

General Woodshop Safety Rules

Version 5: 9/18/2023

Overview:

- Training is **required** for most power tools in the Woodshop. Refer to the [DMS tools information page](https://dallasmakerspace.org/wiki/Tools#Woodshop) (<https://dallasmakerspace.org/wiki/Tools#Woodshop>) for specific details.
- Safety is of paramount importance in the DMS workshop areas, and we follow a [Stop Work Policy](https://www.safetyandhealthmagazine.com/articles/17242-stop-work-authority) (<https://www.safetyandhealthmagazine.com/articles/17242-stop-work-authority>). If you feel anyone is doing something unsafe, it is **your responsibility** to step in and stop them and help them understand the issue.
- If you are not familiar with a tool or its safe operation, then **ask someone** and/or review the tool manual (specific manuals links are on the individual tool pages below)
- Do not perform maintenance on machines without first consulting the committee chair or being authorized to do so.
- Do not use machines which you are not trained. If you are unsure, ask. To see a list of training you have completed, go to the kiosk in the computer room.
- Most freestanding power tools are equipped with RFID interlocks; badge in and out of all tools.
- Always ensure that the work area around you and your tools is clean before and after you are done working. Working in a dust-laden environment can cause issues with machines and your ability to use them.
- There is no storage of materials in the woodshop, woodshop annex, woodshop storage racks or assembly tables. Leaving glue ups for up to 24 hours is OK provided there is a note with your name, contact info, date and time.
- No power carving in woodshop, except for flex-shafts and dremmels (ie tools with $\leq 1/8$ " drive shaft)
- Logs and branches can only be processed on the bandsaws and lathes, no other woodshop power tools



Required:

- Safety glasses are required when in the DMS Woodshop, and most other workshop areas. We require impact-resistant, wrap-around style that meets the ANSI Z87.1 standard (these are very commonly available).
- Close toed shoes are required in the woodshop.
- Tie back or remove any loose clothing, hair, or hanging accessories (backpacks, hoodie strings, etc) to prevent them from being caught in moving machinery.
- Remove all jewelry (watches, rings, necklaces, etc) in the woodshop.
- Check all materials for metal using the metal detector (located on the leg of the SawStop).
- Where applicable, always open dust gate and ensure dust collection is on before starting cut. Likewise, close dust gate when done using tool.
- If you encounter problems with the machines or tools, mark the machine as 'down' and post the issue on talk.dallasmakerspace.org so that the issue can be resolved.
- Members who clean the Felder need to wear a full particulate face-sealing respirator. A dust mask does not suffice.
- **Minors (under 18 years old) Rule. Minors are not allowed to use any tools in the Woodshop with the exception of the Festool sanders and dust collectors. Minors may use the Festool sanders and dust**

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collectors if they are used outside the Woodshop and under the supervision of a parent or guardian who has taken the Woodshop S&O class.

- Minors are not allowed in the Woodshop unless they are accompanied by a parent or guardian. The parent or guardian must have taken the Woodshop S&O class and is responsible for their minor and their behavior/actions.
- “Out of Service” machines: Members may not use machines marked as “out of service”, “do not operate”, “under repair”, “broken”, “damaged”, “locked out” or similar verbiage. “Out of service” machines are usually identified by one or more of the follow warning devices/signs, Do not move, remove or bypass these warning devices signs:



Highly Recommended

- Dust masks/breathing protection is highly recommended. Everyone has different needs (e.g. wood dust allergies); at a minimum, we recommend masks that meet the *N95* classification/standard (these are commonly available).
- Hearing protection is highly recommended. Earplugs or earmuffs are both used widely. At a minimum, we recommend hearing protection with a NRR = 24 dB (these are commonly available; higher NRR is better). It is strongly recommended that members who are learning to use machines do not listen to music while working in the shop. The sounds the machines make inform proper use of the tools.
- Sturdy clothing (short sleeve shirts; jeans or cargo pants; steel-toed shoes or work boots) are recommended.

