



MAKER SPACE INFORMATION
Springfield-Greene County Library District
Midtown Carnegie Branch
397 E. Central St.
www.thelibrary.org/maker-space
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General Information

- The Springfield-Greene County Library Maker Space empowers people of all ages and experience levels to explore creative experimentation, build community, and pursue lifelong learning. By providing an inclusive environment with access to innovative technologies and classic crafting materials, the Maker Space encourages patrons to transform their ideas into reality.
- Maker Space staff will teach you how to use the equipment so that you are empowered to learn and create, but you are responsible for seeing your project through to completion.
- Do not expect perfection on your first try! Just like any crafting endeavor, Maker Space equipment and materials can take several attempts to master.
- We suggest bringing extra materials to practice on. Mistakes are just opportunities for learning!
- A Springfield-Greene County Library card is not required to use the Maker Space.
- We have many other tools that can help you complete your project, like paper cutters, a ChompSaw cardboard cutter, automatic folders, printmaking supplies, and much more! Please ask staff about using these supplies.

Appointments

- Make an appointment by calling the Maker Space or submitting an appointment request on the library website. Appointments are scheduled for the following week and are limited to one appointment per week.
- In your appointment, you will have one hour with a staff member, who will help you no matter your level - beginner to advanced! After the one hour is up, you can use the machine for the rest of the morning or afternoon. Staff will be available to answer any questions during the remainder of the time.
- Hours depend on Maker Space class schedules and staff availability. Maker Space is generally open for appointments 10am-5pm Monday-Saturday, with Open Studio on Wednesdays 1pm-5pm and Saturdays 10am-2pm (no appointment needed).
 - During Open Studio equipment is available first come first serve, and staff will be available for limited questions, not 1:1 help. If you need more extensive help, we recommend you make an appointment.

Equipment

Prusa i3 MK3S+ 3D FFF printers

- We use **PLA plastic filament only** for our Prusa i3 MK3S+ 3D printers available in multiple colors.
- To print, patrons need a 3D model in .STL format. Files are available from:
 - thingiverse.com (free)
 - printables.com (free)
 - makerworld.com (free)
 - tinkercad.com (make your own)
- See 3D printer policy page for information on allowed designs:
<https://www.thelibrary.org/standard-pages/3d-printing>
- Patrons need to come in to start the print but do not need to stay with it the whole time--they can make another appointment to pick it up. 3D printed items not picked up within 7 days become library property.
- Printing time is limited to 16 hours per week.
- Print time depends on size of print--can range from 15 min to 8 hours.
- We can print objects up to: 25×21×21 cm (9.84"×8.3"×8.3")
- **Patrons need to bring:** a file or idea
- **File Type:** stl, obj, or gcode
- **Cost:** \$0.15/gram

Glowforge Pro HD Laser Engraver

- Approved materials:
 - Wood
 - Cardboard
 - Glass (engrave only, no cutting)
 - Anodized Aluminum
 - Acrylic (**Glowforge or Inventables brand ONLY**)
 - Leather (**vegetable-tanned or natural ONLY**)
 - And many more!
- We **cannot** cut or engrave MDF, plastic, or metal
- Only flat surfaces can be engraved or cut
- Printable area:
 - 11 in x 19.5 in
- Maximum material dimensions:
 - Engraving: 18 in x 20 in x 2 in (unlimited length with passthrough)
 - Cutting: 18 in x 20 in x 0.25 in (unlimited length with passthrough)
- Engraving time depends on the design--can range from 2 min to 2+ hours.
- Patrons need to stay with the engraver while it is running.
- The attached air filter runs during engraving/cutting.
- Patrons can create basic designs and text in the Glowforge program, but can also use software such as Canva, Inkscape, or Photoshop to design.
- **Patrons need to bring:**
 - Material to engrave/cut
 - File or idea for your design

- **File Type:** any picture file can be engraved. Glowforge can print JPG, PNG, SVG, PDF, and other file formats. Only.svg vector files can be cut.
- **Cost: Baltic Birch Plywood** \$4/sheet - 12" x 20" - 1.8" thick
Bring your own materials: Free

Cricut Maker & Cricut Air 2

The Cricut Maker is a smart cutting machine that works with an easy-to-use app to help you design and personalize almost anything:

- Print and cut stickers or magnets (any picture file type)
- Print vinyl and cut to shape decals
- custom cards
- The Cricut can cut vinyl, paper, cloth, burlap, foil, bamboo, balsa wood, canvas, and more
- Tools available:
 - Fine Point Blade
 - Knife Blade
 - Rotary Wheel
 - Bonded Fabric Blade
 - Wavy Blade
 - Scoring Stylus
 - Fine Debossing Tip
 - Engraving Tip
 - Deep Point Blade
 - Foil Transfer Kit
 - Cricut Pens
 - Weeding Tools
- Maximum material dimensions: 12" x 24"
- **Patrons need to bring:**
 - File or idea to create in Design Space
 - Materials (vinyl, paper, cardstock etc)
- **File Type:** JPG, PNG, GIF, SVG, DXF, HEIC & BMP
- **Cost: Free when you bring your own material**
 - Our vinyl: \$3.00/square foot
 - Heat Transfer Vinyl: \$4.00/square foot
 - Printable Vinyl Sticker Paper Matte, Glossy, or Clear - Standard Size 8.5in x11in \$1.50/sheet (must use our material)
 - Printable Vinyl Sticker Paper with Magnet and Lamination - 8.5x11in \$3/sheet (must use our material)

