



NEWSLETTER

October 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."

Lately we have been talking about welding quite a bit. In fact, we had an introduction to TIG welding class just few days ago. But there are other things to do in the welding shop besides weld.

Did you know we have the equipment to do non-ferrous metal casting? We can melt Brass, Bronze, Aluminum, Silver, even Gold! You can cast the metal using either sand casting or lost-wax investment casting. Investment casting is the process jewelers use to make fine jewelry. There are some videos on the web site showing how to do this.



In The Lab we have several other capabilities that many may not know about. Did you know we have a video editing suite in the back room? Using the DaVinci Video Suite you can do professional editing and voice overs of your videos. We also have the equipment to do resin casting, archival photo mounting, and many other crafts.

So come and do some exploring, you'll be surprised at what you find. If you have a project in mind and are not sure if we have the facilities to do it, just ask one of the shop managers or make a post on Slack. If we don't have it, maybe we can get it.

George Carlson
President, MakerBarn



Have you met “Morty”?

Morty is the nickname of our newest woodworking addition to the MakerBarn Shop. The making of mortise and tenon joints for furniture is an ancient tradition. A tenon is cut on the end of one board and that is glued into a close-fitting socket, called a mortise, in another piece. Making the tenon is easy, it just involves a few saw cuts. But making the socket of the mortise is something else indeed.

The mortise is made by chopping out a rectangular hole using mallet and chisel. What if you had a machine that could drill square holes?

That’s where the Mortising Machine comes in. The machine uses a bit that is made up of a hollow square chisel, with a special drill bit in the middle. The drill removes most of the wood while the chisel squares out the hole. Moving along the workpiece while plunging the mortise bit allows the worker to almost any size mortise needed.



We now have a Mortising Machine of our own. It is a used machine but is in like-new condition. The Shop Managers will be schooled in its operation so we can get members certified to use it. Also, we will soon produce a short video showing how to use the new machine. If you would like to look it up on the Web, it is a “Grizzly G0448 - Heavy-Duty Mortiser With Stand”.



Three New BrightLife Projects Begin

Three new projects are beginning this fall to help our special needs friends at YMCA BrightLife.

The three projects are; Ornaments, Halloween Bag and a Snowflake.



and cuts in preparation for our special needs friends to decorate, paint and sand these items into beautiful works of art that they sell during their Art Sales at the Branch Crossing YMCA throughout the year.

As you may know, MakerBarn partners with

BrightLife to obtain material and make basic shapes



If you are interested in participating, contact John Buckley through MakerBarn Slack

The Toughest Job You'll Ever Love!

Are you old enough to remember the first advertisements for The Peace Core? The ad headline said, "The toughest job you'll ever love". That might also be a good way to describe being a shop manager at MakerBarn.

The shop manager is responsible for maintaining the shop during his or her shift, for helping members and for ensuring safe operation of all machines. Any member in good standing with at least 3 months of experience is welcome to apply to the "Manager of Managers" - affectionately know as "MoM"!!; Jim Baron.



Contact Jim via Slack or email if you are interested.

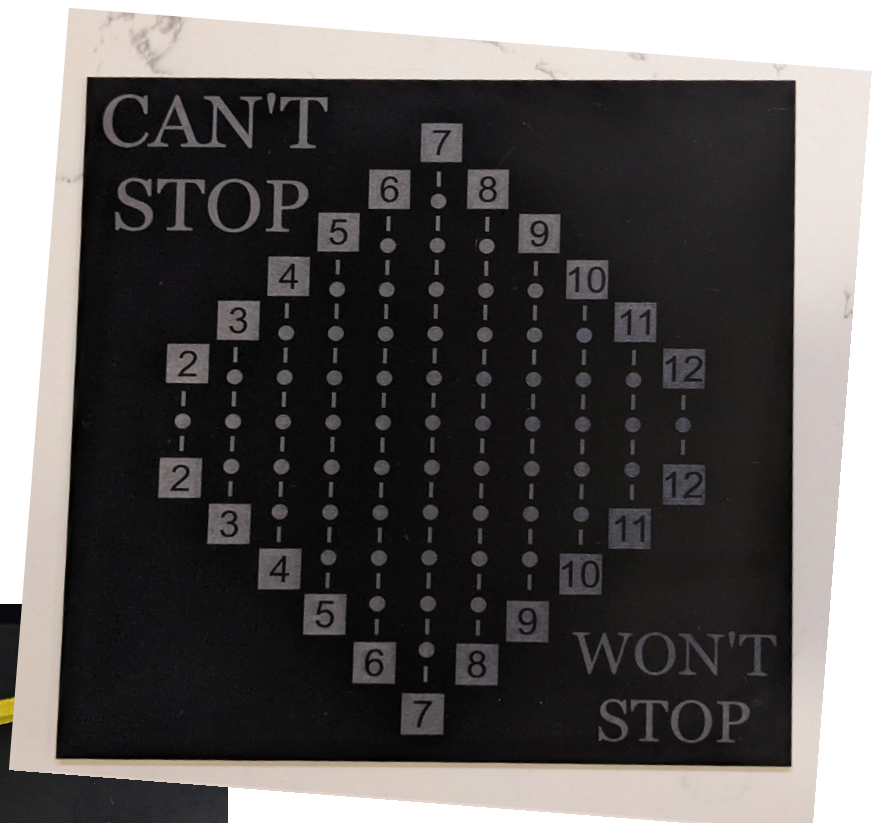


MADE AT MAKERBARN!



