This is a basic walk-through of the Compound Miter Saw and the Box Miter Hand Saw. We will learn the basics operations of these machines and the procedure for setting them up.

Machine Functionality & Limits

The Dewalt Compound Miter Saw will be used to crosscut stock. Unlike most saws that only cut straight cuts, this saw can conduct miter and beveled cuts. The overall length of the stock should be under 6’, and the overall cross-section distance needs to be under 6”. The Box Miter Saw will be used for crosscuts as well, but it should only be used for finer cuts and on smaller cross-sections of stock.

Workshop Content

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Before setting up the machine, move the workbench outside. This machine needs to be used outside where the will not bother those inside the space and will minimize the saw dust output.

The Miter Saw lives on top of a movable bench. This bench has saws on the top, and it has drawers that contain tools & sandpaper.

Plug the saw into the outlet hanging down next to the door.
Using the rafters square, mark the cut you will need.

This machine has a Kerf. This is the measurement of the width of the blade, which is material lost when using this machine. Add a 3/16”-1/8” offset or align your stock accordingly to prevent the loss in material.

“Measure twice cut once” quote is always required

Before proceeding make sure you are wearing the appropriate safety protection.

For this machine make sure you have the following:
- Eye protection
- Closed toed shoes
- Ear protection (if needed)

ALSO MAKE SURE YOU DON’T HAVE LOOSE CLOTHING OR ANYTHING THAT COULD POSSIBLY PULL YOU TOWARDS THE MACHINE. REFERENCE THE USER MANUAL FOR MORE INFORMATION.

This machine needs to be in the closed position when not being used. This will help hide the blade and prevent non-users from getting injured from the blade.

To release the saw, push down on the yellow handle, then, pull the Lock Down Pin.
Crosscuts

For a crosscut make sure the blade’s miter angle is set to 0. This measurement might have been changed, so double check before cutting.

Load up the stock so the waste side is on the right side of the machine. This will allow the scrap to fall off to the side.

If your stock is taller than 6’ tall, use some clamps to fasten some scrap wood to the table. Try to match the height of the base on the saw. You may also need help from a second person to hold the scrap while cutting.

Make sure the blade is aligned with the cut. Remember that the Kerf is something to consider when aligning the blade.

Be sure the stock doesn’t move, so use your free hand to hold down the stock against the base and fence.
Before starting the machine make sure everyone near the machine is wearing safety protection. The work area is a busy walkway so if there are any pedestrians walking by, let them pass before starting the saw.

Before powering the machine make sure you’re stance is proper for cutting. Use one hand to hold down your stock and the other to power on the saw. **NEVER CROSS YOUR HAND WHILE USING THE SAW.**

To start the machine use the trigger switch on the yellow handle.

Let the blade speed up before introducing the blade into the stock.

**DON’T FORCE THE BLADE INTO THE STOCK.** Let the blade move through the stock as you move the handle down.

Once the blade clears the stock release the trigger and let the blade come to halt before raising it up.
Beveled Cuts

The miter saw can be adjusted to make angled cuts along its vertical axis. Angles between 0 - 45 degrees can be achieved.

Locate the vertical angle adjustment knob behind the saw blade, just below the dust collection bag. Turn the knob counter clockwise to loosen the adjustment.

Once the knob is loosened, you can adjust the cutting angle by tilting the body of the miter saw. There is a gauge facing the front of the saw that indicates what angle you’re setting the blade to. When your angle has been set, turn the adjustment knob clockwise to set the blade in position.

Execute your cut the same exact way you would if the blade was perpendicular. Make sure your hands are placed in a safe position. Even though the blade is angled, it will still intersect the workplane in the same spot. When you are finished making beveled cuts, return the blade to its perpendicular position.
Miter Cuts

1

To use the miter function of the machine you will need to adjust the Miter Lever. This lever will allow you to adjust the angle of the miter cut.

First, release the handle by pulling it up. Once released, use the lever underneath the handle to release it, and rotate it to the desired angle.

2

Once the angle is set, lock the handle by pressing it down. This will prevent the angle of the blade to move or change while cutting.

3

Run the saw once you’re ready to cut the stock. Reference back to steps (9-11) if you need to reference how to hold the stock and run the machine.
Use the yellow pins to fasten the stock to the saw. Once the stock is fastened, lower the blade and begin to cut. Use your free-hand to hold down the stock as you move the blade back and forth.

This saw should be used for smaller crosscuts of wood. Around 2” or less is ideal.

To load up the wood raise the saw and place it underneath.

If a miter cut is desired, use the yellow nob to adjust the angle of the blade. Push it toward the saw and move it the angle desired.
Clean Up

Once you’re done using the saws, dust them off and/or use the shop vac to clean up the area. (Only use the vac when there is a large amount of saw dust)

When they are clean, set the Miter Saw in the locked position. If the Box Saw was used, remove it from the stand and insert the protective band on the blade.

Once the table is clean, move the table back inside. This may require two people, so ask the lab monitor if you need assistance.

Make sure all of your stock is put away, tools are in their home, and that the area is clean. There is a yellow bin for scrap wood.