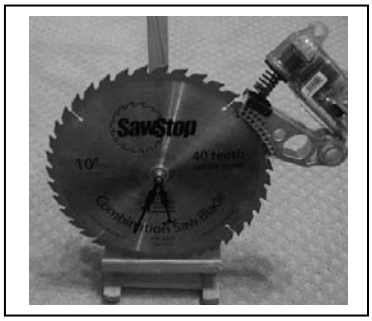
Special instructions using the Saw Stop Table Saw

Online Demonstration: http://www.youtube.com/watch?v=E3mzhvMgrLE

The Saw Stop table saw can tell the difference between cutting wood and cutting a person. If you ever accidentally contact the moving blade, the technology will detect that contact and stop the blade in milliseconds to minimize any injury. However, count on the saw cutting into your skin at least a 1/16th of an inch for every foot per second your hand or other body part is moving.

There are several things to keep in mind before cutting with the Saw Stop table saw. They are:

1) Only cut **non-conductive** materials
    a. If a static charge is created the brake cartridge may stop the blade



A list of non-conductive materials:

- Most plastics
- Foam
- Cardboard
- Corian
- Melamine
- Wood

If you are not sure if the material you are cutting is conductive…ASK! The Delta table saw can be used to cut some conductive materials.

A list of conductive materials

- Aluminum
- Carbon Fiber
- Mirrored Acrylic (Plexiglass)
- Carbon-filled materials
- Pressure Treated Wood (Green Treated Wood)
- Laxan (Polycarbonate)

2) There are a number of system codes that tell a user if the saw is operating properly. A list of these codes can be found hanging above the saw and also to the left hand side of the power box. **If you are unsure of the system status, ASK!**

3) Only use conductive blades. **If you think you need to change the blade ask staff for assistance.**
    a. After changing a blade spin the blade to ensure it will not touch the brake. A U.S. nickel can be placed between the closest points on the blade and brake cartridge to give proper spacing

4) If you are not cutting all the way through your work-piece the riving knife needs to be installed. **Find shop staff to help you properly set up the saw.**

5) Table inserts must be non-conductive to prevent the brake caliper from engaging.

6) If you are cutting material at a 45 degree angle or have recently moved the angle to 0 degrees, release the tension after you hit the limit stops.
    This prevents twisting of the cast iron assembly that may affect blade parallelism and table

Using Your Saw

4. System Status Codes:

In the event that the safety system detects an error, the LEDs on the Switch Box will display a status code to indicate what error has been detected. Table 1 shows the different status codes which can be displayed. A complete description of each status code and the necessary corrective action is provided below.

System Status Codes		
Green LED	Red LED	Status
▬▬▬	▬ ▬ ▬	System Initializing
▬▬▬		System Ready
	▬▬▬	Replace the Brake Cartridge
■ ■ ■ ■ ■		Blade is Coasting Down
▬ ▬ ▬		Bypass Mode is *ON*
■ ■ ■ ■ ■	■ ■ ■ ■ ■	Switch the Start/Stop Paddle to *OFF*
	▬ ▬ ▬	Turn the Cartridge Key to *ON*
■ ■ ■ ■ ■	▬▬▬	Close Belt Access Door and Motor Cover
▬ ▬ ▬	▬▬▬	Adjust Position of the Brake Cartridge
▬▬▬	■ ■ ■ ■ ■	Contact was Detected During Standby
▬ ▬ ▬	■ ■ ■ ■ ■	Contact was Detected During Bypass
	■ ■ ■ ■ ■	Overload Due to Wet Wood

Table 1

Symbol Key:

■ ■ ■ ■ ■ Green LED blinks fast

▬ ▬ ▬ Green LED blinks slowly

▬▬▬ Green LED is on solid

■ ■ ■ ■ ■ Red LED blinks fast

▬ ▬ ▬ Red LED blinks slowly

▬▬▬ Red LED is on solid

***WARNING!** Always switch both the Disconnect Switch and the Main Power Switch to OFF before performing adjustments or maintenance to the saw.*

Introduction: Wood Shop

1) Always keep hands clear from the saw blades
2) Always wear safety glasses even when not using the machines
3) Never wear gloves/loose clothing and tie hair back if necessary
4) Use push sticks, a small vise, or clamps if work-piece is < 3 inches wide or long.

