



# NEWSLETTER

## April 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."*

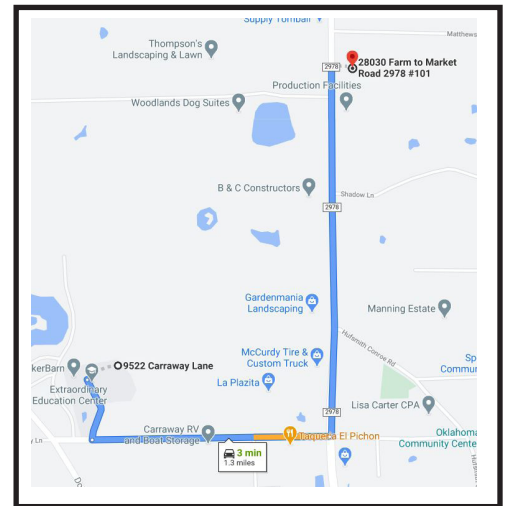
## The Move is On!

By now I'm sure everyone knows the big news, we are going to move the shop to a new location in the same office/warehouse complex as The Lab! The actual closing of the shop and moving all the equipment will happen in late May or early June. But the buildout of the new shop will begin as soon as the current tenant moves out. This should be April 1st, but I suspect it will be a bit later. We have a lease at EE until the end of June, so if we move much sooner, we will have to pay double rent. The landlord at the new facility will not be charging rent while we do the buildout. We have already been working on planning, acquiring materials, and building some of the equipment to be used in the new shop.

Last Saturday, about a dozen members got together and built 15 of the new Automatic Blast Gates. These devices will be part of our entirely new dust collection system. The new system will be much more powerful and the Automatic Dust Gates will open and turn on the dust collection system automatically when a member puts their MACS badge in the reader. The system has dual filtration with a HEPA filter. This means we can recycle air in the shop and save a bunch on A/C costs.

There will be plenty of opportunity in next few months to volunteer and help build the new shop. The plan is to have all the electrical, air plumbing, and dust collection in place when we move. This will make the move-in as close to plug and play as we can get it. With a good bit of luck, the shop should not be down for more than a couple of days.

The best way to keep up with the progress at the new shop is to get the Slack app on either your computer or phone. The Slack channel to watch is "newshopbuild". You can ask questions and/or keep a watch out for opportunities to lend a helping hand.



George Carlson  
President, MakerBarn

## *We had a blast!*

On Saturday March 27, MakerBarn members met at the Lab to achieve final assembly of the new automated blast gates that will be used in our new facility. The blast gates are designed by George Carlson and many members lent a hand to build each component in the days leading up to final assembly.





## ***MADE AT MAKERBARN!***



**Robert Wozniewicz** - is at it again!  
He made this beautiful end grain cutting board out of hard maple & Purple Heart along with some wine cork trivets and a little laser engraving.

**Stephanie Wilson** - made a Shamrock at the Lab using one of the the laser cutters. These are made from corrugated plastic, using damp towel underneath.



## MADE AT MAKERBARN!



**Michael Wanja** - made this one-of-a-kind frame for his license. He explains:

It is split into five sections, which is the number the years it took me to complete it.

- The darker (walnut) are the exams I passed.
- The lighter (hickory) are the exams I failed.
- The broken glass is my view of the system that wasn't working.





## ***MADE AT MAKERBARN!***



**Colleen Helz** - made this sign and a charcuterie board





## ***MADE AT MAKERBARN!***

**Karla Zielke** - made this amazing Easter Egg using a mandala pattern. She used our Thing1 laser machine to cut this intricate mandala pattern perfectly! She used Arteza water colors to add some jewel tone colors before gluing the project together. Beautiful!



# 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	Vectric VCarve Pro	Yes	Jim Barron
3D PRINTER	Fusion 360/Cura/Simplify3D/Prusa	No	Jody Cochran

\*reduced price available for makerspaces like MakerBarn

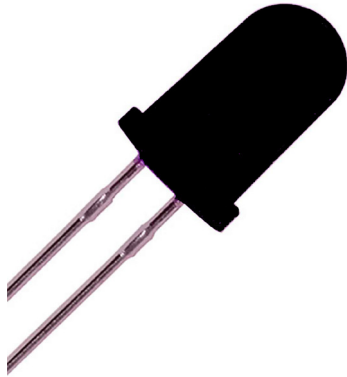
SOFTWARE	USED BY	MakerSpace Pricing
 LightBurn	LASER Thing One – The Lab LASER Thing Two – The Lab	LIGHTBURN is \$20 for MakerBarn users by using the special license code. \$30 per year for additional upgrades
 VCarve PRO	CNC 4'x4' – The Shop CNC Carvey – The Lab CNC Mini for PCB – The Lab	VCARVE PRO 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

## Updated mask wearing requirement at the Barn and at the Lab:

Members, we have updated our mask wearing requirement at the Barn and at the Lab

- As states are administering the COVID vaccine in greater numbers each week and our state governer has relaxed mask mandates, we have revised our rules too.
- Masks will only be required when you find yourself working in close proximity to another member.
- Maintain a 6' social distance and masks will not be required.
- If you feel more comfortable wearing a mask, then you should continue to do so

### News Flash !!!!!



The MakerBarn has invented a new type of electronic device. Named the Dark Emitting Diode, or DED. The DED can be used as an indicator where absolutely no information is conveyed. The DED is compliant with the new Green standards because it uses no power, whatsoever. The DED will become a replacement for old fashioned burned out incandescent light bulbs. It will certainly become a favorite in dark closets and automotive headlights.

(P.S. - April Fool's!)








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](mailto: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!



## Meet The Area Managers!

	<p><u>WOODWORKING &amp; CNC</u></p> <p><b>Jim Barron</b> 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><b>Greg Radliff</b> 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><b>Jody Cochran</b> 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><b>Bryan Manka</b> 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><b>Raul Garcia</b> 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**  
9522 Carraway Ln  
Phone: 832-663-6390



**MakerBarn: The Lab**  
28030 FM2978 Suite 101  
Phone: 832-663-6377

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### **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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