

FIG. 13

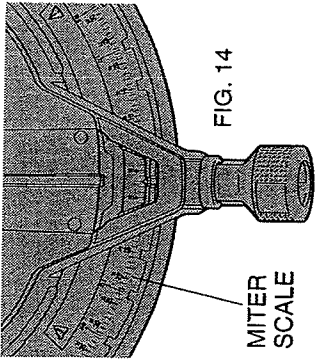


FIG. 14

MITER SCALE

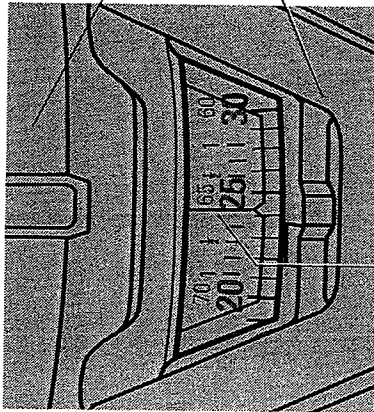


FIG. 15

KERF PLATE

MITER ARM

CENTER MARK ON VERNIER SCALE ALIGNS WITH DESIRED WHOLE ANGLE ON MITER SCALE (24° RIGHT MITER)

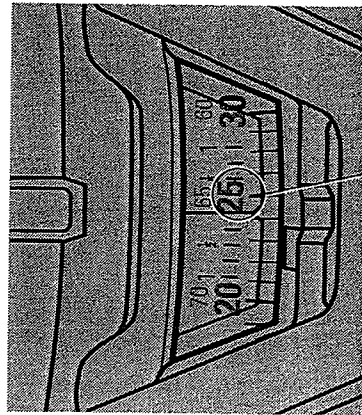


FIG. 16

1/4° VERNIER MARK ALIGNS WITH CLOSEST WHOLE DEGREE MARK ON MITER SCALE (24 1/4° RIGHT MITER)

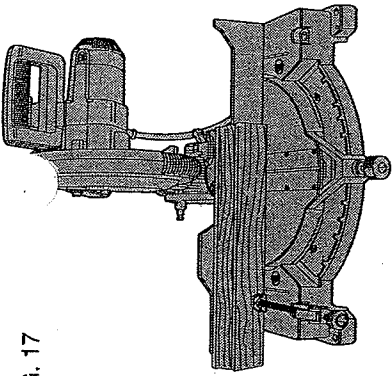


FIG. 17

The guard can be raised by hand when installing or removing saw blades or for inspection of the saw. **NEVER RAISE THE BLADE GUARD MANUALLY UNLESS THE SAW IS TURNED OFF.**

**NOTE:** Certain special cuts will require that you manually raise the guard.

The front section of the guard is lowered for visibility while cutting. Although the louvers dramatically reduce flying debris, they are openings in the guard and safety glasses should be worn at all times when viewing through the louvers.

#### AUTOMATIC ELECTRIC BRAKE

Your saw is equipped with an electric blade brake which stops the saw blade within 5 seconds of trigger release. This is automatic and requires no adjustment.

Occasionally, under certain conditions, the brake will not function properly and won't stop the saw in the 5 seconds as discussed above. If this condition persists, turn the saw on and off four or five times. If the brake still does not stop the blade in about 5 seconds, the problem may be worn brushes. Replace the brushes as described below and try the saw again. If this condition occurs, have the tool serviced at a Black & Decker (U.S.) Inc. industrial service center or company authorized service facility.

## Brushes

### DISCONNECT PLUG FROM POWER SUPPLY

Inspect carbon brushes regularly by unplugging tool, removing the brush inspection cap (Figure 3) and withdrawing the brush assembly. Keep brushes clean and sliding freely in their guides. Always replace a used brush in the same orientation in the holder as it was prior to its removal. Carbon brushes have varying symbols stamped into their sides, and if the brush is worn down to the line closest to the spring, they must be replaced. (If either brush is worn out, replace both.) Use only identical DEWALT

brushes. Use of the correct grade of brushes is essential for proper operation of electric brake. New brush assemblies are available at Black & Decker (U.S.) Inc. industrial service centers. The tool should be allowed to "run in" (run at no load) for 10 minutes before use to seat new brushes. The electric brake may be erratic in operation until the brushes are properly seated (worn in).