Banned Materials:

- Pressure treated lumber: Do not cut, sand, or work on pressure treated wood.
- No-Yellow Pine and any wood with visible sap in the woodshop. See sign next to Laguna bandsaw for more details A bit of the discussion surrounding this can be read [here](https://talk.dallasmakerspace.org/t/20180815-woodshop-meeting-pine-ban-discussion/41154). (<https://talk.dallasmakerspace.org/t/20180815-woodshop-meeting-pine-ban-discussion/41154>)
- Reclaimed wood: Do not cut or sand reclaimed wood (pallets, barn wood, etc) using free-standing power tools.
- No wood concrete forms allowed
- No pallet wood in woodshop
- Wood with dirt or sand on the surface (brush off or power wash dirt and sand). Dirt and sand will dull blades very quickly.
- No metal may be cut in the woodshop.
- No plastic may be cut in the woodshop except:
 - Minimal machining of acrylic pen blanks
 - Cutting sheet plastic to size on a table saw if using a plastic-specific blade you provide.

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Notice of Disciplinary Consequences:

- Using an “out of service” tool or removing a cone or lock from a machine without the Woodshop Chair’s approval will result in an immediate 30 day ban from the Woodshop and a recommendation to the BOD for a permanent Woodshop ban.
- If a member does not follow a stated Woodshop rule, disciplinary action will be at the discretion of the Woodshop Chair or Vice Chair and be commensurate with the seriousness of the incident, whether it is a repeat offense, whether damage to a tool occurred and if there was injury to the user or bystanders.

The following actions may be imposed on a member for rules infractions:

- a. Warning
- b. Must leave the shop for the rest of the day
- c. Retraining (either retake Safety and Orientation or be machine specific) at the discretion of the Woodshop Chair
- d. 30 day ban from a specific machine(s)
- e. 30 day ban from shop
- g. Recommendation to the BOD for longer ban from a specific machine(s) or the Woodshop itself.
- h. Combinations of the above or other disciplinary action as needed,

Rules Changes:

- Proposals for new rules or the editing of existing rules need to be approved by the Woodshop Committee.

Version and Authorization:

- Version 5 Approved by the Woodshop Committee 9/18/2023. Additions to the rules are highlighted in red.

Planer POWERMATIC 20-inch Model 209HH



[PM209 manual](#) (See QR Code above)

- <https://dallasmakerspace.org/w/images/7/76/Powermatic209HHManual.pdf>

Instructional Video Links (See QR Codes above)

- Short overview (6:55): <https://www.youtube.com/watch?v=oRK0yW4CcWs>
- General Planer Safety (12:38): <https://www.youtube.com/watch?v=P6gEBizlOX8>
- Troubleshooting (03:57): <https://www.youtube.com/watch?v=ZAk9sfvC0iw>

Tool Specific Rules

- **Training required to use the planer (Woodshop S+O Class)**
- Watch for pinch points between planer and board. Be careful never to place fingers between the wood and the table as you feed it in. Infeed rollers will press them together, pinching your fingers.
- Don't look into the planer while it is running.
- Never stand in front of or behind stock going through the planer.
- Once feed rollers have taken grip of the piece, let go. Don't try to move the piece once this has occurred.
- Know your material
 - ✓ No metal is permitted in planer, use metal detector on all pieces of wood
 - ✓ No Southern Yellow Pine or any wood with visible sap is allowed on machine
 - ✓ No engineered wood products (MDF, Plywood, Particle board, etc)
 - ✓ No pressure treated lumber
 - ✓ No reclaimed wood (pallet, barn wood, etc)
 - ✓ No painted wood
 - ✓ No planing of end grain wood (ie end grain cutting boards)
 - ✓ All glue must be dry (at least 24 hours from application)
 - ✓ All resin/ epoxy must be fully cured before cutting (Allow at least 7 days for full cure)
 - ✓ Live edge wood is permitted as long as all bark has been stripped off and surface dirt brushed or power washed away.
- Work-piece must sit flat and be stable on the table.
- Minimum material length is 10"
- Minimum material thickness is ¼", consider using a sled and double sided tape for >1/4" thin stock.
- **Members may plane down to 1/8" thick if they use the thin stock board (located under the planer). Wood must be straight grain have no knots, no twisting grain, no end grain, no cracks and be at least 10" long.**
- Don't raise or lower table while stock is in the planer.
- Maximum cut depth is 1/32" for soft wood (half turn) and 1/64" for hardwood (quarter turn).

