

SOPs for Wood-room

MITER SAW

Safety Gear requirements:

- Eye protection
- Ear protection (for you and others around you!!! This b*** is loud and high-freq!!)

NO-NO's:

- Work Gloves
- Long hair, scarves, dangly or cumbersome clothes
- Using hands to clamp
- Leaving without cleaning up afterwards

General use:

Cutting wood

Strengths over other tools:

Can cut pretty thick wood, can cut at varying angles, fun to use, makes you feel strong

Weaknesses:

Not the best for making excellent right angles or precision cuts, not good for cutting something small and weak

*****HOW TO USE THE MITER SAW*****

TO UNLOCK

- 1) Press down on saw
- 2) Pull out small metal pin on the left
- 3) Gently lift saw
- 4) Let pin go

TO USE

- 1) Clamp wood to short metal rail

NOTE: If wood is long, tables to either side may be used to help clamp – they are at the exact same height as the saw

- 2) Without squeezing it, grasp handle with right hand bring saw down towards material

NOTE: If wood is long, bring saw out towards you and down towards wood

- 3) Flip tiny switch on the handle, then squeeze handle

NOTE: there is a slight kick

- 4) Use blade to cut through material
- 5) Bring the blade gently to rest
- 6) Let go of handle

TO PUT AWAY

- 1) Press down on saw
- 2) Push in pin
- 3) Use shop vac to clean area

TO MAKE ANGLED CUTS

For “roll” angle changes:

- 1) Make sure saw is locked!!!!
- 2) Loosen the screw with the black handle on the very back of saw (towards the right)
- 3) Use the scale to determine desired angle
- 4) Tighten black-handled screw
- 5) Make your cuts
- 6) Use steps 1-4 to return the angle to normal
- 7) Use shop vac to clean area

For “yaw” angle changes:

- 1) Pull up black knob at the front of the saw
- 2) Use knob to push saw left or right and use the scale to determine the angle
- 3) Push knob down at the desired angle
- 4) Make your cuts
- 5) Use steps 1-3 to return the saw back to normal
- 6) Use shop vac to clean area

JOINTER

Safety Gear requirements:

-Eye protection

-Push-sticks

NO-NO's:

-Work gloves

-Long hair, scarves, dangly or cumbersome clothes

-Leaving without cleaning up afterwards

General use:

Making planed wood flat on the small edge, creating a 90-degree angle in your stock

Strengths over other tools:

Is very good for precision

Weaknesses:

Cannot face very large pieces of wood – for that you'll need the planer

TO USE

- 1) Move the tool to where you feel comfortable using it
- 2) Use the large black plastic knob sticking out diagonally on the bottom right to adjust depth of cut
- 3) Use dial on the side to determine the speed of the blade. 1 = lowest speed, 5 = highest speed. When in doubt, start slow.
- 4) Connect the shop vac to the interface on the side of the tool
- 5) Turn on the shop vac
- 6) Place stock against fence on right side (not disturbing the red thing in the center)
- 7) Turn machine on with red "ON" switch
- 8) Hold stock with left hand while pushing stock with your right. Push the stock through the jointer slowly and firmly.
- 9) Push all the way through and make sure all wood is stable and clear before turning machine off
- 10) Disconnect shop vac and use to clean the rest of your area

SCROLL SAW

Safety Gear requirements:

-Eye protection

NO-NO's:

-Work gloves

-Long hair, scarves, dangly or cumbersome clothes

-Leaving without cleaning up afterwards

General use:

Cutting wood

Strengths over other tools:

Able to make cuts at tight angles, can cut by threading blade through a hole, is fun to "free-hand" a design.

Weaknesses:

Cannot cut thick pieces of wood, no accounting for skill in terms of accurately making cuts'

TO USE

- 1) Place stock in machine under the guard.

- 2) Lower the guard using the knob on the left. It may be tight, so you can use a wrench to loosen the knob. Lower such that you are not trapping the piece, but there is not enough room for a finger to get stuck in there.
- 3) Tighten the knob for the guard.
- 4) Ensure the air tube is facing the blade.
- 5) Ensure the blade is tight enough by pricking it with your finger. If the pitch is high, then the blade is tight enough.
- 6) Press the red "on" button on the top of the machine.
- 7) Keep both hands firmly planted on your stock.
- 8) Push your stock through slowly.
- 9) Do not pull to go backwards
- 10) When finished making your cuts, press the red "off" button on the top.
- 11) Use the shop vac to clean up the sawdust around the machine.