While "running in" **DO NOT TIE, TAPE, OR OTHERWISE LOCK THE TRIGGER SWITCH ON. HOLD BY HAND ONLY.**

## Operation

Plug the saw into any 120 volt 60 Hz power source. Be sure the cord will not interfere with your work.

### SWITCH

To turn the saw on, depress the trigger switch as shown in Figure 11. To turn the tool off, release the switch. There is no provision for locking the switch on, but a hole is provided in the trigger for insertion of a padlock to lock the saw off.

### CUTTING WITH YOUR SAW

**NOTE:** Although this saw will cut wood and many non-ferrous materials, we will limit our discussion to the cutting of wood only. The same guidelines apply to the other materials. **DO NOT CUT FERROUS (IRON AND STEEL) MATERIALS OR MASONRY WITH THIS SAW.** Do not use any abrasive blades.

### CROSSCUTS

A crosscut is made by cutting wood across the grain at any angle. A straight crosscut is made with the miter arm at the zero degree position. Set the miter arm at zero, hold the wood on the table and firmly against the fence. Turn on the saw by squeezing the trigger switch shown in Figure 11.

When the saw comes up to speed (about 1 second) lower the arm smoothly and slowly cut through the wood. Let the blade come to a full stop before raising arm.

Miter crosscuts are made with the miter arm at some angle other than zero. This angle is often 45 degrees for making corners, but can be set anywhere from zero to 48 degrees left or right. After selecting the desired miter angle, be sure to tighten the miter clamp knob. Make the cut as described above.

### QUALITY OF CUT

The smoothness of any cut depends on a number of variables. Things like material being cut, blade type, blade sharpness and rate of cut all contribute to the quality of the cut.

When smoothest cuts are desired for molding and other precision work, a sharp (60 tooth carbide) blade and a

slower, even cutting rate will produce the desired results. Ensure that material does not creep while cutting, clamp it securely in place. Always let the blade come to a full stop before raising the arm.

If small fibers of wood still split out at the rear of the workpiece, stick a piece of masking tape on the wood where the cut will be made. Saw through the tape and carefully remove tape when finished.

For varied cutting applications, refer to the list of recommended accessories for your saw and select the blade that best fits your needs.

#### **BODY AND HAND POSITION (SEE FIG. 12)**

Proper positioning of your body and hands when operating the miter saw will make cutting easier, more accurate and safer. Never place hands near cutting area. Place hands no closer than 6" from the blade. Hold the workpiece tightly to the table and the fence when cutting. Keep hands in position until the trigger has been released and the blade has completely stopped. **ALWAYS MAKE DRY RUNS (UNPOWERED) BEFORE FINISH CUTS SO THAT YOU CAN CHECK THE PATH OF THE BLADE.**

#### **DO NOT CROSS HANDS AS SHOWN AT RIGHT.**

Keep both feet firmly on the floor and maintain proper balance. As you move the miter arm left and right, follow it and stand slightly to the side of the saw blade. Sight through the guard louvers when following a pencil line.

#### **CLAMPING THE WORKPIECE**

**Turn Off and Unplug Saw**  
**ALWAYS CLAMP WOOD TO THE SAW WHEN POSSIBLE.**

You can clamp to either side of the saw blade and remember to position your clamp against a solid, flat surface of the fence. For best results use the DW7052 Clamp made for use with your saw. Available from your dealer at extra cost.

When cutting small pieces requiring your hand to be dangerously close (within 6") to the saw blade, a clamp must be used to prevent loss of control. The left fence may be adjusted to aid clamping.

#### **SUPPORT FOR LONG PIECES**

**Turn Off and Unplug Saw**

**ALWAYS SUPPORT LONG PIECES**

For best results, use the DW7050 extension work support to extend the table width of your saw. Available from your dealer at extra cost. Support long workpieces using any convenient means such as sawhorses or similar devices to keep the ends from dropping.

#### **CUTTING PICTURE FRAMES, SHADOW BOXES AND OTHER FOUR SIDED PROJECTS**

To best understand how to make the items listed here, we suggest that you try a few simple projects using scrap wood until you develop a "FEEL" for your saw.

