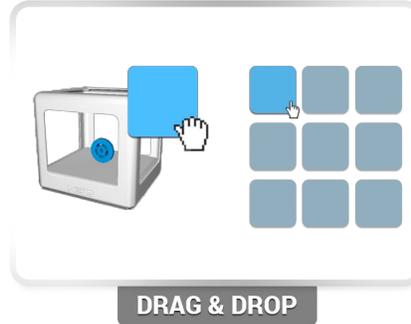
### 1. Quick Calibrate

Often a successful first print layer leads to a successful print! To be sure your printer is ready for its first print, select the **Gear Icon** to open the printer settings. Then go to the **Calibration** section where you can select **Advanced Calibration**. Now select the **Recalibrate Bed Location** button. This will begin the Quick Calibration process, which should take no more than 5 minutes.

#### **\*DO NOT TOUCH The Micro During Calibration\***

Keep the printer on a level/stable surface during any calibration sequence. There is the option in the M3D Software to manually adjust the calibration height of your Micro. Please visit [www.PrintM3D.com/support](http://www.PrintM3D.com/support) for detailed videos and documents regarding calibrating The Micro.

### 2. Load the First Model



Loading a model into the printer is simple; just drag the model from the **Recent Models** library to the printer. Your first model is already loaded in the M3D Software. We recommend printing this model first as a test calibration.

Select the **Open Model** button in the top left corner of the M3D Software to browse for other 3D Models on your computer.

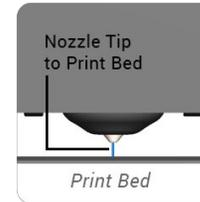
Other models can be downloaded from sites like [Thingiverse.com](http://Thingiverse.com) and [Yeggi.com](http://Yeggi.com). These files must be **.STL** or **.OBJ** file types.

### 3. Watch Your First MicroPrint!

Click the **Green Button** to open the print settings menu and begin your first print. For your first model, we have already pre-loaded the best settings, so all you have to do is press print!

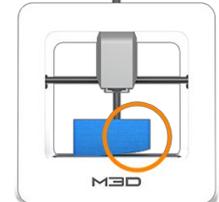
#### **\*Look Out!\***

We encourage you to get into the habit of watching the first few layers of your print and paying attention to two things:



#### **Nozzle Height**

Only a piece of paper should fit between the print bed and nozzle tip. If not, Recalibrate!



#### **Peeling/Warp**

You should typically stop your print and adjust the User Offset Values in that corner.

## 6.0 Troubleshooting

In the event of printer issues, visit the M3D support page online at <http://www.PrintM3D.com/support>. Search our technical articles, videos, and documentation for troubleshooting solutions or contact customer support.

For additional language support please visit <http://www.PrintM3D.com/support> to find documentation in your language.

## 7.0 Print Settings

What is Print Quality?

*Print Quality refers to the height of a layer. With higher quality prints you will have smaller layer heights and longer print times.*

What is Fill Density?

*Fill Density of a print is the amount of filament printed inside the model (the part of the model you do not see). A hollow print will have nothing on the interior, it will weigh less but can be easier to break. A high density print will weigh more, require more filament, but is stronger.*

Can I adjust my model size, position, and orientation?

*Yes, you can! To adjust models click on The Micro Printer to enter adjustment mode. You will see a menu on your left where models can be scaled, rotated, or moved by adjusting the options on the left. Models can be scaled by all three dimensions simultaneously by using the right-mouse button, individually adjusted using the scale bar, or manually entered into the number box.*

What is Support Material, and when should I have it turned on?

*Support Material is needed when printing 3D models with overhangs. An extreme case is if a sphere is floating in mid air in the 3D model, you would turn support on in this situation to print the model properly.*

I want faster prints; how do I do this?

*Select the "Ultra Low" print quality and use "Hollow, Thick Walls" for your Fill Density. Often these settings are great for printing models.*

What is my Bed Location, and why should I care?

*The bed location is the position of the Nozzle Tip relative to the Print Bed. The printer needs to know where the print bed is when printing, otherwise you could be printing in mid air or digging into your bed. Use the Calibration Program to "Zero" the bed location. The "Zero" position is when the nozzle tip is hovering just above the print bed, only a piece of paper should slide between the nozzle tip and print bed. Good bed location usually means good prints! If your first layer is lifting, often this means the Bed Location is off.*

# Safety

**SAFETY AND WARNINGS: CHOKING HAZARD** - The Micro 3D Printer and its consumables may include small parts that may constitute a choking hazard; additionally, these products may be used to manufacture objects that may themselves constitute a choking hazard. The Micro 3D Printer is NOT A TOY; children under the age of 14 should use the product under adult supervision. **CAUTION!** The printhead, exposed nozzle, extruded plastic, and areas near the nozzle may be extremely hot. Keep fingers away from the printhead and extruded material unless it has been unplugged for at least 10 minutes. Use M3D's products only as intended, as described by the user manual and/or this agreement and/or described within the software. Use M3D's products in a well-ventilated area. Do not leave M3D's products running while unattended. **PRECAUTION** - None of components of The Micro 3D Printer or parts printed from it or using M3D filaments are certified for food safety nor should they be regarded as food-safe therefore should not come in contact with the mouth or foods/liquids that will be ingested by humans or animals. **PRECAUTION** - None of components of The Micro 3D Printer or parts printed from it should be used for medical applications, such as but not limited to implantation, drug delivery, or ingestion. **PRECAUTION** - If any allergy develops as a result of direct or indirect contact using M3D's products, or from the 3D printed objects, discontinue use immediately. **MAINTENANCE** - After extended or improper use, the nozzle and/or its cover may need to be replaced or cleaned; the print bed and/or the Buildtak sheets covering it may need to be replaced; the extruder may need to be purged or cleaned; and the filaments may need to be purged or replaced. **REPAIR/SERVICE:** Repair/Service terms were provided to the purchasing customer in the customer purchase agreement. This agreement may be found by logging into their user account at [www.printm3d.com](http://www.printm3d.com). All parts of the Repair/Service section apply to the purchasing customer / first end-user and are non-transferrable. **RETURNS:** Return terms were provided to the purchasing customer in the customer purchase agreement. This agreement may be found by logging into their user account at [www.printm3d.com](http://www.printm3d.com). All parts of the Repair/Service section apply to the purchasing customer / first end-user and are non-transferrable. All software sales or licenses are final, non-refundable, and/or non-transferrable.