Part I: Table Saw

1) Safety Tips

a) Never attempt to cut twisted or warped material

b) Whenever possible do not stand directly behind the work-piece you are feeding though the table saw. Stand off to the side.

c) Make certain material sits flat on table surface during cutting procedures

d) Never make free-hand cuts (without fence or miter gauge)

e) Never grab or touch waste material while the saw blade is still spinning

f) Never reach for material after finishing a cut, let it fall to the floor or have a helper catch the material.

g) Never make cuts using the short edge of the work-piece

(I.e. if the sides of the work-piece have a large aspect-ratio, make certain the longest edge is guided along the fence…not the short edge)

h) If you are cutting a long piece of material have someone support the material as it extends past the saw. **The helper only supports the wood, they do not help pull the material.**

2) General Operation

a) Always use dust collector and turn-off when finished

b) Terminology/Operation

i) Blade guard/splitter/anti-kick-back pawls/riving blade

– **<u>Do not remove for any reason</u>**

If performing cuts that do not go all the way through the work-piece, ask a shop supervisor for assistance.

ii) On/Off/E-Stop

iii) Fence Operation:

(1) Manual Measurements

(a) Some "play" in the fence if not completely tightened

(b) Make certain the fence is square when completely tightened

(c) Make measurement by bumping tape into the fence and reading to the inside edge of the blade's teeth

(d) Gently tighten fence lock and adjust as necessary

(2) Calibrating fence

(a) Set fence on any small integer (usually at 5 inches or so)

(b) Measure the distance to the inner edge of the blade's teeth

(c) Adjust the indicator to the measured value using a hand screwdriver

iv) Optional Miter Gauge **(do not use with the fence)**

(1) Use both hands to control the gauge and work-piece

(2) Make certain a straight edge of the work-piece is held tight to **fence of the gauge**.

(3) If necessary, smaller work-pieces may be clamped to the gauge

c) Pushing a normal-sized work-piece (> 3 inches long)

i) Adjust blade height so the highest standing tooth is a ¼ inch above the work-piece

ii) Always slide a straight edge of the work-piece against the fence

iii) Prevent "pinching" the blade

(I.e. use even pressure on both sides of the work-piece)

iv) Optional handles and two different types of push sticks are available for use

v) **Always keep hands clear of blade**

d) Pushing a small-sized work-piece (< 3 inches long)

i) Same procedure as **Part C, only use a push stick between the blade and fence.**

(1) To hold the work-piece against fence

(2) To push the work-piece through the saw

e) **CAUTION: ALWAYS BEWARE OF "KICK-BACK"**

3) Changing the Blade

a) **Ask for Assistance**

b) Always unplug saw before performing maintenance or changing blades

c) Remove panel that covers the blade

d) Use a blade-stopper to prevent blade from rotating while removing the nut. The Sawstop has an extra wrench to hold the blade in place.

e) Nut uses reverse threading on the Delta table saw

f) The SawStop has right hand threads

g) **DON'T DROP THE NUT** – place a finger on the end of the threaded drive shaft and loosen the nut onto your finger.

Part II: Miter Saw

1) **General Operation**
   a) Always use dust collector during operation (power strip to the right of the machine)
   b) Set the table/blade angle (table angle lock handle/compound angle lock)
   c) Unlock the arm (fixing pin)
   d) Making Measurements
      i) **Manually**
         (1) Use a tape measure to mark material
         (2) Align edge of teeth with desired mark
      ii) **Using the Stops (Only used when making same cut numerous times)**
         (1) Checking for correct calibration
            (a) Make a manual measurement on first work-piece
            (b) Align edge of teeth with desired mark
            (c) Make sure stop-adjustment lever is engaged
            (d) Place and tighten stop on the fence and tight to the end of the work-piece
            (e) Compare the "scale" measurement on the stop with the desired length
               (i) If numbers are equal proceed to cut remaining work-pieces
               (ii) Calibrate the stops if the "scale" line doesn't display the desired length
         (2) Calibrating the stops
            (a) Using a hex-key, adjust the stop-adjustment lever until desired length is equal to the "scale" length
         (3) **If using <u>right-side stop</u>**:
            (a) After completing calibration procedures, push work-piece to stop
            (b) Depress the stop-adjustment lever
            (c) If this is not done material will pinch and "kick-back" could occur
            (d) Then proceed to the cutting procedure
            (e) Re-engage the stop-adjustment lever before cutting the next work-piece
   e) Push work-piece tight to fence and/or stop (hold firmly with one hand)
   f) Using other hand, push safety switch then pull the trigger simultaneously
   g) While blade is up (not cutting material) pull toward body
   h) Lower the saw entirely then cut through your material by pushing saw away from body
   i) Release trigger and wait for blade to stop spinning
   j) Remove work-piece
   k) Clamps or small vise are always available to hold work-piece
   l) Always use clamping devices when cutting small work-pieces (< 3 inches long)
   m) **CAUTION: ALWAYS BEWARE OF "KICK-BACK"**
   – **Especially when using the right-side stop**

