

# **Member Handbook**

Fishers Parks & Recreation: Maker Playground

8100 106th Street Suite 150

Fishers, IN

fishersmpg.com

(317) 595-3150 (8:30am-4:30pm)

makerplayground@fishers.in.us

# **Hours of Operation:**

Mon-Fri: 10am-8pm

Saturday: 10am-5pm

**Closed Sunday** 

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# Maker Membership Terms of Use

Welcome to being a Member at Maker Playground. We are so excited to welcome you and see what you will create! Please refer to this handbook as your guide for use of the space. We highly suggest you download and save this PDF for future reference as you continue to explore and make.

#### **Code of Conduct**

Maker Playground is committed to creating a safe, inclusive, and respectful environment for all members. We welcome individuals from all backgrounds, regardless of age, race, ethnicity, gender, sexual orientation, disability, religion, or any other characteristic.

Treat all members with respect and consideration. Keep conversations professional and appropriate. Be mindful of your words and actions, and avoid behavior that may be harmful, offensive, or disrespectful.

Harassment and discrimination in any form will not be tolerated. This includes, but is not limited to, offensive comments, slurs, jokes, intimidation, unwelcome attention or physical contact, and any other behavior that creates an uncomfortable or hostile environment for others.

If you experience or witness any behavior that violates this Code of Conduct, please report it to a staff member. All reports will be taken seriously and will be kept confidential to the extent possible.

Violations of this Code of Conduct may result in suspension or termination of membership subject to City of Fishers discretion.

### Membership Card

When you become a member, you'll receive a membership card. This card will grant you access to the Makerspace during open hours. Please check in at the receptionist desk with your card when you first enter the makerspace each day. If your membership card is lost, please contact makerplayground@fishers.in.us.

#### Orientation

Before utilizing any of the equipment at Maker Playground, you will be required to watch safety training videos specific to each machine. These training materials can be found on <a href="https://www.fishersmpg.com">www.fishersmpg.com</a> under the "Membership" tab. After watching the training videos, submit the Smartsheet form so we can allow you to access the shop.

### **Personal Protective Equipment**

PPE is required to be worn in designated work spaces. Maker Playground has basic PPE including safety glasses and foam earplugs available to members. Members and visitors are welcome to bring their own, provided it meets or exceeds <u>ANSI</u> requirements. Any additional desired PPE, such as dust masks, will need to be brought in.

### **Training Courses**

Training courses are required for the Boss Laser Engraver, Aeon Laser Engraver, and the ShopBot CNC Router before you are approved to make reservations for those machines. The Boss Laser and CNC Router training courses are \$10 for members. The Aeon certification course is available to be taken after the Boss Laser course, and is free to members. Ask staff to sign up for the next training or find the courses listed in CivicRec. Training sessions take place every other week, tentatively.

### **SawStop Activation Policy**

All members utilizing the SawStop Table Saw must operate in accordance with all safety guidelines provided during safety training and detailed within the member handbook. The SawStop table saw is equipped with a safety brake designed to protect operators from severe injury. However, the brake will also activate when contact is made with any conductive material such as metal (nails, staples, or clamps) and wood that has a high moisture content or has not been fully kiln dried.

In the event that a member trips the SawStop brake due to misuse, a non-refundable fee of \$100, plus any applicable processing fees, will be charged to the member's card on file to cover the cost of a replacement brake.

Misuse includes, but is not limited to:

- Cutting materials not approved for use with the SawStop Table Saw, such as wood with metal staples, nails, or other conductive materials
- Using wet or damp wood
- Improper operation that fails to follow safety guidelines outlined in the handbook or SawStop training video

Members will be notified of the fee upon assessment. Refusal to pay the fee may result in termination of membership.

If you have questions about proper operation or materials that can be safely used with the SawStop table saw, please ask a staff member for assistance prior to use.

#### **Project Materials**

Maker Playground is here to provide you with the tools you need to make your project! However, Maker Playground does not provide project materials. Some lumber supplied by DGC, Inc. may be available to purchase by Venmo found on QR codes in the space. Otherwise, please bring your own wood, finishes, etc. All chemicals should be in their original container, labeled with your name, and may be stored in our flammables cabinet.

#### Storage Cabinets

Storage cabinets may be reserved for an additional \$15 monthly fee (in addition to your monthly membership fee) on a first come, first serve basis. If all cabinets are currently in

use and you are interested in a rental, ask staff to be added to the waitlist. No flammable or hazardous chemicals may be stored in storage cabinets - ALL flammables must be stored in the flammables cabinet in their original container labeled with your name. Maker Playground is not liable for lost or stolen items. Bringing your own lock is permitted. Staff reserve the right to access storage cabinets to inspect stored items if necessary. Cabinets may only be accessed during Maker Playground open hours.

