

Table Saw

Purpose

The Table saw is a very versatile machine, and can be used to accomplish many tasks. It makes repeatable cuts in a straight line. Its primary task is to rip cut boards against the adjustable fence, but can be used with a 'sled' to do cross-cuts, dados, and with other jigs, accomplish many other things.

Rip or Cross cut? The table saw **rip cuts** using the fence (with blade guard and riving knife in place). We have one table saw set up for rip cuts. **Cross cuts** can be done using the sled - the second table saw is set up for that (you can also use the miter saw for cross cuts as well). The blade guard and riving knife are removed when the sled is used.

The SawStop has technology to sense if it is cutting flesh, and fires a brake into the blade to stop it spinning instantly. That is fantastic if it is saving your finger, but since it destroys the brake and blade in the process, we need to be careful not to activate it accidentally. Material with metallic content (nails) or foil backing, or high water content wood (pressure treated lumber) will trigger the brake.

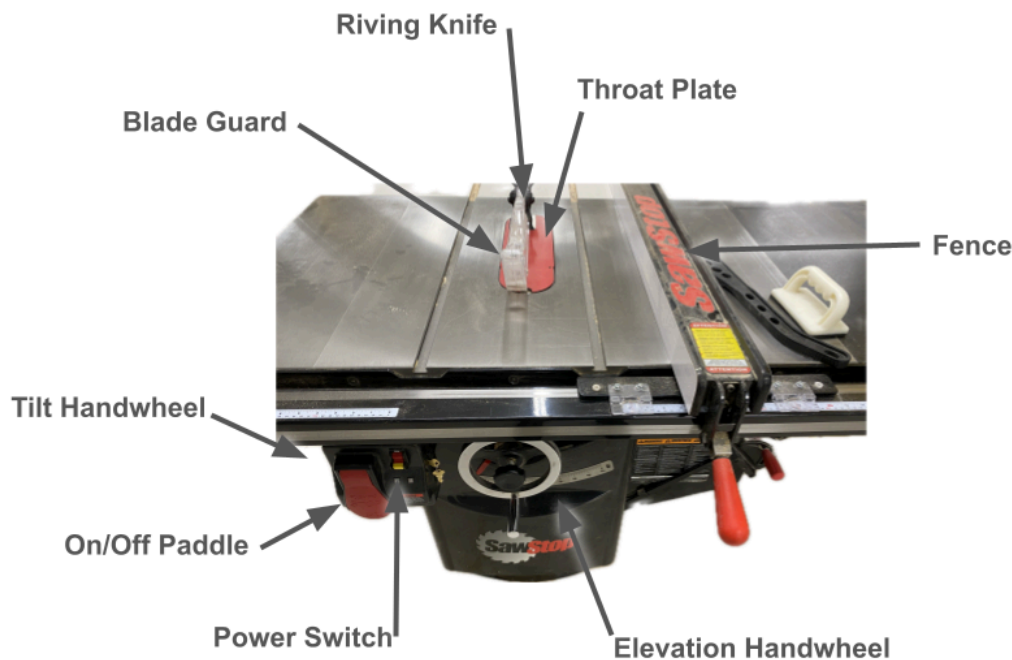
If the blade is changed, the brake cartridge gap needs to be checked. A shop steward will help with that.

Vocabulary

- **Fence:** what your piece rides against when ripping
- **Blade guard:** The plastic cover over the blade that helps protect you. It has several features, including anti-kick-back teeth, that can also be used.
- **Riving knife:** the metal plate behind the blade that helps prevent binding and kickback
- **Blade guard:** protects you from touching the blade
- **Anti-kickback pawls:** the teeth connected to the blade guard that drag across the top of the workpiece and prevents kickbacks
- **Brake Cartridge:** the device located inside the saw instantly stops the spinning blade when it detects flesh (measured through conductivity)
- **Throat plate/zero clearance table insert:** the red cover around the blade that supports the workpiece
- **Off-cut:** the piece of wood that you aren't holding that will be 'freed' after the cut

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- **Push stick:** a tool to push your workpiece through the saw to keep your hand away from the blade
- **Elevation handwheel:** raises/lowers the blade. There is a locking knob in the center of the handwheel.
- **Tilt handwheel:** tilts the blade (to the left). There is a locking knob in the center of the handwheel.
- **Sled:** the wooden jig that sits on top of the table and glides along the tracks. This is used to make accurate and safe cross cuts



Operating: Rip cut with Fence

First, we'll cover doing a rip cut with the fence. The blade guard and riving knife must be installed..

If you have to take the throat plate off, make sure it's sitting flat with the table when you reinstall it.

- **Plan cut:**
 - Safety Check: PPE, clothing, surroundings, clean wood.
 - Plan how you are going to secure your piece and push it through safely. Choose the pushstick(s) you are going to use.