Figure 13 shows a joint made by setting the miter arm at 45 degrees to miter the two boards to form a 90 degree corner. To make this type of joint, set the miter arm to 45 degrees. Position the wood with the broad flat side on the table and the narrow edge against the fence.

As the number of sides changes, so do the miter angles. The chart below gives the proper angles for a variety of shapes.

(The chart assumes that all sides are of equal length.) For a shape that is not shown in the chart, use the following formula. 180 degrees divided by the number of sides equals the miter angle.

- EXAMPLES -	
NO. SIDES	MITER ANGLE
4	45°
5	36°
6	30°
7	25.7°
8	22.5°
9	20°
10	18°

#### **DUAL RANGE MITER SCALE**

The miter scale has two ranges of numbers for convenience, as shown in Figure 14. One scale indicates 0 degrees when the blade is square to the fence. At this position the other scale reads 90 degrees.

The 0 degree scale (larger numbers closer to the front edge) is used when calculating angles. To calculate the proper miter angle, divide 180 degrees by the number of sides of the box or frame. Refer to the chart on this page for some examples.

The 90 degree scale (smaller numbers behind the zero degree scale) is used when a corner of your box or frame is measured with a protractor. For example: if you measure the corner of an 8 sided box, the protractor will read 135 degrees. To determine the proper miter setting, divide the measured angle by two. The proper miter setting in this example is 67-1/2 degrees. Set this angle on the 90 degree scale. This is most useful when a corner is at an odd angle.

#### **VERNIER SCALE**

Your saw is equipped with a vernier scale for added

FIG. 18

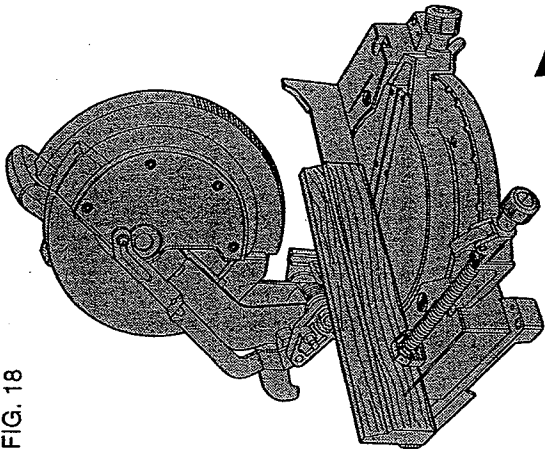


FIG. 19

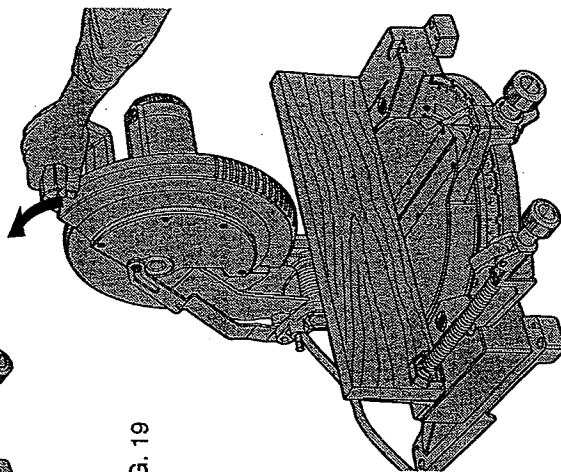
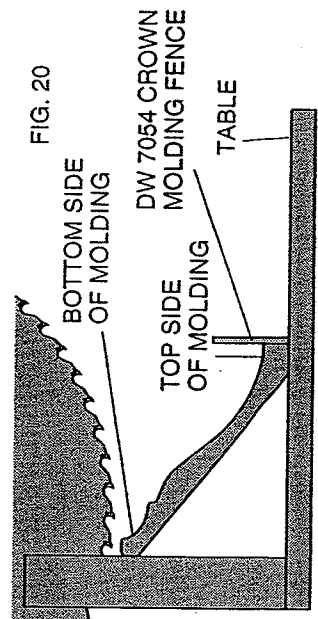


FIG. 20



CROWN MOLDING BETWEEN FENCE AND TABLE

precision. The vernier scale allows you to accurately set miter angles to the nearest 1/4 degree (15 minutes). To use the vernier scale follow the steps listed below.

(As an example, let's assume that the angle you want to miter is 24 1/4 degree right).