Vinyl Cutter - US Cutter SC2

- Patrons can bring their own vinyl or use ours (colors and supply are limited)
- Bring a (simple, single-color) picture to convert and/or use our software to create text
 - Vinyl master - program used for cutting
- Supported Vector file types include .svg. .Ai
 - Some B&W images can be cut using the trace function. Results may vary
- Cutting time depends on the design--usually under 5 min.
- Maximum material dimensions: 34" x unlimited
- **Patrons need to bring:**
 - Vinyl, especially when creating large format design
 - Image file of your design
- **File type:**
 - Vector file types including .svg and .Ai
 - Some B&W images can be cut using the trace function. Results may vary

- **Cost:**
 - Bring your Own vinyl: Free
 - Our vinyl: \$3.00/square foot
 - Heat Transfer Vinyl: \$4.00/square foot

Sawgrass SG500 Sublimation Printer

- Patrons bring in their own items on which to sublimate. Blanks are available on Amazon and at craft stores such as Michaels and Hobby Lobby. We recommend patrons bring in extra materials to test on or account for mistakes
 - Common blanks include mugs, tumblers, bags, polyester shirts, pencil bags, keychains, and more
- Prints on media up to 8.5"x 11". This allows you to apply custom artwork to a wide variety of popular, high margin items, from mugs and coasters to phone cases and awards
- If sublimating fabric such as t-shirts, white polyester will produce the best results. The more percentage polyester the better, but we do not recommend less than 50% polyester. The ink only transfers to polyester, so you can think about it as only 50% of the fibers would receive the ink.
- Light color shirts will work as well, but keep in mind the ink is transparent, so the color of the shirt will show through the ink
- **Patrons need to bring:**
 - Picture file
 - Sublimation blanks (T-shirt, tumbler, mug, keychain, etc)
- **Cost:** \$1.50/page

HeatPressNation Signature Series 15"x15" Auto-Open Slide-Out Clamshell Heat Press

- Our heat press is a HPN Signature Series Clamshell Press
- It can be used to attach heat press vinyl, iron-on transfers to cloth, or sublimation to blanks
- **Cost:** Free

Soldering Stations

- Our soldering irons are Weller 1010 with adjustable temperature
- We have lead-free solder or the patron can bring their own
- A magnifying glass is available
- **Cost:** Free

Mayku FormBox Vacuum Former

- Vacuum Formers are used for: Rapid prototyping, tooling, end-use parts, packaging, art projects
- Patrons bring in any object
 - Forming bed: 200mm (L) × 200mm (W) x 130mm (H) or 7.8in (L) x 7.8in (W) x 5.1in (H)
 - Object to form can be 150x150 mm
- The Mayku heats a plastic sheet that will be vacuum sealed over the object creating a form around it that can be used for custom packaging, art projects, and molds for silicone, clay, even chocolate
- 0.5mm PET or .5mm polystyrene sheets
- **Cost:** \$2/sheet

HeatPress Nation 7 in 1 Automated Sublimation Mug and Tumbler Press and HeatPress Nation Cap and Hat Heat Press

- These are both high-quality machines that simplify transferring professional designs to various sized mugs, water bottles, tumblers and hats. These must be “Sublimation Blanks” that can be found through an Amazon.com search or at local hobby stores e.g. Michaels, Hobby Lobby.
- Can also use for heat transfer vinyl
- The HPN Signature Series Mug Cup Heat Press can accommodate the following items:
 - 11/15 oz Mug Attachment
 - 16/20/30 oz Skinny Tumbler Attachment
 - 17 oz Latte Mug Attachment
 - 6/10 oz Water Bottle Attachment
 - 12 oz Latte Mug Attachment
 - 1.5 oz Shot Glass Attachment
 - 3 oz Espresso Mug Attachment
- **Cost:** Free to use, sublimation cost is \$1.50/page

American Button Machines 1.25” and 2.25” Button/Magnet Maker and Design Punch

- 1.25” and 2.25” buttons and magnets.
- Patrons can design buttons in the Maker Space, or bring in a design that fits 1.25” or 2.25” diameter
- **Cost:** Price = \$0.25 for 1 or \$1.00 for 5 - Color printing included

Media Digitization: Film, Audio, Video (VHS), slides & negatives

Copyrighted materials are **not permitted to be digitized.**

Kodak Reels 8mm & Super 8mm Digitizer

- No sound transfer, does not work with Hi8 or Camcorder tapes
- We suggest an SD card to save on, but a USB drive will work as well
- Transfer works frame by frame, so it is slower than real time
- **Cost:** Free

Clear Click HD Video Digitization

- We can digitize **VHS, VHS-C, and MiniDV only**
- We have a VHS Player for VHS and VHS-C tapes and a Sony Handycam DCR-trv22 for MiniDV
- Other formats can be digitized only if you have the camcorder needed and compatible with RCA
- Audio CDs can be copied using windows media player
- Patrons need to bring:
 - VHS to digitize (no copyrighted material)
 - Flash drive/SD card
- **Cost:** Free

KODAK Slide N Scan Digital Film Scanner

- We can digitize:
 - 35 and 50mm slides (135, 110, and 126 adapters available)
 - Photo negatives
- Patrons need to bring:
 - Items to scan
 - Flash drive to store files

- Slides are scanned **individually** and may take several hours to complete
- We can make multiple appointments if needed
- **Cost:** Free

Reshow Walkman Cassette Tape Player and Recorder

- Can convert cassette tapes into digital files
- Works with Audacity software to record and edit files
- Patrons need to bring:
 - Cassette tapes to record
 - USB Flash Drive to save files to
 - headphones for listening
- **Cost:** Free