TO THREAD BLADE THROUGH A HOLE

- 1) Use the large black knob on top to loosen the blade
- 2) Use the two smaller knobs above and below the blade to loosen the grip
- 3) Pick up the blade and put it to the side
- 4) Place your stock down on the metal table
- 5) Feed the blade through the hole
- 6) Place the blade back into the blade slot and tighten with the two small black knobs
- 7) Use the large black knob to tighten the blade.
- 8) Check blade tightness by pricking it with your finger. If the pitch is high, then the blade is tight enough.

LATHE

Safety Gear requirements:

-Eye protection

NO-NO's:

-Work gloves

-Long hair, scarves, dangly or cumbersome clothes

-Leaving without cleaning up afterwards

General use:

Making beautiful cylindrical works of art. Or just cylinders.

Strengths over other tools:

Can do cylinders.

Weaknesses:

Can only make round things, not a tool for extreme precision

CHUCKING UP YOUR PIECE

FOR the SHARP CHUCK (i.e. mr spikes)

- 1) Find the center of your stock on both sides (this can be very difficult and time consuming. I recommend looking at tutorials online for this. Getting it wrong will cause your piece to be lopsided)
- 2) Poke a small pilot hole on both ends
- 3) Set the stock firmly into the chuck on the left. You can use a rubber mallet to whack it a little until it sticks
- 4) Adjust the chuck on the right by loosening the small black lever and pushing it along the track. (may be difficult to move – proceed with caution)
- 5) When the chuck on the right is touching your stock, firmly tighten the black lever.
- 6) Firmly secure the stock by tightening it in with the dial that extends the right chuck.

FOR THE OTHER CHUCK

- 1) Place stock in the rough center of the chuck
- 2) Use the chock wrench to securely fasten the material to the chuck.
- 3) Alternatively, if your piece is hollow, place piece around the chuck and use the chuck wrench to move the chuck fasteners outwards

OTHER METHODS OF SECURING YOUR STOCK

- 1) For a piece of stock with a very large base, you can use a flat chalk with holes to screw the chock directly into the piece. Drill pilot holes for your screws in your stock and use good judgement/do some research on how long the screws ought to be

TO USE THE LATHE

- 1) Secure the tool holder relatively close to your piece (about a thumbs-width or less) and underneath the center-line of it.
- 2) Choose a long-handled chisel tool from the lathe tools box.
- 3) Turn the machine on with the black switch on the bottom right.
- 4) Make sure that the machine is turning the wood TOWARDS you. If it is not, turn the machine off and use the Fwd-Reverse switch to “FWD”
- 5) Adjust the speed with the knob to a speed you are comfortable with to begin.
- 6) Set the tool onto the tool holder and grasp closely with one hand. Place the other hand at the bottom of the long handle.
- 7) Use your body and arm holding the tool’s long handle to make sweeps and dips across the wood as it turns.

SAFETY NOTES

Some wood has knots in it. Be careful as these knots could come at your face or others standing near you if you dislodge them.

Do not grasp the tool so tightly that you cannot let go if it gets pulled under.

Keep your hand on the metal part of the tool to make sure that it does not get too hot.

Keep your eye out for if your piece is burning. If you smell smoke, immediately stop what you are doing.

BANDSAW

Safety Gear requirements:

- Eye protection
- Ear protection for you and everyone else in the vicinity. **Being around this squealer will cause long-term hearing damage**
- Push stick if material is small

NO-NO's:

- Cuts less than a half inch
- Sticking your fingers within the saw's "danger zone" while the blade is in motion
- Pulling stock through the bandsaw
- Work gloves
- Long hair, scarves, dangly or cumbersome clothes
- Leaving without cleaning up afterwards

General use:

Cutting wood

Strengths over other tools:

Can cut some thick stock. Can make curves if the turning radius is large enough.

Weaknesses:

Will not help you cut straight. Is not for precision jobs.

TO USE

- 1) Place your stock on the table
- 2) Reach around the back of the saw towards the top and loosen the knob there.
- 3) Use the other knob on the side to adjust height so that the guard is sitting just above your stock material.
- 4) Re-tighten the knob at the back.
- 5) Set your stock slightly away from the saw.
- 6) Press the green START button.
- 7) Use your hands or push sticks to slowly push the wood through the bandsaw
- 8) Do not ever pull stock back towards you
- 9) When finished with a cut, turn off the saw and **WATCH IT COME TO A COMPLETE STOP.**

- 10) Wait for the saw to come to a COMPLETE STOP before collecting material that is close to the blade
- 11) Return the guard to the bottom of the table by following steps 2-4.
- 12) Use the shop vac to clean up the vicinity

BELT SANDER

Safety Gear requirements:

- Eye protection
- Respirator/mask (recommended)
- Ear protection (recommended for extended use)

NO-NO's:

- Work gloves
- Long hair, scarves, dangly or cumbersome clothes
- Leaving without cleaning up afterwards

General use:

Sanding wood

Strengths over other tools:

Very quick and easy. Can take away material very fast.

Weaknesses:

Difficult to tell what one is doing and it's easy to take off too much material by accident. Also easy to burn material.

TO USE

- 1) Place belt sander where your stock will be free of obstruction while sanding
- 2) Turn belt sander on by pulling the red and yellow switch towards you.
- 3) Place stock on the black table to steady it.
- 4) Press material gently to the sander.
- 5) Turn sander off when finished sanding.
- 6) Use a shop vac to clean up the vicinity.

PLANER

Safety Gear requirements:

- Eye protection

-Ear protection for you and those around you. Seriously please warn folks if you're going to use this before you kill their hearing.

NO-NO's:

-Feeding stock with nails or screws in it

-Work gloves

-Long hair, scarves, dangly or cumbersome clothes

-Leaving without cleaning up afterwards

General use:

Making wood flat

Strengths over other tools:

It's the only tool that does this job! Much faster than a hand-planer. Makes you feel like a lumberjack.

Weaknesses:

You can come away with some imperfections due to feeding errors, therefore I would say this is not the most accurate tool.

TO USE - *NOTE: THIS TOOL IS BEST USED WITH A FRIEND!!!*

- 1) Let down the feed panels on either side and make sure the area is clear around you for whatever size of stock you are working with
- 2) Connect the shop vac to the planer via the round plastic interface.
- 3) Place your stock in the planer and put it in so that it triggers the red gauge.
- 4) Use the red gauge at the bottom to determine if you should raise or lower the blade.
- 5) If the red gauge is not triggered, unlock the crank on the right and use the crank to bring the blade down to where it is just touching the wood.
- 6) If the red gauge shows over 1/32 of an inch, use the crank on the right to move the blade higher.
- 7) Make sure the blade crank is locked.
- 8) Take your stock out of the machine.
- 9) Turn on the shop vac before cutting anything.
- 10) Turn the planer on.
- 11) Feed your stock through until you can feel the blade "grab" it.
- 12) Let go of the stock and watch it go through the planer.
- 13) Have a friend grab the stock on the other side (or go get it yourself).
- 14) To make another cut, unlock the crank and use it to lower the blade. Then re-lock the crank.
- 15) ONLY MAKE A HALF-TURN OF THE CRANK FOR EACH CUT.
- 16) When you are satisfied with your cuts, turn off the planer.
- 17) Detach the shop vac and use it to clean up any excess sawdust.
- 18) Put the planer away by unscrewing the shop vac attachment and putting the feed panels back up

TABLE SAW

Safety Gear requirements:

- Eye protection
- Push stick
- Ear protection for you and those around you.

NO-NO's:

- Cuts smaller than the blade opening
- Placing your hands within the red blade area during cutting
- Work gloves
- Long hair, scarves, dangly or cumbersome clothes
- Leaving without cleaning up afterwards

General use:

Cutting wood

Strengths over other tools:

The only tool that can reliably cut in a straight line! Very powerful.

Weaknesses:

Can only make straight cuts

TO USE

- 1) Bring material to tabletop.
- 2) Find a suitable push stick for your material.
- 3) Use large crank on bottom to lift blade to where the dips in the blades just peak out from your stock material.
- 4) To move the guide on the right, pop up the long red switch.
- 5) Move guide to desired measurement.
- 6) Make the long red switch flat again.
- 7) To adjust blade angle, squeeze together the front and back part of the crank and place the indicator at the desired angle.
- 8) To make fine angle adjustments, use the black dial directly under the right side of the table.
- 9) Make sure the area is clear behind the table
- 10) Turn on the table saw with the red and yellow ON/OFF switch on the left hand side below the saw.
- 11) Hold the push stick in your right hand and place on material.
- 12) Hold the material with your left hand and use it to press material to the side rail.
- 13) Use both hands to push the material all the way through the blade area.

- 14) Turn off the saw.
- 15) Return the blade to a zero angle.
- 16) Lower the blade all the way back down.
- 17) Use a shop vac to clean the table saw and the area around you.