### Lumber/Project Storage (ACTIVE PROJECTS ONLY)

Storage is available only for active project lumber that will be removed within TWO WEEKS. Kiln dried lumber ONLY - no wet or green wood. All lumber must be stored in a designated lumber storage area. All lumber must be labeled with your name and current date. Failure to write your information on your lumber or failure to use your lumber within 2 weeks may result in materials being misplaced or repurposed. If there is no intention to work on the project the lumber is for in the next week, materials must be stored OFF-SITE. Full size lumber only - no partial or assembled projects. Overnight storage for assembled projects is only granted for glue ups and finishing for a 24 hour limit. Members must return the next day to retrieve their project. Maker Playground is not liable for damaged or stolen lumber or project materials. Stored lumber may only be accessed during Maker Playground open hours.

### Ероху

We are currently unable to provide adequate ventilation and storage space for curing large epoxy pours. Epoxy for small patches and knots is acceptable, however, deep epoxy pours such as river tables must be completed off-site.

#### Staff

Staff is here to ensure everyone is operating machinery safely and proper use of tools and equipment. Staff is also happy to help with design techniques, tips, tricks, and advice. Feel free to ask a question and we will answer or assist to the best of our ability. However, Makerspace Staff is not an extra set of hands for completing projects. Projects should be within reasonable size to complete by yourself and be entirely self directed.

#### DO:

- request tools from the back room
- request a quick refresher or demonstration on a machine with a process you are less familiar with (i.e. cross-cutting a board on the table saw or jointing the edge of a board on the jointer)
- ask clarifications about tool operation (i.e. how to change a angle grinder disc or angle the miter saw)
- ask advice about your process (i.e. "Is there an easier way to add a juice groove to my cutting board?" "Which of these processes should I do first?")

 notify staff about machine maintenance (i.e. blade broke or sandpaper needs changed - note depending on the task and how busy we are, maintenance may not be completed immediately)

#### DON'T:

- monopolize staff time
- use staff as your personal assistant for project operations or heavy lifting (i.e. running large boards through the planer we have roller stands available for this purpose or unloading excess amounts of lumber from your vehicle use a cart!)
- expect staff to complete cuts or projects for you
- ask staff to teach you the entire process of making an in-depth project (Youtube is a great resource!)
- ask staff to instruct how to use the CNC or Laser machines outside of designated class times (short questions are OK!) - if you are unable to make any class dates, notify staff and we will work with you

#### **Tool Checkout Procedure**

Ask staff if you would like to use any of the listed tools available to check out in the space. Staff will check this item out to you under your name. After use, return any tools to makerspace staff to be checked in. Tools remain in the makerspace at all times. Do not take tools out of Maker Playground. Hand tools in the space are available to use without being checked out, and should be returned where they are found.

### **Equipment Reservation Procedure**

In order to ensure access to all members, we require you to reserve a time slot when you plan to use certain machines. Reservations are required to use the Boss Laser Engraver, Aeon Laser Engraver, ShopBot CNC Router, and Ultimaker 3D Printers. Prior training classes are required for the Boss Laser Engraver, Aeon Laser Engraver, and ShopBot CNC Router before you are able to reserve.

All machines are reserved on a first come, first serve basis. Reservations are available in hour increments, with a minimum of 1 hour, and a maximum reservation of 4 consecutive hours. For the laser engravers, this 4 hour maximum reservation time applies to EITHER laser.

Visit the "Membership" tab at <a href="www.fishersmpg.com">www.fishersmpg.com</a> to reserve access to the machine prior to your arrival. Please allow some time at the end of your reservation to clean up for the next member. A step-by-step guide on how to make a reservation can be found on pages 17-21. Information on what to prepare for your time slot can be found on pages 25-27.

If you are unable to keep your reservation, please cancel your reservation before it begins by following the step-by-step guide on pages 22-24, contacting the front desk by

calling (317) 595-3150 between 8:30am and 4:30pm, or emailing <a href="makerplayground@fishers.in.us">makerplayground@fishers.in.us</a>. Recurring missed reservations without notice will result in temporary loss of permissions to reserve equipment.

### **Membership Cancellation Policy**

Members can cancel their membership by emailing <a href="mailto:makerplayground@fishers.in.us">makerplayground@fishers.in.us</a>. Please allow 10 business days for cancellation to process. To avoid being billed for the next month, notify us 10 business days prior to the start of the next billing cycle. Prorated refunds are only available for yearly billed memberships. Members may also pause their membership to be easily continued at a later date.

## **Punch Card Memberships**

Punch Cards allow registrants access to use the Maker Playground on five separate occasions. Punch Card members WILL NOT receive a membership card, and will need to check in with staff every visit in order to access the space. Each punch grants access to the Maker Playground for the duration of the open hours of that day. Punchcard registrants, like all members, will be required to complete orientation before utilizing the space. This includes taking any prerequisite classes to access the Laser Engraver or CNC Router. Punchcard Registrants will get the member discount on these courses if they wish to use these machines. If the Punch card registrant is present to only take a certification course, using a punch is not required. In order to ensure our members are up to date on safety procedures and tool usage, punch cards expire one year after activation.

# Accessibility

Fishers will, upon request, provide appropriate aid and/or assistance and services leading to effective participation for people with disabilities to participate equally in Fishers programs, services, and activities. View the City of Fishers Accessibility policy on our city website.