1. Turn off miter saw.
2. Set the miter angle to the nearest whole degree desired by aligning the center mark in the vernier scale, shown in Figure 15, with the whole degree number etched in the miter scale. Examine Figure 15 closely; the setting shown is 24 degrees right miter.
3. To set the additional 1/4 degree, squeeze the miter arm lock and carefully move the arm to the RIGHT until the 1/4 degree vernier mark aligns with the CLOSEST degree mark on the miter scale. In our example, the closest degree mark on the miter scale happens to be 25 degrees. Figure 16 shows a setting of 24-1/4 degrees right miter.

For settings that require partial degrees (1/4, 1/2, 3/4 degrees) align the desired vernier mark with the CLOSEST degree mark on the miter scale, as described below (The plastic vernier plate is inscribed with marks for 1/4, 1/2, 3/4 and 1 degrees. Only the 1/2 degree and the 1 degree are numerically labeled.)

#### WHEN MITERING TO THE RIGHT

To increase the miter angle when mitering to the right, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the right. To decrease the miter angle when mitering to the right, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the left.

#### WHEN MITERING TO THE LEFT

To increase the miter angle when mitering to the left, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the left. To decrease the miter angle when mitering to the left, move the arm to align the appropriate vernier mark with the closest mark on the miter scale to the right.

#### CUTTING BASE MOLDING

**ALWAYS MAKE A DRY RUN WITHOUT POWER BEFORE MAKING ANY CUTS.**

Straight 90 degree cuts -

Position the wood against the fence and clamp it in place as shown in Figure 17. Turn on the saw, allow the blade to reach full speed and lower the arm smoothly through the cut.

#### CUTTING BASE MOLDING UP TO 3-7/8" HIGH VERTICALLY AGAINST THE FENCE

Position molding as shown in Figure 18

All cuts made with the back of the molding against the fence and bottom of the molding against the table.

#### INSIDE CORNER:

- Left side
1. Miter left 45°
  2. Save left side of cut

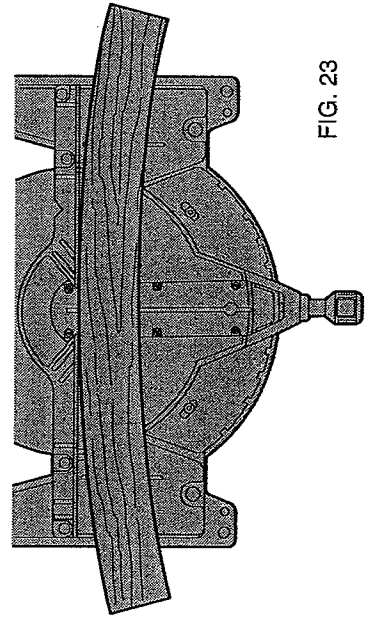
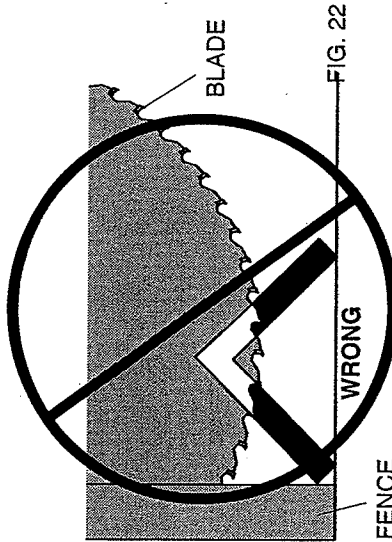
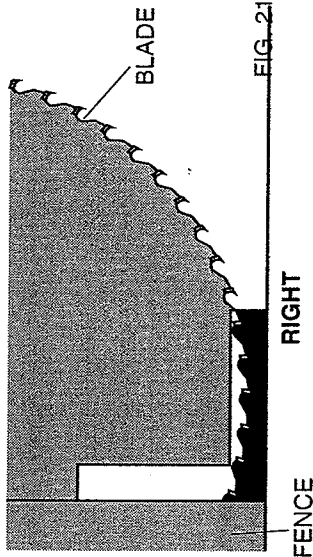
Right side

1. Miter Right 45°
2. Save right side of cut

#### OUTSIDE CORNER:

Left side

1. Miter right at 45°
2. Save left side of cut



Right side

1. Miter left at 45°
2. Save right side of cut

Material up to 3.9" (3-7/8") can be cut as described above. For wider boards [up to 5.5" (5-1/2")] several minor concessions must be made.

