



NEWSLETTER

June 2022

"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."

There's a lot going on!

There's a lot going on at The MakerBarn these days!.

Although we will not be moving to the suites 201 and 202 at the front of the shop building until August, we do have access to suite 203 now which is next to the shop.

This suite will be split into three sections. The Machine Shop, Fab Lab (lasers and 3D printers), and the glue-up and Finish Area will each have their own special space;



The Fab Lab will be in the room where dog kennels used to be. The kennels have been removed and room is currently being remodeled.

The Machine Shop will be next to the Fab Lab. The Machine Shop space is almost ready to move into. We put in new lighting and electrical. Kevin and Mark have taped and floated the new wall that was built at one end. A little more work and we will be able to move the machine equipment in. This will free up quite a bit of space in the shop for shop use. Both the Fab Lab and Machine Shop have great air-conditioning.

The Finishing Area will be about 25'x25'. In this area we will have four 4'x8' worktables. These tables will be similar to the MDF worktables now in the shop. The finishing area will be kept as dust free as possible, so finishes can dry without dust specks. If you haven't seen what's going on in suite 203, go through the double door just as you come into the shop and look around. We have some cleaning and painting left to do, if you would like to help, let us know on Slack.

New equipment on the way! This week our **new fiber laser** should arrive. More about the fiber laser below. The **new CNC milling machine** will arrive mid-August. It is a gantry type mill and is fully enclosed so we can run flood coolant. If you would like to learn more about

it, go to www.langmuirsystems.com/mr1 and read about the new machine.

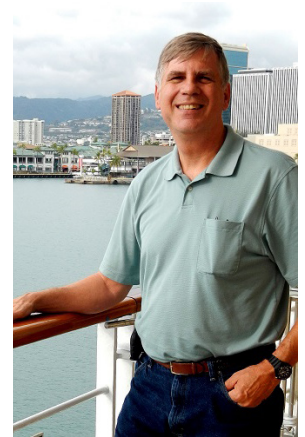
Thanks goes to Jody for setting up a 3D printing class for kids of HP employees. Not only did we get a chance to show-off our makerspace to HP employees, but we received a nice grant from HP.

And it was good to see YMCA BrightLife special needs group visit us on a Monday morning in May. We have been making wood blanks for the BrightLife Art Sales for several years now. It is a wonderful partnership and I encourage you to join by contacting John Buckley.

So much has been happening I'm sure there are some things I forgot. It is easy to stay current with The MakerBarn activities, just check the Slack channels.

Keep on make'n!

George



The Importance of August...

Quick, what happens in Houston in August?? That's right - Heat, Humidity and Hurricanes!

But this August we'll add one more - that is our upcoming move out of the Lab and into the Shop building.

Please make a mental note now to be available for a day or two in August this year as it will take 'all hands on deck' to make this happen - Thanks!



Tinkercad Crash Course A Success, Thanks HP!

Saturday morning 14 curious students attended a small workshop led by Greg Radliff and Jody Cochran. We did a crash course on Tinkercad and everyone designed something they were proud of while Greg did an intro to resin printing.

This event was part of a grant effort with HP for the Makerbarn.



YMCA BrightLife Visits MakerBarn

For several years now, the makers of MakerBarn have been cutting and shaping wood 'blanks' for the use of YMCA BrightLife - an organization of special needs persons sponsored by the Branch Crossing Chapter of YMCA located near MakerBarn.

On Monday May 23rd, for the first time - the BrightLife folks climbed into two YMCA buses and came to visit us at MakerBarn. They watched MB member CE Raum make Birdhouse blanks in the Shop and members Greg Radliff and Candidia Wolfram helped each BrightLifer make a badge in the Lab.

This long awaited event was organized by John Buckley and Jill Copland. If you would like to join the fun of helping our special needs friends, please contact John Buckley at jb332699@gmail.com.



MADE AT MAKERBARN!

Elizabeth Jones made End of the year teacher presents; pens with names engraved using the laser printer.



J Pontiff made a plastic drum cutter to cut plastic drums and then used drums to make a container to purge (wash) crawfish.



MADE AT MAKERBARN!



J Pontiff cut out a bracket and powder coated it to hold a rear view mirror camera for his T bucket auto



Are you Manager Material?

The MakerBarn runs on volunteers and you if you have been an active member for two months or more, we would like you to consider becoming a Shop MakerBarn Manager. MB Managers work 3-4 hour shifts during which they supervise the general operation of the Shop keeping a close eye on safety and noting any maintenance issues that arise. They also devote a fair amount of time to general cleaning of the shop floor and emptying the dust collection and trash systems. They give prospective members tours and update MACS access cards as needed for members. **Oh, and they enjoy 24/7 access to the Shop!**

If the Shop manager role sounds interesting to you, contact Jim Barron via Slack. Thanks!

MADE AT MAKERBARN!

Jon Green made a coffee table from Honduran mahogany obtained in Tegucigalpa Honduras in the late 1960's. The wood has been in storage for a long time but now it is a family heirloom. A few pieces of wood on one side were left in their original rough condition to document how the table came to be.



Rick Wallis made an ice chest using 2x4x8 Cedar and 10' Cedar Pickets .



New FIBER LASER arriving soon

Here's a photo of the new fiber laser that will be arriving soon.

Fiber lasers operate a bit different from the CO2 lasers we have. Although CO2 lasers do a great job at cutting and engraving materials like wood and acrylic, the laser beam has no effect on metal. Fiber lasers engrave metal and can even cut thin metals. The beam from the fiber laser passes right through acrylic without even making a small mark yet easily marks metal. The fiber laser will allow us to engrave almost any kind of metal. It will also do a very clean engrave on powder coated stainless steel.

Fiber lasers use small mirrors mounted on galvos. A galvo (short for galvanometer) is driven much like a loudspeaker cone. The magnetic fields generated by a coil of wire move under the force of a permanent magnet. The movement can be very fast and very precise. There are two galvos, one for X axis, one for Y. The galvos, their mirrors, and the focusing lens are all contained in a sealed box. Our machine will have a working area of 200x200mm or about 8x8 inches. The laser is rated at 30 watts. Some controls are similar to the CO2 laser such as power and speed. The fiber laser is pulsed at very high frequency. This frequency can be set by the user create special effects, so the fiber laser will require some special training. Also, very important, the fiber lasers are open systems. This means there is no cover like the CO2 laser have. So, safety is paramount. Safety glasses are a must. Also, if the laser can cut metal, it will cut fingers, so keep you hands away while operating the machine.





While engraving clean metal there should be little or no smoke and fumes. If you are engraving powder coated metal and other smoke generating materials, be sure to use the fume extractor.

The machine will also have a rotary attachment. Setting up the rotary involves some effort and care, but after doing it a few times it should be easy, much easier than the CO2 lasers.

To learn more about the fiber laser, checkout "laser everything" on YouTube. The information provided for fiber lasers in well presented and easy to understand. He really knows how to get the fiber laser to do remarkable things.

As soon as we get the machine up and running, we will have several classes and demonstrations on it's operation. How could something so hot be so cool, you will soon see for yourself!

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>Daniel Claybaugh</p>	<p><u>WELDING</u></p> <p>Daniel Claybaugh is area manager for welding</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

Doug Green - Web Site

Ashley Dickson - Member at Large

John Buckley - Newsletter Editor

Area Managers: (Guru or Custodian)

Woodworking - Jim Baron

Lasers - Greg Radliff

3D Printing - Jody Cochran

Metalworking - Bryan Manka

Electronics - Raul Garcia

Welding - Daniel Claybaugh

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