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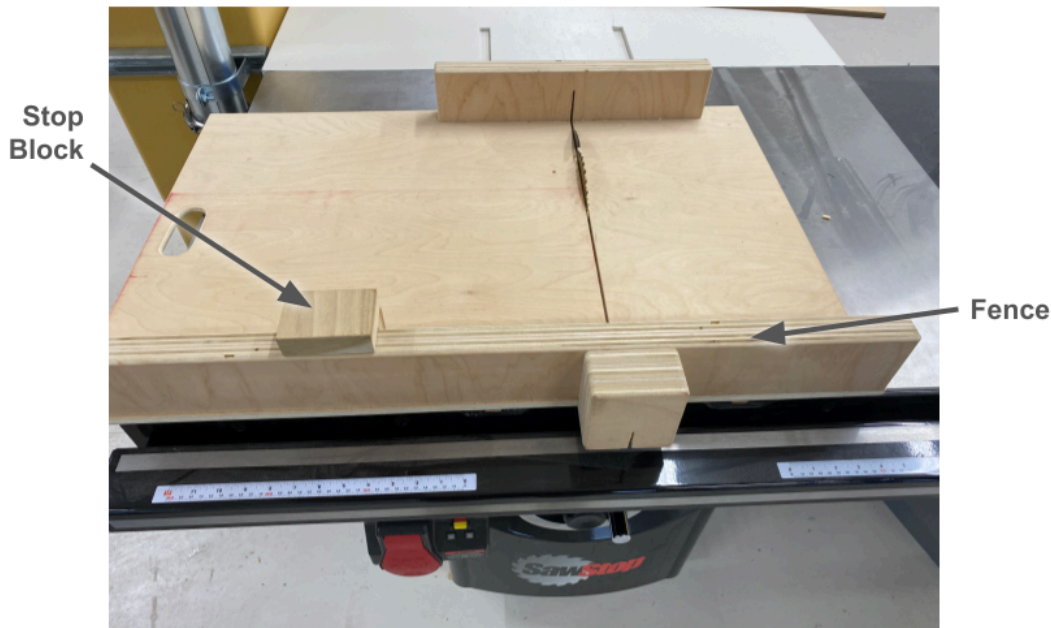
- Use a push stick if fence is closer than 6" from blade.
- Identify the offcut, and ensure it's not trapped.
- Make sure workpiece sits flush against the fence. If the piece against the fence is bowed, it needs to be straightened first.
- Adjust the blade height to about ½" above the workpiece .
- Set workpiece in position for the cut - taking into account the kerf of the blade.
- Don't cut a piece that is shorter than the width of the blade (10").
- **Starting:**
 - (Blast gate is already open on the table saws)
 - The red/yellow switch needs to be turned on to use the saw. It does a self-check, and if all good, a solid green light illuminates within 10 seconds. If it does not go to solid green, have a shop staff person check it out.
 - Turn on saw by pulling the red paddle towards you. Let it spin up without the blade touching the workpiece.
- **Cutting:**
 - You want to keep piece against the fence as you are moving your piece through the blade: pressure on workpiece should be against the fence and forward.
 - Slow and steady and intentionally - let the blade do its work.
 - Listen to the saw - if it starts making an unusual noise, stop immediately.
 - Retrieve workpiece and offcut from back side - don't pull them forward by the blade.
- **Finishing:**
 - Return machine to its 'default' configuration:
 - return bevel angle back to 0 degrees if you changed it
 - make sure all guards in place
 - blade lowered to ½" above table
 - Leave blast gates open on the table saws.
 - Clean up offcuts and sawdust.

Operating: Cross cut with Sled

When using the sled, the fence is moved to the right side of the table, and the blade guard is removed, and the riving knife is installed. It's easiest to set the sled if the blade is fully retracted. The sled can be used on either of the two table saws, but will be the 'standard configuration' of the second saw.

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The sled is used for a vertical cut only - no beveled cuts - that would ruin the sled. Also, no dado stacks with the sled.



- **Plan cut:**
 - Plan how you are going to secure your piece and push it through safely.
 - Identify the offcut, and ensure it's not trapped (if you are using a stop block for repeated cuts).
 - Make sure workpiece sits flush against the fence.
 - Set workpiece in position for the cut - taking into account the kerf of the blade.
 - The blade is unprotected with the sled! Have your left hand on the fence on the left of the blade, and your right hand on the right, with your hands holding the workpiece against the fence.
- **Starting:**
 - Safety Check: PPE, clothing, surroundings, clean wood.
 - (Blast gate is already open on the table saws)
 - Turn on saw, and let it spin up without the blade touching the workpiece.
- **Cutting:**
 - With your piece securely being held to the fence, push the sled forward, slow and steady and intentionally.
 - Once you have cut through the piece, pull the sled back towards you.

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- **Finishing:**
 - Clean up offcuts and sawdust.
 - Leave blast gates open on the table saws.

Safety

- Make sure power switch (to the right of the on/off switch) is OFF when working with the blade.
- Use the knee switch to turn the saw off if you need it off quickly.
- Keep hands at least 3" from blade.
- Make sure off-cut is not trapped between the blade and the fence - your pushblock is securing the piece between the blade and the fence.
- Don't have hands in line with blade.
- Don't force wood through the saw - slow and steady and intentionally.
- Have blade spin up before beginning cut of workpiece.
- Have blade spin down before reaching for workpiece or clearing offcuts.