Anyone who requires an auxiliary aid, assistance, or service for effective participation or modification of policies or procedures to participate in a service, program, or activity, should contact Nick Snyder via email or at (463) 231-7294, no later than forty-eight (48) hours before the scheduled event. To request an interpreter, please contact Customer Service at (317) 595-3150 or at <a href="mailto:parks@fishers.in.us">parks@fishers.in.us</a>.

#### Website

For Parks and Maker Playground website accessibility information, visit <u>fishersmpq.com/site/accessibility</u>.

### **Personal Protective Equipment**

The Makerspace may be extra loud at times when machinery and equipment is in use. Maker Playground provides standard protective eyewear and hearing protection, which is required in certain areas and when working with tools. These requirements are posted at entry points within Maker Playground. Members and visitors are welcome to bring their own PPE, provided it meets or exceeds <u>ANSI</u> requirements.

### **Adaptive Tools**

Maker Playground offers individuals of all abilities the opportunity to create. Below is a list of adaptive tools and accommodations. Don't see an adaptive tool on the list? Is there a tool or other accommodation that could support your use of the Maker Playground? Let us know so we can add it to our toolbox.

- Loop Scissors: Loop scissors pop open after use to make it easier to stay in control and stable.
- Hand Aid: Hand Aids provide a comfortable grip on a pen, pencil, paintbrush, etc.
   One end is flat to prevent rolling.
- Magnifying Glass: Our articulated magnifying glass is ideal for those with low vision. It magnifies up to 5x and provides additional light. It is held by an articulated arm so users can move it in place over their work.
- KultureCity Sensory Bags: Maker Playground and Fishers Parks is partnered with KultureCity to make sure that Maker Playground is sensory inclusive and welcoming for all. Sensory bags, including noise canceling headphones (provided by Puro Sound Labs), fidget tools, verbal cue cards (produced in conjunction with Boardmaker), and weighted lap pads, are now available to all

guests who may feel overwhelmed by the environment. More information about Fishers Parks and KultureCity can be found <u>on our Parks website</u>.

### Service Animals and Personal Care Attendants

Service animals are permitted with members and guests, although there are some spaces within Maker Playground where service animals are not permitted for the health and safety of both the service animals and members. These areas include the Woodshop and the Metal Shop. Machinery and equipment in these areas creates an undue risk to service animals.

Personal Care Attendants are permitted at Maker Playground without a membership or additional fee. Personal Care Attendants must be present to assist a member in order to qualify for free access.

# Maker Playground Facility Rules

### 1. Get Safety Training & Follow All Safety Procedures

In order to ensure our members are knowledgeable and competent on our equipment, required safety videos are listed on our website. If you are unfamiliar with a machine at Maker Playground, ask our staff for help or request additional training. Do not operate any machinery, equipment, or tool for which you have not been properly trained. Individual machine rules are posted on laminated sheets near each machine for your reference. If you are uncertain about the safety of a cut or how to safely complete a specific task, ask our staff and we can ensure that you're doing things in the safest possible way.

### 2. Respect Our Tools

Treat our tools like you would your own. Do not abuse the machines or use our tools in an unauthorized way. All safety procedures are in place to protect both yourself and our machines. Stay aware of the sounds on the machine you are working with and never force a cut or operation beyond a tool's limits. Report any damaged equipment or tools to Maker Playground staff, and do NOT try to make repairs or unauthorized modifications to equipment. Return all tools and leave all machines in a clean and ready-to-use state. Keep food and drink out of working spaces and away from tools.

### 3. Come Prepared

Wear shop appropriate gear at Maker Playground: wear close toed shoes, tuck in loose articles of clothing, and tie long hair back. Be sure to wear PPE - safety glasses and hearing protection is available at Maker Playground. Make sure you are fully awake and present while working at MPG. Bring your own materials and be prepared to take any projects home with you. Make a reservation for your machine where applicable and have any files you need ready. If you require additional help on a machine, let one of our staff know to schedule a time with you when they can assist.

#### 4. Be Considerate of Other Members

Maker Playground is a communal workspace. Be respectful of other members and always follow Maker Playground's Code of Conduct. Don't help yourself to other members' materials. Be mindful of others working around you and do not block walkways. Keep your workspace organized, and restrict projects to one work bench whenever possible to allow room for other members. Stationary tools should be cleared off. Checked out tools should be cleaned and returned to staff after use to make them available to other members.

### 5. Clean up

Clean up sawdust on and around any machines you were working with and return tools where they belong. You'll need to consider the time it takes to prep, complete, and clean up your project BEFORE your reservation time ends and/or BEFORE Maker Playground closes. If you brought materials and tools into the space, we ask that you remove them at the end of your visit unless storage has been purchased or lumber storage has been discussed with staff. More information about storage can be found in the Maker Handbook.

### 6. **Listen to staff**

Obey all instructions given by Maker Playground staff. If staff instructs you to stop operating a piece of equipment, do so immediately. Staff may also suggest safer methods of completing a task. Report any unauthorized use of machines and dangerous behavior to Maker Playground staff.

# List of Available Maker Playground Equipment & Tools

#### Think Tank

- Ultimaker 2+ 3D Printer
- Ultimaker S3 3D Printer
- Ultimaker S5 3D Printer

### **Project Alley**

- Boss Laser HP 3655 Laser
- Aeon Super Nova 14 Laser
- EMP ST50J Fiber Laser

#### Tools Available for Checkout:

- Drill
- Driver
- Impact Wrench
- Oscillating Multi-Tool
- Cordless Grinder
- Hand Planer
- Palm Sander
- Orbital Sander
- Finish Nailer
- Restorer Belt Sander
- Festool Vacuum

- Framing Nailer
- Pin Nailer
- Router Kit
- Cutout Tool
- Biscuit Joiner
- Jig Saw
- Track Saw
- Circular Saw
- Reciprocating Tool
- Festool Domino

# Woodshop

- 4' x 8' Shopbot CNC Router
- Sawstop Table Saw
- 20" Planer
- Compound Miter Saw
- 20" Wood Lathe
- 16"/32" Drum Sander

- Combination & Spindle Sanders
- 6" Jointer
- 20" Scroll Saw
- 17" Band Saw
- Router Table
- Benchtop Drill Press

# **Metal Shop**

\*\*\* Coming Soon \*\*\*

# Table Saw Safe Operation

- 1. Wear proper eye and hearing protection.
- 2. Secure any loose clothing, long hair, dangling jewelry, etc.

  Any of these items might get caught in the blade and yank you into it before you can react.
- Do not wear gloves while operating.
   Gloves can reduce your gripping power and tactile strength, and most of all be loose enough for the rotating blade to grab, resulting in worse injury.
- 4. Stand to the left of the blade, with your feet apart for good balance while operating. Stand to the left side of the blade to stay out of the way of sawdust and any possible kickback. Position your body firmly while operating the saw to avoid losing your balance and grip on your piece.
- 5. Keep the floor in front of the saw and work area clean to avoid tripping or slipping.
- 6. Check your material before cutting. No green wood, staples, or nails!

  Our SawStop will be activated by anything conductive, which immediately stops the saw and destroys the blade. This is good for the safety of your fingers, but it will also be triggered by any metal, wet wood, or wet paint on anything being cut. In addition to this, be aware of any loose knots in your lumber that may pop out while making your cut.
- 7. Never operate the table saw with the throat plate removed.

  Wood that falls into the hole can drop down and get caught on the blade. Use a zero clearance throat plate when cutting very thin pieces.
- 8. Adjust the blade height just high enough for one blade tooth to clear your material.
- 9. Always use the fence and a push stick while ripping.
  Guide your material into the blade while keeping your material firmly against the table and fence. Use a push stick to push the end of stock that is 6" or less in width past the blade.
- 10. Always use a miter gauge or cross-cutting sled while crosscutting. Never rely on the fence for this purpose. You will be unable to keep your piece completely straight with the fence alone, and this creates a perfect recipe for a kickback if the saw blade catches a corner of your piece.
- 11. If a procedure feels unsafe, it probably is. Find another way to do what has to be done.
- 12. Make sure nothing is touching the blade before turning on the saw. Allow the saw to speed up completely before feeding your piece into the blade.
- 13. Push your piece past the end of the blade and riving knife.
  Releasing work too early can cause kickbacks as it is possible for the blade to grab any part that has not yet gone by.
- 14. Make sure that the blade has stopped turning before you adjust the table saw.
- 15. Any operations that require reaching into the cabinet, such as switching to a dado blade or riving knife, must be done by our staff.

# Thickness Planer Safe Operation

- 1. Wear proper eye and hearing protection.
- 2. Secure any loose clothing, long hair, dangling jewelry, etc.

  Any of these items might get caught in the blade and yank you into it before you can react.
- 3. Always make sure to run the dust collection while operating the planer.
- 4. Don't plane material shorter than 12".

  Materials that are too short will not reach the outfeed rollers and get stuck inside of the planer.
- 5. Never run materials containing nails, screws, or other metallic objects. These will nick the blades and possibly get thrown out of the planer.
- 6. Don't plane material that has paint or finish on it. This gums up the blades.
- 7. Be cautious of loose knots, splits and other defects in wood. These defects can tear out and jam the planer.
- 8. Always plane with the grain. No end grain cutting boards or cookies!
- 9. Always keep hands 6" away from the infeed area.
- 10. Never stand in front of or behind stock going through planer.

  Similarly, never crouch down to look into the blades of the planer. Though we have anti-kickback feed rollers, stay out of the path of the material if it or any small residual pieces were to kick back or fly out.
- 11. Plane one piece at a time or butt them end to end. Never plane side by side. This avoids kickback caused by uneven thicknesses.
- 12. Do not place your fingers under your material while pushing it into the planer.