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- Don't remove debris unless the planer has come to a complete stop and is locked out or unplugged.
- Always plane with the grain.
- If your stock is of uneven thickness, plane from thickest to thinnest. This point applies to single tapered boards or multiple boards of varying thickness.
- Always open dust gate and ensure dust collection is on before starting cut. Likewise, close dust gate when done using tool.
- **When you are done using the machine, turn off the machine, sign out (aka "FOB out") of the machine and clean up any dust and debris in the area.**

Jointer POWERMATIC 12-inch Model 1285



[The manual](#) (See QR Code above)

- https://content.powermatic.com/assets/manuals/1791241_man_EN.pdf

Instructional Video Links (See QR Codes above)

- How to: <https://www.youtube.com/watch?v=OwbVIqOVMDk>
- Beginner how to: <https://www.youtube.com/watch?v=5G1PUkiCBbU>
- In_Depth: <https://www.youtube.com/watch?v=ahr7oUWhiLU>

Tool Specific Rules

- **Training required to use the jointer (Woodshop S+O Class)**
- Know your material
 - ✓ No metal is permitted in machine, use metal detector on all pieces of wood
 - ✓ No Southern Yellow Pine any wood with visible sap is allowed on machine
 - ✓ No engineered wood products (MDF, Plywood, Particle board, etc)
 - ✓ No pressure treated lumber
 - ✓ No reclaimed wood (pallet, barn wood, etc)
 - ✓ No painted wood
 - ✓ No jointing of end grain wood (ie end grain cutting boards)
 - ✓ All glue must be dry (at least 24 hours from application)
 - ✓ All resin/ epoxy must be fully cured before cutting (Allow at least 7 days for full cure)
 - ✓ Live edge wood is permitted as long as all bark has been stripped off
- Max Cut depth is $\frac{1}{8}$ "
- Minimum material length is 7"
- Minimum material height is $\frac{1}{4}$ "
- Always open dust gate and ensure dust collection is on before starting cut. Likewise, close dust gate when done using tool.
- Always use finger/hand guard unless material is shorter than gap below the guard
- If chips fly back from cutter towards infeed table, stop cut and verify that the chip suction path is not blocked
- Use push blocks whenever possible, keep fingers 5" from blade at all times
- Do not stand behind the machine, and remind others in the woodshop to not stand in the path of a potential kickback
- Always joint with the grain
- **When you are done using the machine, turn off the machine, sign out (aka "FOB out") of the machine and clean up any dust and debris in the area.**

Table Saw Sawstop ICS73230-52 and Powermatic 66



SawStop Manual



PM66Manual



TableSawHowTo



SSChgeBrake



SSDadoChange

Manuals (See QR Codes above)

- [Powermatic 66 https://dallasmakerspace.org/w/images/7/76/PM66_Tablesaw_manual.pdf](https://dallasmakerspace.org/w/images/7/76/PM66_Tablesaw_manual.pdf)
- [Sawstop ICS73230-52 https://www.sawstop.com/images/uploads/manuals/ICS%20Rev.%20%20Manual%20V3.4.pdf](https://www.sawstop.com/images/uploads/manuals/ICS%20Rev.%20%20Manual%20V3.4.pdf)

Instructional Video Links (See QR Codes above)

- How to table saw: <https://www.youtube.com/watch?v=tKtEOsTFi8g>
- Change change saw brakes on a sawstop: https://www.youtube.com/watch?v=X41ds_PN4N8
- Install dado stack on a sawstop: <https://www.youtube.com/watch?v=wMqhf4qZBEU>

Tool Specific Rules

- **Training required to use the SawStop (Woodshop S+O Class)**
- Know your material
 - ✓ No metal is permitted in machines, use metal detector on all pieces of wood
 - ✓ No pressure treated lumber
 - ✓ No reclaimed wood (pallet, barn wood, etc)
 - ✓ All glue must be dry (at least 24 hours from application)
 - ✓ All resin/ epoxy must be fully cured before cutting (Allow at least 7 days for full cure)
- Sawstop may trigger when exposed to anything conductive while running. Known materials that will trigger the sawstop are:
 - ✓ Charred wood - from fire, laser, etc ...
 - ✓ Laser-cut wood (see above)