**PART REMOVAL:** During part removal be mindful of your fingers when using sharp objects. M3D recommends removing the bed from the printer when possible before attempting to remove a 3D printed object. For tips on removing 3D printed objects see the support page at <http://www.printM3D.com/support>.

# Legal Conditions

**M3D END USER AGREEMENT:** This agreement between M3D LLC (a company incorporated under the laws of the State of Maryland in the United States), and you, the END-USER, which describes important disclaimers, indemnity, safety instructions, software information, and limited warranty information about its products and govern the conditions of use. PLEASE READ THESE TERMS CAREFULLY as continuing this installation process and using M3D products and software indicates agreement with these terms. You acknowledge that you have read and understand this agreement in its entirety, and accept the terms of this end-user agreement.

**INDEMNITY:** You understand that 3D printers are an experimental technology and that they were intended for use under the guidelines provided in the user manual and this agreement. You understand and acknowledge that the user manual only describes the best practice for operating The Micro 3D Printer, and that even the best practice for operating the printer is not always presumed as safe. You agree to hold harmless and indemnify M3D from any personal injury that results from using its products. You are responsible for any damage or injury that may occur as a result of using M3D products. You understand and agree that M3D is not responsible for any injury, damage and/or loss of accessories, components, consumables, and information that may occur during the use of the product. You agree to hold harmless and indemnify M3D from any liabilities that result from any of the following conditions: 1) modification of The Micro 3D Printer, its consumables, and/or software; 2) use of third-party software; 3) use of any custom 3D models; 4) use of third-party power supplies or USB cables; 5) use of third-party consumables such as print beds, print bed surfaces sheets, print bed adhesives, and filaments; 6) use of The Micro 3D Printer and/or its components in any way other than intended, as described in the user's manual; 7) operation of The Micro 3D Printer or use of M3D filaments; and 8) Printing of custom objects which results in any physical hazard, legal suit, and/or intellectual property infringement. You agree that there is no circumstance where M3D will be held liable for any damages, including but not limited to loss of anticipated profits, business, opportunities, saving, or deals due to late delivery, performance characteristics, repair, business interruption, or any other disapproval of M3D's products or services. You agree to hold harmless and indemnify M3D from having any additional responsibilities to anyone other than you, the end-user.

**INTELLECTUAL PROPERTY:** M3D and its products and services include proprietary and privileged information, also known as trade secrets. M3D® is a registered trademark of M3D LLC. Design and utility patents pending.

**CONDITIONS OF USE:** You understand and acknowledge that the user manual for M3D's products, this end-user agreement, and the limited warranty may have been provided as a physical copy where required by law, with the initial customer purchase. A digital copy of this agreement and the end-user agreement can be found online at [www.printm3d.com](http://www.printm3d.com) if you are not the purchasing customer. Before attempting to use The Micro 3D Printer, you agree to read the Micro 3D Printer user manual, which contains important disclaimers, warranty, and safety information. If you are not the purchasing customer and first end-user, you must access a digital copy of the manual from our website. All terms and conditions of this agreement are subject to change, such as may be necessary by law. M3D reserves the right to log your acceptance of this agreement locally in your computer or as needed and allowed by law. M3D Consumables will be made available by M3D and its distributors. Any consumables included as part of an initial purchase does not imply inclusion of those consumables with a future purchase. As an end-user, you agree that without the written consent of M3D, you will not disassemble, decompile, modify, enhance, reverse engineer, or tamper with, attempt to identify trade secrets, or attempt to circumvent safety features of M3D products and software. M3D is bound by US law and cannot send its products to any customers in embargoed locations, and individuals, entities, and corporations are screened against various export enforcement, a.k.a. "blacklists." This includes links or access to software products. If you are on the blacklist, you must not accept this agreement.

**SOFTWARE:** M3D software will be included with a limited, non-exclusive license as part of each purchase of a Micro 3D Printer. The M3D software is under development and is supported by M3D through downloadable updates. Specifications of the printer and software functionality may be expanded or modified by the software through updates. These include but are not limited to: operating system functionality; printer speed; print quality; build volume; and print resolution and accuracy. Software development updates are intended for ongoing product performance improvement and may require temporary reversion to older performance parameters as other features are tested, improved, or enabled. M3D reserves the right to contact our remote server in future versions of the software for the purpose of comparing software versions and downloading remote software updates. M3D software updates include firmware updates which may be pushed to The Micro 3D Printer. The M3D software includes terms and agreements that differ from the customer purchase agreement. The M3D software is proprietary and its design and contents are protected by law. Attempts to deconstruct / reverse engineer the software are considered illegal as provided by copyright law and fair use; trade secrets; patents pending; and additional local, state, and federal laws where applicable. All parts of this section apply to any end-user and are fully transferrable to any user.



[www.printM3D.com](http://www.printM3D.com)

Patent and Trademarks Pending.