  The planer will flatten the board and pinch your fingers between the board and planer surface. Push the material in while flat against the surface.
- 13. Don't raise or lower the table while stock is in the planer. Always adjust the height before you feed your material.
- 14. Do not try to remove more than 1/16" at a time.
- 15. Do not plane stock less than 1/4" thick.
- 16. Don't remove debris unless the planer has come to a complete stop and is unplugged.
- 17. If the planer malfunctions or makes abnormal noises, stop the machine immediately and report to staff.

# Miter Saw Safe Operation

- 1. Wear proper eye and hearing protection.
- 2. Secure any loose clothing, long hair, dangling jewelry, etc.

  Any of these items might get caught in the blade and yank you into it before you can react.
- 3. Do not wear gloves while operating.
  Gloves can reduce your gripping power and tactile strength, and most of all be loose enough for the rotating blade to grab, resulting in worse injury.
- 4. Be sure all scraps have been removed from around the blade before using the saw.
- 5. Never cut any material shorter than 8".
- 6. Never secure material with your hands or fingers closer than 6" from the blade.
- 7. Your arms should always remain parallel to each other while using the saw. Never cross your arms in front of the saw to hold your material.

  You should almost always hold the material with your left hand and control the saw with your right.
- 8. Always firmly hold your material against the fence.
- 9. If you have to cut slightly bowed material, place material with the curve facing out so that the blade doesn't bind during the cut.
- 10. Never attempt to rip material on the miter saw.
  Never attempt to cut material that is wider than it is long on the miter saw. The longest direction should always be the one against the fence.
- 11. When crosscutting wider material, start with the outermost width of the material and push the saw towards the fence.
  - This maintains control of the saw and helps to prevent the saw climbing towards the user.
- 12. Avoid trapping your material between any stop blocks and the blade. When cutting at angles, cut the acute angle away from the stop block.
- 13. If a procedure feels unsafe, it probably is. Find another way to do what has to be done.
- 14. Allow the blade to reach full speed before cutting.
- 15. Never remove or hold the guards out of the way while using the miter saw.
- 16. After cutting through your material, allow the saw blade to stop spinning completely before returning it to its initial position.
  - This prevents the saw from catching your material as it is being moved back up.

# **Band Saw Safe Operation**

- 1. Wear proper eye and hearing protection.
- 2. Secure any loose clothing, long hair, dangling jewelry, etc.

  Any of these items might get caught in the blade and yank you into it before you can react.
- Do not wear gloves while operating.
   Gloves can be loose enough for the moving blade to grab, resulting in worse injury.
- 4. Make sure the blade is properly tightened.
- 5. Adjust the upper guard assembly so that it is approximately ¼" above your material before turning on the machine.
- 6. Allow the saw to reach full speed before starting to feed the work.
- 7. The wood must stay flat on the table while cutting.
- 8. Feed the wood only as fast as the teeth will remove the material easily.
- 9. Maintain a 4" margin of safety!

  Your hands MUST be at least 4" away from the blade when the saw is running.
- 10. Plan relief cuts ahead to avoid backing out of curves whenever possible.
  Make turns carefully and use relief cuts so that the blade does not twist and break. STOP the machine before backing out of a LONG curve cut.
- 11. If the saw stalls in a cut, turn the power off and reverse the blade by hand to free it.
- 12. When resawing, use the resaw fence and a push stick.
- 13. ROUND stock should NOT be cut unless mounted securely with a jig.
- 14. If a procedure feels unsafe, it probably is. Find another way to do what has to be done.
- 15. If you hear a clicking noise, or if the blade breaks, turn the machine OFF! This noise indicates a crack or broken blade. Alert Maker Playground staff.
- 16. Turn the saw off as soon as you are finished with your work.
- 17. Do NOT open the wheel doors yourself! If you need to change the blade, inform staff.

# **Router Table Safe Operation**

- 1. Wear proper eye and hearing protection.
- 2. Secure any loose clothing, long hair, dangling jewelry, etc.

  Any of these items might get caught in the bit and yank you into it before you can react.
- 3. Do not wear gloves while operating.
  Gloves can reduce your gripping power and tactile strength, and most of all be loose enough for the rotating bit to grab, resulting in worse injury.
- 4. Always make sure to run the dust collection while operating the router.
- Make sure the job size is appropriate for the router table.
   Very small pieces could get caught between the fence and bit and should not be cut. Large workpieces should be cut with a hand-held router.
- 6. Check your material before cutting. Beware knots, heavy warping, and twisty grain.
- 7. Make sure the wheels on the table are locked and the table feels secure.
- 8. Be sure to unplug the router before changing the bit.
- Don't bottom out the bit in the collet or partially insert the bit. Ensure that the collet is securely tightened using the wrenches provided with the router.
   We suggest completely inserting the bit, and then backing off approximately 1/16 in.
- 10. Use the smallest diameter table insert that will allow the bit to pass through it.
- 11. Minimize the gap in the fence.

