The circular saw is one of the most versatile machines used for woodworking. It can be used for a wide variety of operations including ripping, crosscutting, as well as other operations such as cutting miters, radius, dados, and ovals. This sheet describes the procedure for ripping stock to width. For other operations ask your instructor or refer to one of the many references available.

Controls: The controls on the circular saw in the materials processing laboratory consist of the following:

1. A magnetic power switch that must be reset if the power in the laboratory is interrupted.
2. A blade height adjustment wheel on the front of the machine.
3. A blade tilt adjustment knob on the side of the machine.
4. Fence adjusting knob and fence lock on the rip fence.
5. A blade tilt adjustment wheel on the side of the machine.

Safety practices:

1. Always wear safety glasses.
2. Be sure to have firm footing.
3. Do not allow others to crowd around the saw.
4. Never let go of the stock during the cut.
5. Do not make "free hand" cuts on the circular saw, always use the fence, miter gage or other fixture.
6. Always use saw blades guard when possible. (most operations can be done with the guard), check with the instructor before making any cuts without the guard.
7. Never stand directly behind the saw blade.
8. Always wear safety glasses.
9. Be sure to perform only operations you know how to do safely.
10. Never wear cloths or other articles that dangle and could catch on the saw.

Potential hazards:

Because of the rapid spinning motion of the circular saw blade, the following hazards exist.

1. The stock between the blade and fence is pushed into the blade. Note the position of the fence and guard and that a push stick is being used.
2. The blade guard is in place and functioning properly.
3. The stock to be cut is flat and has a straight edge.
4. The blade must be above the thickness of the stock.
5. The stock between the blade and fence is held in position by a push stick.
6. The work piece can be thrown violently from the rotating saw blade.

The controls on the circular saw in the materials processing laboratory consist of the following:

1. A blade height adjustment wheel on the front of the machine.
2. A blade tilt adjustment knob on the side of the machine.
3. A blade tilt adjustment wheel on the side of the machine.

Ripping on the Circular Saw

Ripping is the operation during which the stock is pushed lengthwise through the blade to reduce its width. Refer to the following illustrations.

1. Stock is being pushed into the blade. Note the position of the fence and guard and that a push stick is being used.
2. The stock between the blade and fence is pushed clear of the blade to prevent kickback.

Because of those potential hazards the following safety rules must be followed.

1. Always check to be sure that a rip or combination blade is mounted on the saw.
2. Adjust the rip fence to approximately 1/8 to 1/4 inch higher than the thickness of the stock.
3. Adjust the rip fence to the desired width of cut.
4. Be sure the blade guard is in place and functioning properly.
5. Stand to the side of the blade and start the saw. Be sure no other people are in line with the blade.
6. Use a push stick for narrow work, push the stock through the blade with the stick against the fence.
7. Do not reach directly over the moving blade to remove stock.
8. When using the miter gage be sure it slides freely and clears the blade.
9. Never stand directly behind the saw blade.
10. Never reach directly over the moving blade to remove stock.

Note: There are other controls on various accessories used with the saw that are not listed in this discussion.

Note: There are several other operations that can be done using a circular saw. Ask your instructor and refer to one of the many references for those procedures.

References: