



NEWSLETTER

September 2021

"The MakerBarn is a member-driven family-friendly makerspace that exists to provide a place for our members to envision, design, and realize creative projects. We are dedicated to building a creative maker community among our membership and the community at large."

A lot has been said lately about our new shop and welding area, those who use The Lab may be feeling a little left out.

The Executive Committee has been considering some improvements for The Lab. Jody Cochran is researching resin 3D printers and associated equipment. We also have been talking about setting up a jeweler's bench and a bench dedicated to leatherwork. Let's talk about these subjects on the MB Slack "The Lab" channel.

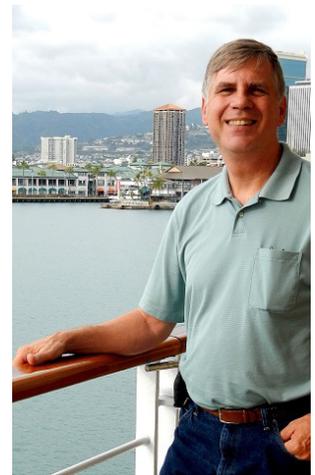
We are also talking about acquiring some additional space for classroom and project-in-progress storage. Suite 203, which is next to the shop, will become available in the not-too-distant future. When that happens, we will talk with Kathy Martin, our landlady, and see if we can work up a deal. Having a dedicated classroom would expand our ability for outreach programs for the community as well as support our own members.

As always, even though The MakerBarn is a corporation, in reality, we are just a community of folks that like to make things. So, get on Slack and share your ideas. If there are changes you would like to see, be sure to let us know. BTW, we are looking for someone to become an area manager of the new welding area. The job includes some teaching and guidance. Keeping the welding shop organized and tidy. Also, letting Kathy or myself know if something is needed or needs repair.

Don't forget about projects for the upcoming holidays.

Work safe, have fun.

George Carlson
President, MakerBarn

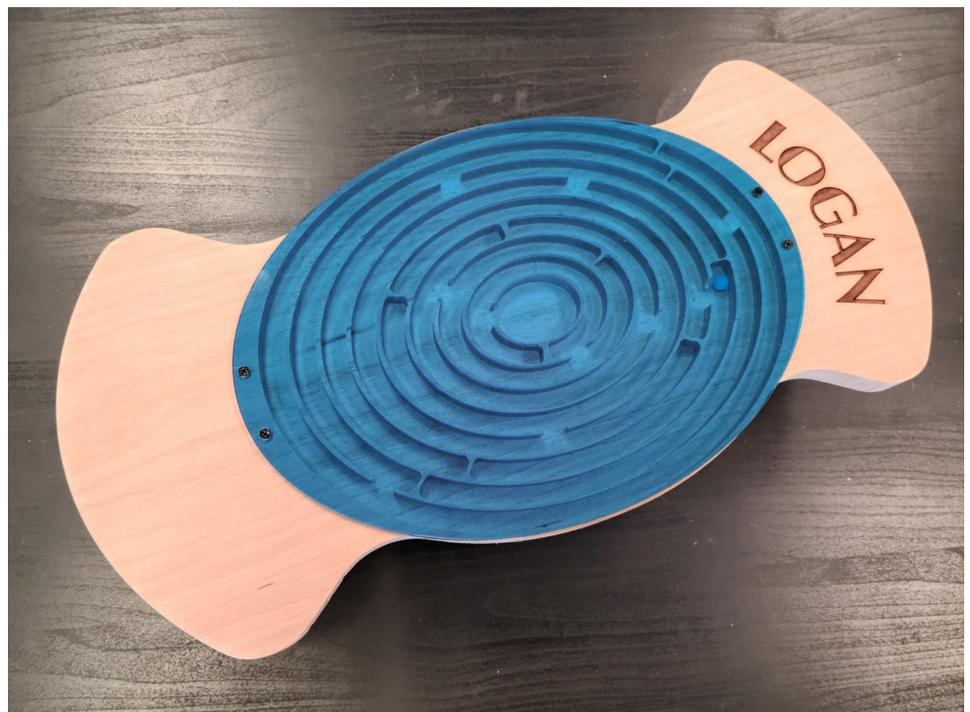


MADE AT MAKERBARN!