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- ✓ Chemically treated lumber / pressure-treated wood
 - ✓ Wet lumber
 - ✓ Green wood
 - ✓ Wet paint or wet glue
 - ✓ Foil-laminated or metal-leafed wood (like some picture frames)
 - ✓ Metal shards (staples, etc...)
 - ✓ Cardboard corner guards (usually contain recycled metal fragments)
 - ✓ Any metal in proximity to the blade the saw sled, rulers, squares, etc.
 - ✓ Graphite cloth
 - ✓ Anti-static Ultra High Molecular Weight (UHMW) Polyethylene (contains carbon particles to make it anti-static)
- If a member triggers the Sawstop brake, they are responsible for notifying the woodshop chair, and donating \$100 to help cover a portion of the cost for replacing the brake and blade. Fee may be waived at discretion of the Woodshop Chair.
 - Unless a cut requires removal of the riving knife (eg, Dado cut, Resawing,), all cuts must have the riving knife installed
 - Do not stand behind the area between the blade and fence, the kickback area.
 - ✓ Do not permit others to stand in this area while operating the tablesaw.
 - Unplug saw before changing blade
 - The sawstop functionality is not to be bypassed, use the powermatic
 - Do not use DMS dado stack on the sawstop. If operator wants to use their own dado stack on the sawstop, they must provide their own dado brake for the sawstop. Do not use a dado stack on the sawstop without installing a dado brake.
 - Always open dust gate and ensure dust collection is on before starting cut. Likewise, close dust gate when done using tool.
 - **When you are done using the machine, turn off the machine, sign out (aka "FOB out") of the machine and clean up any dust and debris in the area.**

Miter Saw Makita LS1219L



Manual



Overview



General Safety

Manual (See QR Code above)

- https://cdn.makitatools.com/apps/cms/doc/prod/LS1/b54a9ea9-3bbb-491a-befd-b66075fc70e3_LS1219L_IM__885618A943_C1920.pdf

Instructional Video Links (See QR Codes above)

- Short overview (1:43): https://www.youtube.com/watch?v=SLnecw6_bq8
- General Miter Saw Safety: <https://www.youtube.com/watch?v=FVpmjX1Djml> This video shows cutting aluminum with a miter saw – Metal may not be cut with any tool in the wood shop.

Tool Specific Rules

- **Training required to use the SawStop (Woodshop S+O Class)**
- All resin/ epoxy must be fully cured before cutting (Allow **at least** 7 days for full cure)
- Live edge wood is permitted as long as all bark has been stripped off surface dirt brushed or power washed away.
- Never alter a guard or use the tool with a guard missing, or disable/remove any safety feature. Be sure all guards are in place and working properly before each use.
- Work-piece must sit flat and be stable on the table and against the fence when making a cut. Use clamps as needed to secure the work-piece to table/fence. Attempting to cut bowed or twisted boards can result in dangerous kickback situations.
- Follow manual guidelines for limits on work-piece dimensions; for standard 90-degree cross cut, maximum height & width are 3 1/2" x 12".
- For cuts that create short cut-offs (i.e. pieces that are not held in place by fence or clamps), use a sacrificial backer board to avoid ejecting the cut-offs in an unsafe manner.
- Never cut small pieces that would require you to put fingers within 3" of the cutting blade; use appropriate clamping and backer and sacrificial boards as needed.
- Never reach under the saw blade or perform "cross handed" operation.
- Never try to adjust a work-piece, remove a cut-off, or adjust clamping while the blade is rotating.
- Allow the blade to reach full speed before cutting; do not force the blade and always start the cut gently and under control.
- The appropriate technique for a standard sliding miter saw cut is five steps: pull the blade out; energize the blade; lower the blade all the way down (potentially into work-piece); move the blade forward into work-piece (towards the fence), under control, to make the cut; de-energize blade. Again: **Out, On, Down** under control, **Forward** under control, and **Off**.
- At end of cut the blade should remain in lower forward position until the blade has come to a complete stop.
- **When you are done using the machine, turn off the machine and clean up any dust and debris in the area.**

Lathes



Manuals (See QR Codes above)

- [POWERMATIC 3520B https://content.powermatic.com/assets/manuals/1352001_man_EN.pdf](https://content.powermatic.com/assets/manuals/1352001_man_EN.pdf)
- [Jet JWL-1221VS https://content.jettools.com/assets/manuals/719200_man_EN.pdf](https://content.jettools.com/assets/manuals/719200_man_EN.pdf)
- Oneway Manual: <https://oneway.ca/pdf/Large%20Lathe%20Manual%20Rev%201.pdf>

Instructional Video Links (See QR Codes above)

- WoodWorkers Guild brief video - Safety: <https://youtu.be/7yhkeUP6Mf8>
- 1960"s tutorial on lathe basics: <https://youtu.be/EOzYJ2pn2B0>
- This Rockler video is a good medium: <https://youtu.be/GV0dmf2mBMc>
- Mike Waldt is also a fave: https://youtu.be/Se-Et_lap68

Tool Specific Rules

- **Training required to use lathes (Lathe Safety and Orientation Class)**
- Eye Protection required - Full face shield recommended.
- Respiratory Protection recommended.
- Ensure all lathe accessories and work material are properly attached.
- Check tool rest and banjo for clearance and proper height by hand turning your workpiece before turning on the lathe.
- Do not repurpose a tool via sharpening. For example: Do not sharpen an easy wood tool into a bedan. Do not sharpen a scraper into a negative rake scraper. Do not turn a negative rake scraper into a scraper.
- Do not turn work pieces that have cracks that may result in significant chunks of wood to fly off.
- Avoid standing in the plane of rotation (where material travels if it flies off the workpiece) when possible and do not let spectators stand in the plane of rotation.
- Do not turn workpieces that cause excessive vibration of the lathe.

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- Recommended maximum lathe speeds (per diameter of workpiece) taken from the Jet manual.

Diameter	Roughing RPM	General Cutting RPM	Finishing RPM
< 2"	1520	3000	3000
2" to 4"	760	1600	2250
4" to 6"	510	1080	1500
6" to 8"	380	810	1125
8" to 10"	300	650	900
10" to 12"	255	540	750

- When you are done using the machine, turn off the machine and clean up any dust and debris in the area.

Bandsaws



Manuals (See QR Codes above)

- Jet 14 (JetBSManual) [Manual https://dallasmakerspace.org/w/images/e/e6/Jet-Bandsaw-manual-JWBS-14CS.pdf](https://dallasmakerspace.org/w/images/e/e6/Jet-Bandsaw-manual-JWBS-14CS.pdf)
- Laguna 18 (LagBSManual) <https://860860.app.netsuite.com/core/media/media.nl?id=660538&c=860860&h=979aec9d9982819a74e5&xt=.pdf>
- Laguna 14bx (manual): https://lagunatools.com/wp-content/uploads/2022/07/14BX_Manual_071822.pdf

Instructional Video Links (See QR Codes above)

- Band Saw safety: <https://www.youtube.com/watch?v=paXdjsgPgU>
- Jet Band Saw Blade Change: <https://www.youtube.com/watch?v=7J0Du1phCbw>
- Laguna 14bx blade change: <https://www.youtube.com/watch?v=d0EhyANcYWY>
- Laguna 14bx guide block adjustments: <https://www.youtube.com/watch?v=d0EhyANcYWY&t=49s>

Tool Specific Rules

- **Training required to use the Laguna bandsaws (Bandsaw Basics).**
- **Training required to use the Jet bandsaw (Woodshop Safety and Orientation Class)**
- Always check to make sure the blade is tensioned properly. (Make sure the lever behind the upper wheel is set to the “Run” position)
- Raise or lower the upper blade guide e so that it clears your work no more than an inch or so

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- If cutting green or sappy wood, clean the blade when done (and blade guide if necessary).
- Keep your fingers at least 4" away from the blade. Use push sticks when necessary!
- Use the cradle when sawing logs & limbs to prevent rolling / breaking the blade
- Do not force the blade to twist for any reason!!!
- Do not attempt to cut a curve too tight for the blade width. (See yellow bend radius chart.)
- Do not feed the material into the blade too fast, bind the blade or stop the motor.
- Know your material
 - ✓ No metal is permitted in machine, use metal detector on all pieces of wood
 - ✓ No pressure treated lumber
 - ✓ All glue must be dry (at least 24 hours from application)
 - ✓ Use of epoxy / resin is permitted on the bandsaws. TAKE EXTRA CARE and go slower than normal, pushing epoxy through the blades too fast will cause the epoxy to overheat and become gummy, damaging the blades.
- When you are done using the machine, turn off the machine and clean up any dust and debris in the area.

