**SAFETY WARNINGS FOR OPERATION OF 3D PRINTERS**

**Burn Hazard**
Do not touch extruder nozzle, heating bed and stepper motors without first turning off the hot end. Please allow up to 20 minutes for hot end to completely cool. Do not touch recently extruded plastic because it can stick to your skin and burn.

**Electric Shock Hazard**
Before opening electronics enclosure or disconnecting wiring harness, please power down and unplug the printer. Never open external power supply enclosure because it can cause harm from electric shock even after being powered down.

**Fire Hazard**
Do not place flammable materials or liquids on or near the 3D printer when the machine is powered on and is operational. The heat from the machine could trigger an incident.

**Pinch Hazard**
Do not place fingers near any moving parts including belts, pulleys or gears. Make sure to tie back long hair or clothing when operating machine to ensure that they won’t get caught.

**Ventilation**
Use of LulzBot TAZ 6 requires a well ventilated space.

**Attention**
Never leave the LulzBot TAZ 6 unattended when powered on.

**LIBRARY POLICIES**
- Printers are available on a first come first serve basis.
- Only one print per patron at a time. Prints will be handled in the order they are received.
- Some 3D prints may take 5 hours or more depending on size and complexity. Due to this, we will not accept any prints that will take longer than scheduled library hours.
- Printing will cease exactly 1 hour before closing.

For More Information Please Call 915-215-4306

**LULZBOT TAZ 6 FEATURES**
- **Print Area**: 280mm x 280mm x 250mm.
- **Print Surface**: Heated Borosilicate glass bed with PEI Surface.
- **Top Print Speed**: 200mm/sec (7.9in/sec)
- **Average Print Speed**: 30-50mm/sec (Using default nGen profile)
- **Average Volumetric Output**: 300mm³/min (Using default nGen profile).
- **Print Tolerance**: 0.1mm (0.0039in) in X and Y axes; Z axis tolerance dependent on layer thickness.
- **Layer Thickness**: 0.050mm – 0.50mm (0.002in – 0.02 in), Dependent on nozzle size.
- **Usable Filament Size**: 3mm (0.1in).
- **Max Operating Temperature**: 300°C (464°F)
- **Max Bed Temperature**: 120°C (248°F)
- **Power Requirements**: 100-240VAC
- **Power Supply**: 24V
- **Average Draw Power**: 5.3 Amps (US)
- **Nozzle Size**: 0.50mm

Purchase of these 3D Printers has been funded by a grant from the National Network of Libraries of Medicine, South Central Region.

LULZBOT TAZ 6 3D PRINTER
NOW AVAILABLE AT TTUHSC EL PASO LIBRARIES

Image Source: [http://3dprinterreviewsite.com](http://3dprinterreviewsite.com)

Image Source: [https://hackaday.com](https://hackaday.com)
Acrylonitrile Butadiene Styrene (ABS):
• ABS is a petroleum based thermoplastic.
• More prone to warping as it takes longer to cool and is printed at a higher temperature.
• Very hard to print without a heated bed, as the print will immediately start peeling up at edges. Heated perforated plates are particularly good for printing with ABS.
• Can smell a little and can be slightly toxic. Proper ventilation is advised when in use.
• ABS is less brittle and will bend slightly before breaking, which makes it better at withstanding vibrations.
• Does not react with moisture.
• Not suitable for food contact.
• More heat resistant.
• Prints at 240°C

Polylactic Acid (PLA):
• PLA is a thermoplastic made from plant starch.
• Less prone to warping, as it cools quicker and is printed at a lower temperature.
• Not necessary to print with a heated bed, however if you do have one it will help ensure the print stays firmly stuck down when printing and gives a glossy finish at the bottom.
• Does not smell at all and no ventilation is necessary.
• PLA can be brittle when it does reach the limit.
• Is biodegradable and degrades when in contact with moisture.
• Is suitable for food contact.
• Less heat resistant.
• Prints at 210°C

High Impact Polystyrene (HIPS):
• Unlike ABS & PLA, this filament has the ability to be sanded, glued, primed and painted with acrylic paints upon print completion.
• Usually paired with ABS as a supporter filament in dual extrusion printing.
• Similar to ABS but much less likely to warp.
• Not suitable for food contact.
• Can be dissolved using Limonene as a solvent.
• HIPS has a high durability, but low flexibility when it comes to bending.
• Generally printed at temperature ranges between 210°C-250°C.
• A heat bed temperature of 50°C-100°C is highly recommended when using this filament.

ATTENTION: TTUHSC El Paso Libraries will be receiving Glow-in-the-dark, translucent, sparkle, solid, and translucent (ABS & PLA only) filaments. Colors vary upon availability.

1. SD Card Slot – Allows the ability to insert and remove SD cards for prints.
2. LCD Control Screen – Displays the system interface.
3. Control Knob – Allows navigation of the menus on the LCD control screen.
4. 12mm Linear Guide Rails – Allows for movement of each axis of 3D printer.
5. PTFE Filament Guide Tube – Allows for filament to be fed into the hot end.
6. Single Extruder Tool Head – Has three fans fixated towards the extruder, which allows cooling and the ability for the extruder to take on longer complex prints.
7. Filament Spool Holder – Mounts Filament on the right side of the chassis.
8. Conductive Pads – Located on each corner of the heated bed. Used by the self-cleaning routine for bed leveling. The extruder is heated and is wiped down on a foam pad (SEE # 10 on list) attached to the printer base before each print.
9. PEI Covered Borosilicate Heated Glass Bed – The bed can reach a temperature of 120°C and is covered in PEI, which helps 3D print parts stick to the bed.
10. Foam Pad – Used prior to leveling for cleaning excess filament from tool head.
11. Physical Hot End Switch – Hot end tool calibrator, which serves as part of the startup process for the printer. Allows for different hot end tools installed on the printer to be used and calibrated without user input.