Tessa McCain, 15,
made this cat tree.

Kathy Barbieri made this balance board with a built-in maze as a gift for a young child. She used the CNC (with Jim' Barron's refresher help), the laser cutter for the name and acrylic.



MADE AT MAKERBARN!



Robert Brayton made this bed for his two year grand daughter. His daughter and his son-in-law helped

CE Raum made a weatherproof barn enclosure for his Pi camera sensor and lens. He used the woodworking shop tools to make the barn structure, the 3D printer to create fitted supports for glueing the doors and the vinyl cutter to create a stencil for the lettering. Lastly, he used CNC to craft a custom fit base.



MADE AT MAKERBARN!



Randy Rakowitz made a completely unique set of custom cornhole boards. He used the CNC and VCarve software to remove blank space material and have room to insert LED lights. He plans to use color epoxy to fill the negative space removed by the CNC. It will be sanded down flush and stained before getting a clear epoxy flood coat, sealing it all in.

MADE AT MAKERBARN!



David Long made a bezel for a ScanGauge for automotive application. This was his first 3D print.



David Long made these sandstone coasters with his company logo. He used the Thing 1 laser cutter engraver at the Lab.

MADE AT MAKERBARN!



John Buckley made a prayer kneeler for the pastor of his church

Joe Reed made this picture frame from 25 year old cedar fence boards. Joe took the photograph at a ranch on the Rio Grande River. These barn owls are 15 inches in length and have a wingspan of 44 inches.



MADE AT MAKERBARN!



Ashley Dickson made a laser cut Nespresso Pod holder that attaches to the side of her machine.



Ashley Dickson did her first CNC project! It's a sign for the space at home she is turning into a little workshop.

Let's Have a BrightLife Christmas!

As many MakerBarn members know, MakerBarn is dedicated not only to our our member making efforts, but also to our community. And in that spirit we have forged a partnership with some special folks at the YMCA called "BrightLife".



Brightlife is a community of folks who have special needs. They have been meeting together at the Montgomery County Branch Crossing YMCA for many years under the guidance of some wonderful folks who are friends of the MakerBarn. Two years ago we became aware of the BrightLife art show when BrightLife organizers asked us if we had any scrap wood to share? When we asked why they explained that the BrightLifers paint and decorate wood shapes for sale at the art sale, but they struggle to cut wood to precise shapes for decorative artwork.

And with that our partnership was born! Now we cut wood blanks in the shape of hearts, Christmas trees, Easter bunnies and many other things for the BrightLifers to turn into beautiful brightly painted art objects.

This year we would like to explore other ways to help our BrightLife friends. Perhaps you can think of a craft project in which we might help them get started or finish? BrightLifers love to paint and create - just like us! - so let's see if we come come up with more ways to collaborate for Christmas season this year.

If you are interested in helping, please write to John Buckley at jb332699@gmail.com or contact him through MakerBarn Slack. We hope to have a zoom meeting soon to discuss ideas.

MakerBarn



BrightLife



ArtSale



Where it all began...



A photo composition by Jody Cochran



Are you a Slacker? No, we don't mean are you lazy! We mean do you have an account on the SLACK App and have you downloaded it to your phone?

Nearly all of MakerBarn's internal day-to-day communication is conducted on SLACK within the fifteen channels that have been created for everything from Equipment Maintenance to CNC training. If you are a MakerBarn member and are not currently using SLACK, please write to info@themakerbarn.org and request that you be added to the app & then follow the instructions to you receive to download the app and begin using the channels for the most up-to-date news at the Barn and the Lab!

CAD/CAM GCode Maker Barn Software Explained

The purpose of this document is verify where to find and how to use appropriate software for each CAD/CAM machine at MakerBarn. NOTE: This paper is current as of the date listed above. Please be sure you are reading the most current version for the most up to date information

At MakerBarn we are fortunate to have a number of machines that are capable of using computer generated code to drive the manufacture of an object. This type of configuration (computer + machine) is relatively new and has often been called Computer Aided Design (CAD) for the computer software side and Computer Aided Manufacturing (CAM) for the hardware machine side. This combination is often abbreviated as simply CAD/CAM.

CAD/CAM software typically outputs a special set of instructions for each manufacturing machine it supports. These instructions are called “generated code” or “G-code” and they are of a specific type for each supported manufacturer’s machine.