Part III: Panel Saw

1) General use
   a) Can be used to cross-cut or rip (vertical or horizontal cuts)
   b) Please ask for shop assistance when ripping (horizontal cuts)
   c) 4-foot height maximum

2) General Operation (for cross-cutting ONLY)
   a) Mark location of cut on the top portion of work-piece
   b) Load work-piece from side (make sure it sits evenly on the rollers)
   c) Ensure saw-head is locked into the vertical cutting position
   d) Pull the saw-head to the edge of the work-piece
   e) Align blade with desired mark (looking through the blade window)

f) With saw-head in place and slightly above the work-piece, flip on/off switch up
g) Pull saw-head down until it reaches the bottom of the work-piece
h) Flip on/off switch down and wait for blade to stop spinning
i) Return the saw-head to its original location

3) Quick discussion on ripping (no details included)

a) Lock the saw-head in the horizontal position
b) Material is pushed in from one side and out the other.
c) **Do not perform unless given permission by shop staff**

Part IV: Circular Saws

1) Safety Tips

a) Ensure the blade guard operates properly
b) Never attempt to cut twisted or warped material
c) Keep base plate sitting flat on the surface of the work piece for cross-cutting and ripping operations
d) Never make curved cuts
e) Never grab or touch waste material while the saw blade is still spinning
f) Never place hands or fingers in front of the blade
g) Do not start saw when teeth are in contact with the work piece
h) Do not overreach-- keep proper footing and balance at all times
i) Use clamps or other practical method to secure the work piece to a stable platform
j) Keep cords untangled and clear of the blade and cut path
k) *For out of shop use: be sure to work in a safe environment (dry, uncluttered, well-lit, etc.)

2) General Operation

a) Terminology/Operation
   i) On/Off Trigger
   ii) Blade guard
   iii) Baseplate Operation:
      (1) Depth of cut adjustment
      (2) Angle of cut adjustment
   iv) Plunging
      (1) Plant front edge of baseplate firmly onto work piece-- this is the pivot point
      (2) Hold blade guard up and away with thumb of lead hand on the front handle
      (3) Turn on saw and plunge into work piece using front edge as pivot point
      (4) Cut to desired depth and raise blade out of work piece using front edge as pivot point
      (5) Release power switch after blade is clear of work piece
   v) **Always keep hands clear of blade**
   vi) Special notes for Rockwell Versacut
      (1) Safety switch operation
      (2) Depth of cut set using yellow stop on side of saw
      (3) Use of parallel guide to assist with straight cuts
      (4) Laser use
b) **CAUTION: ALWAYS BEWARE OF "KICK-BACK"**

3) Changing the Blade - Ask for Assistance

Part V: Router Introduction

a) Firmly tighten the router bit with the wrenches provided with the router
b) Make sure the power switch is set to the off position before plugging the router in
c) Always remove bit from router after each use
d) Keep base plate sitting flat on the surface of the work piece
e) Keep both hands on the handles of the router when operating. **Do not use with one hand.**

f) Do not start router when bit is in contact with the work piece
g) Do not overreach-- keep proper footing and balance at all times
h) Use clamps or other practical method to secure the work piece to a stable platform
i) Keep cords untangled and clear of the bit and cut path
j) *For out of shop use: be sure to work in a safe environment (dry, uncluttered, well-lit, etc.)

1) General Operation

a) Terminology/Operation
   i) On/Off Trigger
   ii) iii) Adjust depth of cut:
      (1) Loosen wing nut on most routers, adjust bit to desired depth and retighten wing nut.
   iv) Adjust Depth of cut on Plunge router
      (1) Pull handle, press base until desired depth is met, press handle back in place, slide depth stop until it makes contact with the base and tighten in place.
   v) Clamp material to stable work table
   vi) **Use both hands when operating router**
   vii) For best results climb mill (move the router in the opposite direction of the rotating bit). If routing the edge nearest you, route from left to right.
   vii) When done routing, turn off the router and move the rotating bit away from your body. Safely set the power tool down.
   viii) If removing a large amount of material, make multiple passes instead of removing all the material at once.

Part VI: Other Wood shop Information

1) Must have shop staff permission to use the 12" Makita Miter-Box
2) Use red handled tension arm to set and release tension on the band saw before and after use
3) Clean up after using the equipment