Powermatic Drill Press PM2800B



Manual (See QR Code above)

- https://content.powermatic.com/assets/manuals/1792800B_man_EN.pdf

Instructional Video Links (See QR Code above)

- Drill Press Safety: <https://www.youtube.com/watch?v=Nu9tYcld7ck>

Tool Specific Rules

- **Training required to use the drill press (Woodshop Safety and Orientation Class)**
- Change bits only while machine is completely off.
- Clamp material in place
- Gently pull or push the start button to turn the drill press on and off. Do not slam the button to turn the machine off, it breaks easily.
- Use peck drilling: drill no more than ½” into the material then pull the drill bit all the way out of your material. This aids in removal of chips and also prevents the drill bit from over heating.
- Only change the speed of the machine while it is running!
- Leave the drill press cleaner than when you found it
- Return the drill bit back to wherever you found it so the drill press is ready for the next user AND you know where to find the drill bit when you need it again
- Put a piece of scrap wood under your piece to prevent blow out at the bottom of your hole
- The blue rockler clamps are very good for holding things to the drill press table
- If you’re trying to drill a hole in a turning blank, using the pen blank jig to hold your blank steady while you drill. Clamp the jig to the table using the blue rockler clamps
- Use the 3d printed right angles if trying to drill the center in a piece of material
- **When you are done using the machine, turn off the machine and clean up any dust and debris in the area.**

Sanders



Manuals (See QR Codes above):

- PM2244 Manual (drum sander): https://dallasmakerspace.org/w/images/0/0a/Pm2244_manual.pdf
- Jet Spindle Sander Manual: https://content.jettools.com/assets/manuals/723950_man_EN.pdf
- Jet Belt Sander Manual : https://content.jettools.com/assets/manuals/708599_man_EN.pdf
- Jet Edge Sander Manual : https://content.jettools.com/assets/manuals/708447_man_EN.pdf
- Festool 150 Manual: https://www.festoolusa.com/-/media/tts/fcp/festool-usa/downloads/manuals/705699_002_ets150_14spr.pdf
- Festool 400 Manual: https://www.festoolusa.com/-/media/tts/fcp/festool-usa/downloads/manuals/manual-rts_dts_400_req_usa.pdf
- Festool Dust Extractor Manual (36e) : https://www.festoolusa.com/-/media/tts/fcp/festool-usa/downloads/manuals/ct26_36_usa_hepa_manual.pdf

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Instructional Video Links (See QR Codes above):

- PM Drum Sander how to change paper (PM2244ChgSP) : <https://talk.dallasmakerspace.org/t/please-read-drum-sander-operation-information/41622>
- Sander Safety: <https://www.youtube.com/watch?v=yMPtMFZPCqk>

Tool Specific Rules

- **Training required to use the sanders (Woodshop Safety and Orientation Class)**
- Be sure the belt, pad, or drum is in fair condition prior to use. It should have plenty of grit left on it, and not be smooth.
- Be sure the blast gate for the dust collector is open.
- Be sure the dust collector is on and active.
- **NO MATERIALS WITH METALS, WET GLUE(Allow at least 24 hours), OR WET RESIN (Allow at least 7 days for full cure of all resin/ epoxy products)!**
- When you turn the machine on, be sure the pad, belt, drum, etc. is taut.
- Use of fully cured (allow at least 7 days) epoxy/ resin on the sanders is permitted with no exception unless noted below.
- Live edge wood is permitted as long as all bark has been stripped off surface dirt brushed or power washed away.
- Once the machine is running and active, gently bring your material to it.
 - For the belt sander: Be sure to stay low on the belt, there is a risk of material being thrown down onto the table. Be sure to move left and right as to not wear the belt in a single spot.
 - For the disc sander: the disc rotates counter clockwise. your material is at a greater risk of being thrown on the right hand side of the disc and in the center.
 - For the oscillating belt sander: The higher you raise your material on the belt, the more of a risk you have for your material to be thrown. It is also important to move your material so that the belt will not wear out in one spot.
 - For the drum sander: The drum sander has a counterclockwise rotation. Be sure to be mindful of how your material is being pulled so that it does not get ejected from the work area. Make sure the drum is secure into the collet. If it is not, the drum could become loose and fly freely.
 - Use of epoxy/resin on the drum sander is permitted as long as members use their own paper.
- Once you are finished use the large rubber eraser and clean the drum, belt, or pad.
 - This is done while the machine is running.
 - If performing long sanding operations, frequently cleaning the sanding media with the eraser will maintain the condition of the paper for longer use
- **When you are done using the machine, turn off the machine and clean up any dust and debris in the area.**