It is very important that you use a CAD software that generates the proper G-Code for the type and brand of machine you are using at MakerBarn!

There are three basic types of CAD/CAM available at MakerBarn: 1) Laser Cutting/Engraving, 2) Computer Numeric Control (CNC) and 3) 3D Printing.

| Machine: | Software: | Special Price* | Contact |
|------------|----------------------------------|----------------|--------------|
| LASER | Lightburn | Yes | Greg Radliff |
| CNC | Vetric VCarve Pro | Yes | Jim Barron |
| 3D PRINTER | Fusion 360/Cura/Simplify3D/Prusa | No | Jody Cochran |

*reduced price available for makerspaces like MakerBarn

| SOFTWARE | USED BY | MakerSpace Pricing |
|---|---|--|
|  LightBurn | LASER Thing One – The Lab LASER Thing Two – The Lab | LIGHTBURN is \$20 for MakerBarn users by using the special license code. \$30 per year for additional upgrades |
|  VCarve PRO | CNC 4’x4’ – The Shop CNC Carvey – The Lab CNC Mini for PCB – The Lab | VCARVE PRO Special Makerspace Client Edition is free by downloading the current version trial and then entering the special license code. Note that we keep a special Makerspace Master Edition at MakerBarn and only it can export code to CNC machines |
|  AUTODESK® FUSION 360™ | SPEC #1 – The Lab SPEC #2 – The Lab PRUSSA – The Lab TAZ – The Lab Resin 3D – The Lab | N/A |

Meet The Area Managers!

| | |
|---|---|
|  | <p><u>WOODWORKING & CNC</u></p> <p>Jim Barron has lots of experience with woodworking and CNC. He holds occasional CNC classes that demonstrate the Vectric VCarve Pro software we use. Jim can check you out on woodworking and CNC tools at the Barn. Contact him via SLACK.</p> |
|  | <p><u>LASER PRINTING</u></p> <p>Greg Radliff is an artist and expert at using Laser Cutter and Engravers. Greg can show you the LightBurn software we use and can check you out for use of the Laser printers in the Lab. Contact him via SLACK</p> |
|  | <p><u>3D PRINTING</u></p> <p>Jody Cochran is a graphic artist with deep experience in 3D printing and other graphics tools. Jody can show you slicer and other software used with the 3D printers. Contact him via SLACK.</p> |
|  | <p><u>METALWORKING</u></p> <p>Bryan Manka is area manager for metalworking which includes the metal mill and the metal lathe at the Barn. He can check you out for use of either of these machines. Contact him via SLACK.</p> |
|  | <p><u>ELECTRONICS</u></p> <p>Raul Garcia is area manager for electronics. More of a fixer than designer, but willing to help and learn together. See Raul for anything related to microcontrollers, electronic devices or other electronics related projects. Contact him via SLACK.</p> |
| <p>No Area Mgr Yet</p> | <p><u>WELDING</u></p> <p>We have no one assigned to area manager in this area at this time</p> |

For New Members

WELCOME to the wonderful world of making!! We know you'll come to love this place as much as we do. First and foremost, this place is about the people. We would like to encourage you to see yourself as more than just a member. We are a community. Because we don't have any employees, we rely heavily on our community to keep things running. So please join in, pitch in, and get involved. Ask lots of questions. We are a really friendly group and love to help one another. The MakerBarn is a fantastic community of makers and we are glad you are here!



Maker Barn: The Shop
28030 FM 2978, Suite 204 77354
Phone: 832-663-6377



MakerBarn: The Lab
28030 FM 2978 Suite 101 77354
Phone: 832-663-6377

MakerBarn Directors:

George Carlson, Director and President
Jeanie James, Director
Greg Radliff, Director

Executive Committee:

Kathy Barbieri - Procurement and acquisitions
Jody Cochran - Secretary
Raul Garcia - Member at Large
Jim Barron - Membership
Matt Folsom - IT
Daniel Cielecy - Treasurer
John Buckley - Newsletter Editor

Area Managers: (Guru or Custodian)

Woodworking - Jim Baron
Lasers - Greg Radliff
3D Printing - Jody Cochran
Metalworking - Bryan Manka
Electronics - Raul

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