  Adjust the fence halves so that they come to within 1/16" to 1/8" from the bit.
- 12. The workpiece must always be in firm contact with the fence or a rub bearing mounted on the bit. Do not try to make free-hand cuts.
- 13. Never start the router with the bit in contact with the stock.
- 14. Feed from right to left.
  - Never climb cut unless the depth of cut is 1/32" or less and the workpiece is secured and held down by feather boards.
- 15. Use push blocks or featherboards to position your hands a safe distance from the bit and make sure the piece is held firmly.
- 16. Take light cuts. Don't force the bit or overload the router. Heavy cuts invite kickback. If necessary, move the fence closer to the bit or switch to a larger guide bearing.
- 17. Never adjust a jig or the fence position with the router running.
- 18. If a procedure feels unsafe, it probably is. Find another way to do what has to be done.

# **Jointer Safe Operation**

- 1. Wear proper eye and hearing protection.
- Secure any loose clothing, long hair, dangling jewelry, etc.
   Any of these items might get caught in the cutterhead and yank you into it before you can react.
- 3. Do not wear gloves while operating.
  Gloves can reduce your gripping power and tactile strength, and most of all be loose enough for the rotating blades to grab, resulting in worse injury.
- 4. Always make sure to run the dust collection while operating the jointer
- 5. Never run materials containing nails, screws, or other metallic objects. These will nick the blades.
- 6. Don't joint material that has paint or finish on it. This gums up the blades.
- 7. Be cautious of loose knots, splits and other defects in wood.

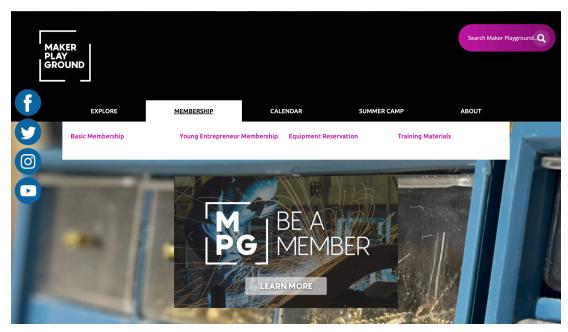
  These defects can tear out and cause kickback.
- 8. Always joint with the grain. No end grain cutting boards or cookies!
- 9. Keep hands away from the cutterhead.
- 10. Do not stand in the direction of potential kickback.
- 11. Set the fence to reveal only as much of the cutting head as you need.

  The less of the head that is exposed, the less likely you'll have any chance to come into contact with it.
- 12. Never start the jointer with the bit in contact with the stock.
- 13. Always support the workpiece against the fence and table.
- 14. ALWAYS use grips or push blocks when planing face grain.

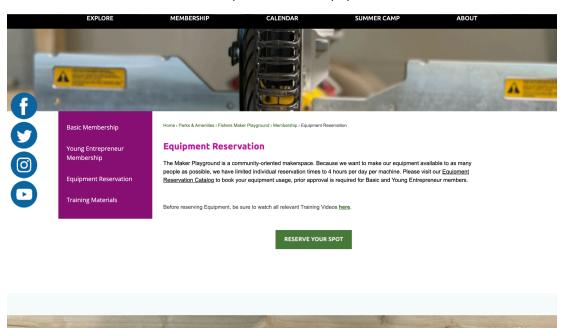
  Push blocks keep something between your hands and the cutterhead at all times and make sure the piece is held firmly.
- 15. Do not try to remove more than 1/8" at a time.
- 16. Do not joint stock less than 8" long, ¾" wide, or ½" thick.
- 17. Feed work against the direction of rotation of the cutterhead only.
- 18. Never adjust the fence position or cut depth with the jointer running.
- 19. If the jointer malfunctions or makes abnormal noises, stop the machine immediately and report to staff.

# How to Make a Maker Playground Equipment Reservation

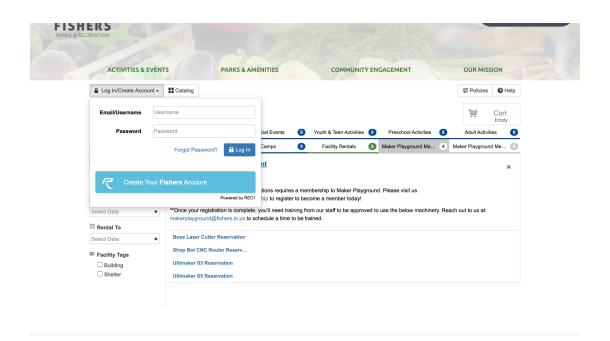
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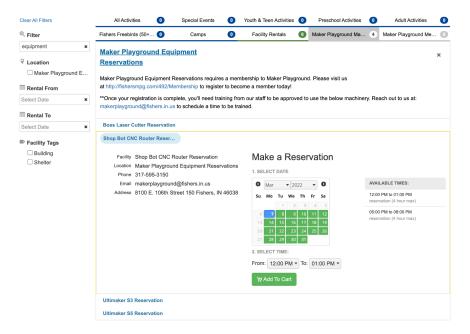
Under the membership tab, click 'Equipment Reservation'.