Ashley Dickson made a luggage tag

Ashley Dickson made a laser etched Board Game called "Can't Stop" and some accompanying pieces with a pouch she sewed to hold them.



MADE AT MAKERBARN!



Elizabeth Jones made a sign on the CNC for the candy store Craving Kernels in Tomball's Main Street area.

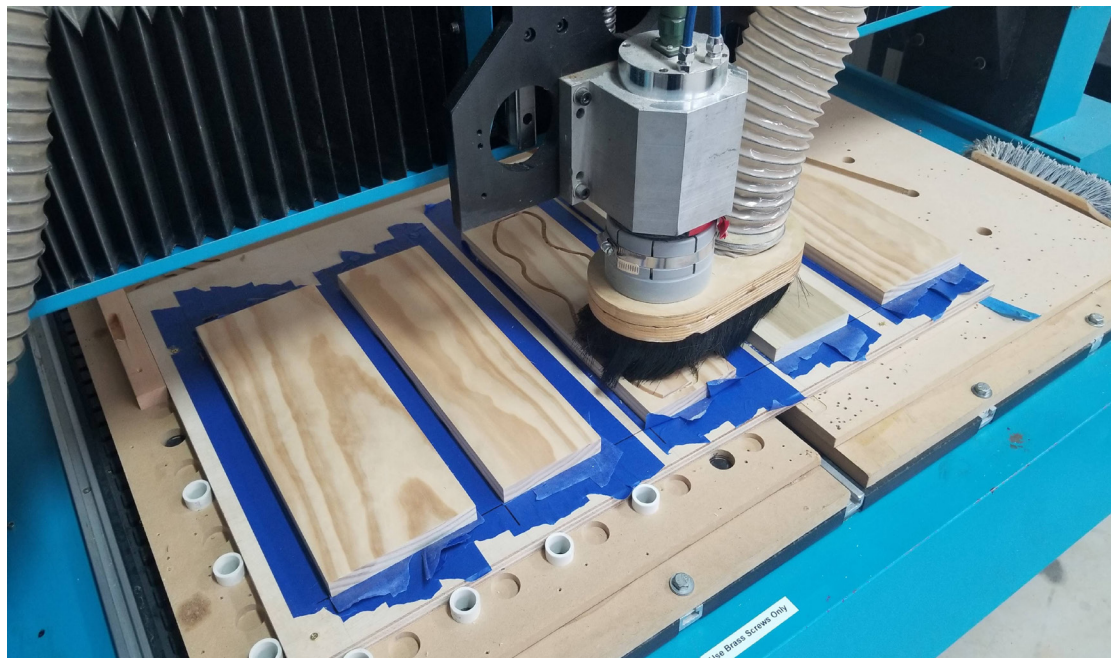
Kathy Barberi made a seasonal wreath for a friend using the laser cutter at the Lab



MADE AT MAKERBARN!



CE Raum made a cutting board and a butter tray. The cutting board is made of walnut, maple and cherry wood. Each board was cut separately on the CNC. The final shape, groove and handles were also made using the CNC. The butter dish was made by slicing the outside edges from a solid block of wood with the re-saw bandsaw. A block of leftover wood was turned to make the knob.



MADE AT MAKERBARN!

Jim Baron made these Halloween Lanterns at the shop with the front cut outs on the lasers



Candida Wolfram made a pumpkin 18" round and letters from 1/4" birch plywood. The leopard print is engraved on half the letter and the other half is painted.

MADE AT MAKERBARN!

Candida Wolfram made a Witches sign using double sided whiteboard/chalkboard from Lowes - no paint needed! One side is white and one side is black. Frame cut on the laser out of 1/4" ply and stained.

(Ed.note: did you get any applicants??)



Candida Wolfram made mirrored acrylic mum trinkets. If you live in Texas you'll understand!

All Set to Learn Welding



About a dozen members gathered recently to learn TIG welding techniques from George Carlson. Who knows, maybe one of these members will become our long lost Welding Area Manager?!!



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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*MakerBarn Lab
28030 FM 2978 Suite 101
Magnolia, TX 77354*

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