Router Table (New section as of 6/2/2022)



Manual and other Paperwork (See QR Codes above)

- IncraRouter1: https://incra.com/manuals/MastRLiftII_Manual.pdf
- IncraRTInfo: https://incra.com/router_system_accessories-mast-r-lift-ii.html
- BoraRouter: <https://boratool.com/mwdownloads/download/link/id/188/>

Instructional Websites and Video Links (See QR Codes above)

- RTSafety1: <https://www.wwgoa.com/article/12-tips-for-using-a-router-safely/>
- RTSafety2: <https://www.youtube.com/watch?v=23IqfubRtTg>

Tool Specific Rules

- **Training required to use the sanders (Woodshop Safety and Orientation Class and the Router Table Safety and Orientation Class)**
- Unplug the machine when changing bits.
- Unlock the router table cam lock before adjusting height (rotate counter clockwise ¼ turn), lock the cam lock before turning on the router (rotate clockwise ¼ turn). Note the arrows do not always line up correctly.
- Max depth of cut per pass: 1/8" on hardwood and ¼" on softwoods.
- Ensure that the bit is not cracked or chipped before using it.
- Ensure that the collet is securely tightened using the wrenches provided with the router.

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- 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 (ie while using a bit without a bearing and not contacting the fence).
- Never start the router with the bit in contact with the stock.
- Make sure that the workpiece is fed from Right to Left. Never climb cut (feeding stock in the same direction as the bit is spinning).
- Match the router speed to the diameter of the cutter. The speed dial on the router is at the lowest point on the router (as installed on the router table). Router manufacturer recommended speeds:

Variable Speed Dial

The variable speed dial allows you to adjust the rotating speed (RPM) of the tool.

Use the following chart to determine the best speed for the bit diameter.

Speed Setting	RPM	Max. Bit Diameter
Slow	10,000	3" to 3-1/2"
Slow	12,000	3" to 3-1/2"
Medium	14,000	2-1/4" to 2-1/2"
Medium	16,000	2-1/4" to 2-1/2"
Medium	18,000	1-1/4" to 2"
Fast	20,000	1"
Fast	22,000	1"

- Use the smallest diameter magnetic table insert that will allow the bit to pass through it.
- Never adjust the router depth, fence position or fence gap with the router running.
- When the router bit overlaps the fence, minimize the gap in the fence. Adjust the fence halves so that they come to within 1/16" to 1/8" from the bit.
- Never shape stock less than 12" in length unless it is secured in an appropriate jig or fixture or push blocks.
- To control the stock, use push sticks, push blocks, feather boards, or any other safety device whenever possible.
- When pattern shaping, ensure that the workpiece is adequately secured to the pattern with screws or sufficient double-sided tape.
- Never cut narrow stock that is less than three times the width of the profile to be cut.
- Cut at a moderate feed rate. Feeding too fast may cause the workpiece to have tearout or excessive machine marks. Feeding too slow may cause the cutter to heat up and burn the workpiece.
- Ensure that the base cabinet door is closed when the router is running. This door prevents access to moving parts and ensures that the dust collection system is operating efficiently.
- Ensure that the dust collector is running and that the blast gate to the router table is open before starting the router. Close the blast gate when you are finished using the router table and turn off the dust collector if no one else is using it.
- **When you are done using the machine, turn off the machine and clean up any dust and debris in the area.**