



# NEWSLETTER

## February 2021

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*"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."*

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**Invent:** To create a novel device or method to solve a problem.

Some inventions are tremendously important. Can you imagine what it was like before they invented toothpaste in a tube? Some inventions just don't work out as well. I always thought a good improvement to the Smart Phone would be a Smell-A-Phone. Or, the Astro-Solar a solar power source for astronomers. But one invention that has been a big plus for all of us is the invention of The MakerBarn.

The MakerBarn is not so much a place, but a group of individuals who love to make things. Making, by its nature, is inventing. Even if a maker is only building a kit, he/she is constantly solving problems related to the build.

So, we are not simply makers, we are Inventors. You should proudly wear your Eli Whitney or Thomas Edison hat. You can invent things they could never have considered.

Inventors must collaborate and share ideas. This has been even more difficult to accomplish do to the Covid epidemic. So here is an idea, let's get together on Zoom at 7:00pm on Wednesday evening February 10th. We'll call this the **Inventapalooza**, (because I can't think of anything clever). Talk about improvements, complaints, and praise are all welcome. It will be come and go as you please, so don't worry if you are late, or your time is limited.

Here's the important link:

Topic: The MakerBarn Member Inventapalooza

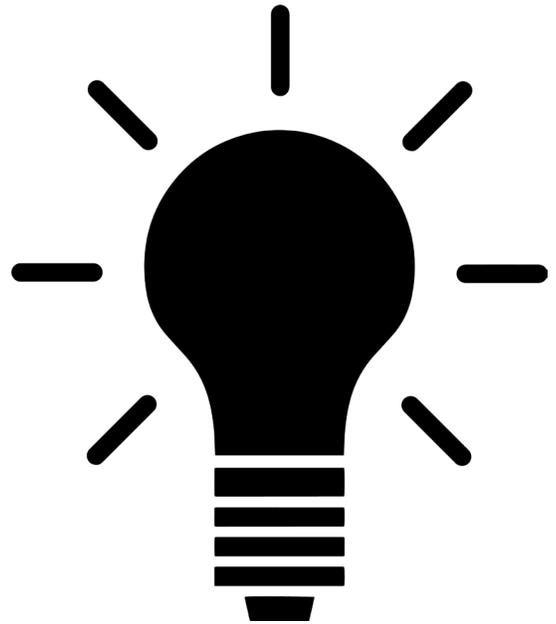
Time: **Wednesday Feb 10, 2021 07:00 PM** Central Time (US and Canada)

<https://us02web.zoom.us/j/2817038279?pwd=aTIWaUc1Mk5UU0FCRXoyR25oakIxUT09>

Meeting ID: 281 703 8279    Passcode: Maker

See you on the Zoom.

George Carlson  
President, MakerBarn



## *Learn to Make via ZOOM*

The COVID virus has made in-person learning difficult, but MakerBarn members are determined to see our training activity continue!

A series of Zoom training sessions has begun and we are learning to enhance the zoom sessions with multiple cameras and microphones to make these learning sessions (almost!) as good as training in person.



*Above - Members running the recent LightBurn Laser Software Training session*

We have three MakerBarn Zoom sessions set for February:

Monday, February 1 7:30 PM - **Technical Aspects of Laser**

Wednesday, February 10 7:00 PM - **The MakerBarn Member Inventapalooza**

Monday, February 15 7:30 PM - **LightBurn Laser Software Training**

Watch your email for join instructions.

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

**Matt Folsom** made an ashes urn of maple sides, oak top/bottom, and mahogany splines in the mitered corners.



**Matt Folsom** made a mount for the Lightburn laser camera. Designed from scratch in Fusion360, sliced with Prusa and printed with PETG on my Creality Ender 3. Heat-set 4mm threaded inserts placed with soldering iron. Installed in the lid of Thing2.

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

**Robert Wozniewicz** made two men's dresser top valets. Top side storage as well as inside. One made with figured dark exotic wood plus a fluted bird's eye maple lid. The other blood wood with fluted lid.



**Robert Wozniewicz** used off-cuts of various other projects to make pencil holders and three spice towers for dry spices like salt/pepper or herbs. Plus (Ed: what he calls!) a bad attempt at a wooden spoon.

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

**Will Liebe** and his younger brother spent a day constructing this warship made of plywood and some PVC pipes. They used the usual woodworking tools like the SawStop, Mitre Saw, and Drills.



# MADE AT MAKERBARN!



Gary Walz made this ping pong table a year ago. This was his first significant attempt on the CNC router and first time to work with epoxy resin. It took some trial and error to get the net just right. He thanks everyone at the barn who helped him along the way, especially Jim Barron.



# MADE AT MAKERBARN!



**John Henderson** made a bed and a table top. He used jointer, planer, miter saw, table saw at the Barn to make them.



## 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

## REMEMBER - Five COVID Guidelines for the MakerBarn:

**Test again BEFORE you return:** If you or someone living with you should test positive for the virus, please inform us and do not plan to return to The Lab or The Shop until you have a negative test result.

**Masks:** Everyone must wear a mask before entering the Barn and for the duration of your time at the Barn. Please bring your own.

**Two's a crowd:** We want to practice social distancing while also allowing for making. So let's keep it to one member using each area at a time, i.e. one member in the laser room, one member in the sanding room, one member using the sewing, one doing wood working, etc.

**Use Sign-up Genius :** Please do not come to the barn without reserving time to use equipment. It's easy now to go to the website at <http://themakerbarn.org> and click on the new Sign-Up Genius icon. There you may reserve equipment in one hour blocks. You can always call 832-663-6390 & the manager on duty will confirm your time as shown on SignUp. We are all going to need to be respectful and considerate of one another during this time.

**Members with guests:** Guests and children are asked to stay at home until we have reliable information that shows the Covid-19 danger is considerably reduced. We are not there yet. Safety and health of our members is top priority.



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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*Our mailing address is:*

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