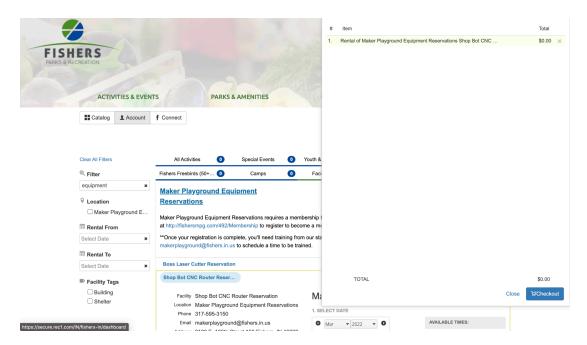
Click "reserve your spot" to enter CivicRec.



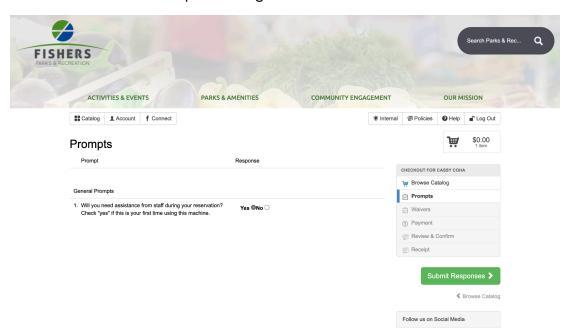
Once in CivicRec, make sure you're logged into your account. Log in using the button in the upper left corner. Now, you'll be able to select which machine you'd like to reserve.



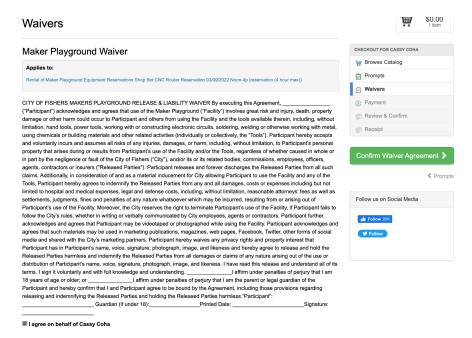
CivicRec will display a calendar and available times. Select the date and time for your reservation and click 'Add to Cart.'



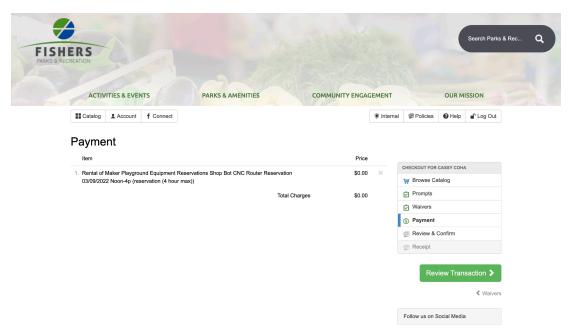
Your cart will show up on the right side of the screen. Click 'Checkout.'



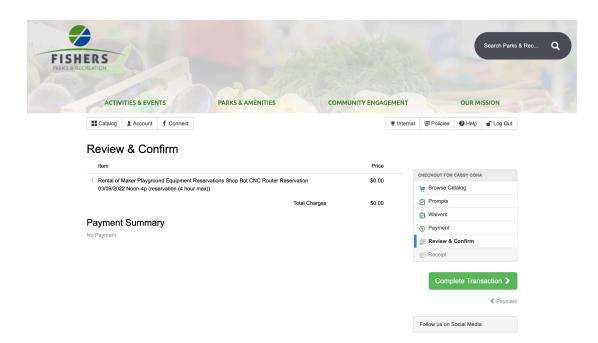
Fill out any prompts on the next screen, then 'Submit Responses.'



Check to agree to the Maker Playground Waiver, and click 'Confirm Waiver Agreement.'



Your Maker Playground Reservation will be free, so you won't need to enter any payment information. Click 'Review Transaction.'



Review & Confirm Transaction. Click 'Complete Transaction.' If you do not click this button, your reservation will not be saved.

Afterwards, you'll see your receipt and receive an email confirmation. You're done! Look at pages 25-27 to see what you should prepare for your reservation slot.

\*If you are unable to reserve equipment, you may still need to take the required course to reserve that machine. If you have already taken the course, let Maker Playground staff know, so we can flag your account to allow you to create equipment reservations.

### Canceling a Maker Playground Equipment Reservation

Please email <u>makerplayground@fishers.in.us</u> or call (317) 595-3150 between the hours of 8:30am and 4:30pm to cancel your equipment reservation.

# Boss Laser HP3655\* and Aeon Super Nova 14\* Reservation Procedure\*

\*You must have taken the Laser Cutting and Engraving Shop Class to be certified to reserve time on the Boss Laser. \*You must have taken the Aeon Certification Class afterwards to be certified to reserve time on the Aeon Laser.

### Limit 4 hours of reservation time on EITHER laser engraver.

Please have your vector or image file ready to import into Lightburn prior to your appointment. If your file is more complex and has a lot of layers, you can prepare your file in Lightburn ahead of time on our MPG laptop. Be sure to ask for the laptop with Lightburn installed.

