Prusa Mini Procedures

- **Safety is the most important thing.**
  - The printers use open belt systems and pulleys that can grab hair, necklaces, bracelets, sleeves, etc.
    - Long hair and other items that might dangle and get caught should be secured in an appropriate way to prevent injury.
  - These printers work by melting plastic. The hotend reaches average temperatures of 210° C (410° F). This can cause serious burns.
  - The machines can move quickly and unexpectedly and move suddenly after periods of no movement or action. Keep hands, tools, etc. away from moving components even if they are not in motion as they can begin to move suddenly and unexpectedly.
- **Weapons policy**
  - Make717 falls under the Thaddus Stevens College of Technology (TSCT)'s weapons policy
    - No weapons, weapons parts, accessories, etc. can be made at make717. If you are unsure if your part qualifies, please ask the MIC.
- **Drug and alcohol policy**
  - Make717 also falls under the TSCT drug and alcohol policy.
    - No drug paraphernalia, accessories, alcohol paraphernalia or accessories may be made or used at make717.
    - As a general rule, you are not allowed to consume drugs or alcohol on the campus whether it is legal for you to do so or not.
- **Prusa Slicer**
  - Prusa Slicer is the only approved slicer for the printers at make717. While other slicers exist like Cura and Simplify 3D, the Prusa Minis and other Prusa printers at make717 rely on features supported only in Prusa Slicer
  - Prusa Slicer profiles used at make717 **MUST** have "make717 – " in front of them. Numerous changes have been made from the default printer profiles from Prusa.
    - Using profiles without the "make717 – " in front may damage the machine. Make sure you are using the correct profiles.
  - Profiles need to be selected in the exact order below. Prusa Slicer has dependencies to ensure incompatible materials are not used.
    - Printer Profile
    - Quality Profile
    - Filament Profile
- **Prusa Minis**
  - Make717 has 8 total Prusa Minis. 6 are always available for use. The remaining 2 are used as spare machines and as "on the road demo units".
    - If a Prusa Mini is broken, alert the MIC, fill out a red tag, post the tag in the 3D Printing Telegram Group, and have the MIC swap the broken printer for one of the spare units.

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- o Each printer has a name. Each printer also has a corresponding removable steel sheet and a corresponding USB drive. Do **NOT** switch USB drives or steel sheets between printers.
    - Sensitive calibration is done before machines are put into service. Swapping sheets or USB drives will put the machine out of calibration and can cause significant damage to the printer.
- o PLA is the only material allowed on the Prusa Minis.
    - PLA blends like PLA with carbon fiber, PLA with stainless steel, HTPLA, Pro PLA, etc. are not allowed.
    - You are allowed to bring your own filament.
        - Filament needs to be from an already approved brand listed on our website. If you have a company you wish to use that is not approved, a SDS (sometimes still called a MSDS) must be submitted prior to you bringing it in for use OR storage. SDSs can be sent to sam@make717 for review.
        - Filament you bring should be labeled with your name. make717 is not responsible if your personal filament is accidentally used.
- o First layer calibration
    - The first layer is the most important part of every print. You must watch your first layer before doing anything else. This includes using other equipment in the room like the laser.
    - Examples of good and bad first layers are below. If your first layer does not match the "good" example, consult the MIC.
    - You should not change the first layer calibration height unless trained to do so even if you have a printer at home. We have a specialized procedure for first layer calibration. Not doing our procedure correctly can cause significant damage to the machine.
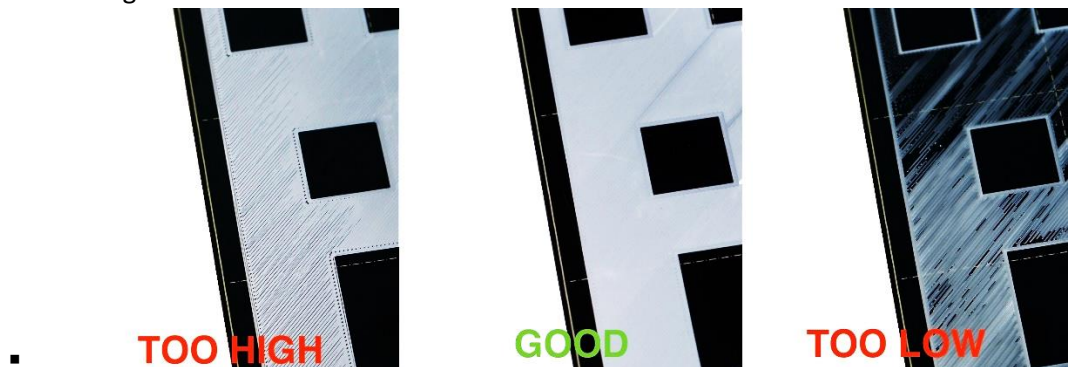   -

Figure 1. Examples of "good" and "bad" first layers

- o Paying for material
    - All material used that was originally provided for by make717 must be paid for
        - This includes all support structures, brims, rafts, failed prints, etc.
    - Material can be paid for using the following:
        - PayPal: Send money to treasurer@make717.org

- Credit/Debit card: Using the Square reader, enter the amount and swipe your card.
- Cash or check: make checks payable to make717 Innovation Center
  - No coins please
- We do not accept contactless or virtual wallets (Apple Pay, Google Pay, etc.)
  - Please accumulate $15-20 worth before making a payment. There is a clipboard that should be filled out every print with the material used and how much is owed.

- **Broken Printers**
  - Broken printers should be reported immediately. Issues should be reported even if you are unsure if it is a large issue that requires maintenance.
    - Printers that need maintenance should have a red tag filled out. Red tags can be found near the slicing station.
    - Fill out the tag completely and to the best of your ability.
    - Red tags **require** a MIC signature. If you are unsure who the MIC is, look at the TVs near doors and workbenches. The MIC should be listed there.
    - It is YOUR responsibility to make sure the issue is also reported in the make717 3D Printing Telegram Group.
      - A QR code to join the group can be found on our website.
  - Prusa Minis can be swapped out for other spare units. Ask the MIC to do so after getting their signature for your red tag.

Misc. policies

  - Leaving printers
    - Once you have watched your first layer, you are allowed to leave, use other equipment, etc.
    - Prints are allowed to run overnight, outside of open hours, etc.
    - Prints may be removed to free up printers. Completed prints will be put in the completed parts bin for pickup.
  - You may remove prints if other printers are being used. Completed prints should be put in the completed parts bin for pickup.
  - Please clean up after yourself.
    - Please make sure brims, priming lines, supports, etc. are cleaned up after you are done.
  - Please be considerate of others when using the printers.
    - The maximum number of printers allowed per person at a time is 2.
    - Especially for 24/7 members, please be considerate of when we are open during open hours.
  - Prusa Connect
    - All printers at make717 are monitored through Prusa Connect.
      - While Prusa Connect allows for remote printing, make717 does **not** allow remote printing.

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