Lightburn will provide a rough time estimate for your file. Be sure that the time estimate fits within your reserved time slot. Most projects take less than 30 minutes to complete.

Maximum Job Size: 55x36" Software: Lightburn

Compatible File Types:

image: .bmp, .jpg, .jpeg, .png, .gif, .tif, .tiff, .tga vector: .ai, .pdf, .dxf, .hpgl, .plt, .rd, .svg, .lbrn

Approved Materials for Cutting & Engraving:

- Hard Woods
- Soft Woods
- Plywood
- Masonite
- Corkboard
- Acrylic/Plexiglass
- Rowmark
- Delrin/Acetal
- Mylar/PET Film
- Cardboard
- Paper/Cardstock
- Untreated Leather/Suede
- Fabric (no vinyl)
- Felt
- Laser-Safe\* Foam
- Chlorine-Free\* Rubber

If you would like to cut a material not on the pre-approved list, please provide the Material Safety Data Sheet. Staff will review and determine if your material is safe to cut.

Approved Materials for Engraving Only:

- Glass
- Ceramic Tile
- Marble, Granite, Onyx
- Powder Coated Metal
- Mirror (backside only)
- Cermark Spray on Metal

#### **Banned Materials:**

- Epoxy Resin
- PVC or PVB (vinyl, artificial leather)
- Polyethylene HDPE, LDPE, LLPE, MDPE, UHMW
- Polystyrene or Polypropylene Foam (including foamcore posterboard)
- PTFE / Teflon
- Polycarbonate / Lexan
- ABS
- Fiberglass
- Carbon Fiber

## **ShopBot CNC Router Reservation Procedure\***

\*You must have taken the CNC Routing Shop Class with Maker Playground to be certified to reserve time on the ShopBot.

Please have your VCarve file ready prior to your reservation on the CNC Router in order to keep the ShopBot desktop dedicated to running files. This can be prepared on MPG's laptops or on your personal computer with the VCarve Trial version after becoming an invited member of Maker Playground through Vectric's web portal. Many helpful tutorials for VCarve can be found online. If you need staff assistance, complete the file to the best of your ability, and staff will be able to assist with finalizing the file for the ShopBot.

Check your feed and speeds for the given bit and material with Maker Playground staff before exporting your toolpaths for ShopBot. If you would like to bring your own CNC bits, make sure they have either a 1/4" or 1/2" shank for our collets.

VCarve will provide a rough time estimate for your file. Be sure that the time estimate fits within your reserved time slot. Most projects take less than an hour to complete.

Maximum Job Size: 96x48x8"

Software: VCarve Pro Compatible File Types:

vector: .dxf, .dwg, .eps, .ai, .pdf, .pvc, v3d, .v3m, .crv, .skp, .svg

image: .bmp, .jpg, .gif, .tif, .tiff, .png, .jpeg

3D model: .stl, .v3m, .3dm, .skp, .rlf, .3ds, .asc, .prj, .x, .dxf, .lwo, .wrl, .obj

#### **Approved Materials:**

- Solid wood
- Plywood
- MDF
- Dense foam
- Plastic
- Aluminum (prior clearance by MPG staff required)

#### Available bits:

- 1/4" Endmill
- 1/2" Endmill
- 1/8" Endmill

- 1/4" O-Flute (Acrylic)
- 60° Engraving V-Groove
- 1/4" Diameter Up Spiral Ball Nose (3D Milling)

Staff will typically have the above bits available for your use, and we may have additional bits for specific projects. Ask staff for a complete, up-to-date list of bits. If you are looking for a more specific router bit, you may need to bring in your own. If you are surfacing slabs or river tables, you will need to provide your own surfacing bit.

# Ultimaker 2+, S3, and S5 3D Printers Reservation Procedure

Plan on setting up your print in Cura prior to your reservation. This can be done on any of MPG's laptops or on your personal computer, as Cura is free to download. Print setup can typically be completed in 10 minutes or less and MPG staff is happy to help.

Upon completion of print configuration and slicing, Cura provides a print time estimate. If your print is estimated to be complete within your reserved time, you may begin printing. If your print is estimated to take longer than your reserved time, work with MPG staff to get your print in the queue and schedule a pick up time.

MPG will provide PLA for any prints that can be printed within a single reservation (i.e. 4 hours or less). Our stock PLA is usually black, but we sometimes have white or gray available. For larger/longer prints, plan on bringing your own material.

Build Volume	Width	Depth	Height
2+	223 mm (8.77")	220 mm (8.66")	205 mm (8.07")
S3	230 mm (9.05")	190 mm (7.48")	200 mm (7.87")
S5	330 mm (12.99")	240 mm (9.44")	300 mm (11.81")

NOTE: If your part is drawn in inches, scale up by 2540% upon uploading to Cura.

Software: Ultimaker Cura (available on MPG laptops, free to download)

Compatible File Types: .stl, .obj, .3mf, .x3d

Materials: PLA, PETG, ABS, ASA, PVA, Nylon, TPU, PC, PP (2.85 mm filament only)