When cutting a board between 3.9" (3-7/8") and 5.5" (5-1/2") in width the guard will hang up on the workpiece. If this occurs, simply place your right thumb on the upper side of the guard and roll the guard up just enough to clear the workpiece, as shown in Figure 19. Once you have cleared the workpiece, you can release the guard and it will continue to open as the cut progresses.

When mitering to the right side of a base molding wider than 3.9" (3-7/8") standing vertically against the fence as in Figure 18, the saw can only cut through the board up to 1 inch from the end of the board. Trying to cut more than an inch will cause the saw's gear case to interfere with the workpiece. If you want to cut base molding between 3-7/8" and 5-1/2" wide vertically follow the directions below.

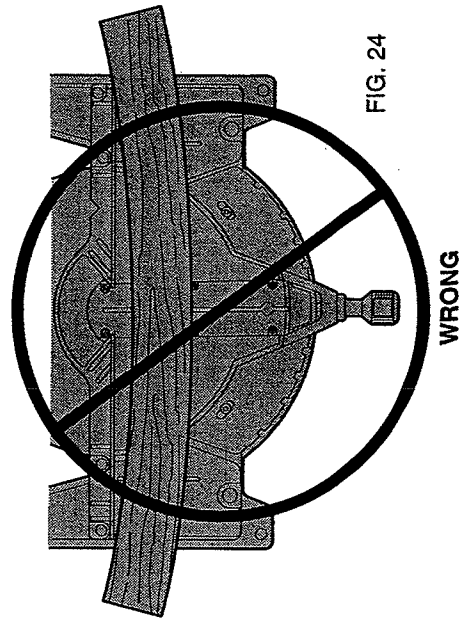
#### CUTTING 3-7/8" - 5-1/2" BASE MOLDING VERTICALLY AGAINST THE FENCE

- Position molding as shown in Figure 18
  - All cuts made with the back of the molding against the fence
- INSIDE CORNER:
- Left side

1. Position molding with bottom of molding against the table of the saw
2. Miter left 45°
3. Save left side of cut

Right side

1. Position molding with top of the molding resting on the table of the saw
2. Miter left 45°
3. Save left side of cut



RIGHT

## OUTSIDE CORNER:

Left side

1. Position molding with bottom of molding against the table of the saw
2. Miter right 45°
3. Save left side of cut

Note: If the cut must be made somewhere other than 1" from the end of the molding; cut off the molding at 90° approx. 1" longer than your final length then make the miter cut as described above.

Right side

1. Position molding with bottom of the molding against the table of the saw
2. Miter left 45°
3. Save the right side of cut

## CUTTING CROWN MOLDING

Your miter saw is better suited to the task of cutting crown molding than any tool made. In order to fit properly, crown molding must be mitered with extreme accuracy. The two flat surfaces on a given piece of crown molding are at angles that, when added together, equal exactly 90 degrees. Most, but not all, crown molding has a top rear angle (the section that fits flat against the ceiling) of 52 degrees and a bottom rear angle (the part that fits flat against the wall) of 38 degrees.

Use of the crown molding fence accessory (DW7054) is highly recommended because of its degree of accuracy and convenience. The crown molding fence accessory is available at extra cost from your local dealer or Black & Decker service center.

**PRETESTING WITH SCRAP MATERIAL IS EXTREMELY IMPORTANT!** Use the crown molding fence accessory to maintain the angle at which the molding will be on the wall. Place the bottom side (the side that will be against the wall) against the MITER SAW FENCE. Place the top (that part that will be against the ceiling) against the saw table and the crown molding fence, as shown in Figure 20.

## INSTRUCTIONS FOR CUTTING CROWN MOLDING ANGLED BETWEEN THE FENCE AND THE TABLE OF THE SAW FOR ALL CUTS:

1. Angle the molding so the bottom of the molding (part which goes against the wall when installed) is against the fence and the top of the molding is resting on the table of the saw, as shown in Figure 20.
2. The angled "flats" on the back of the molding must rest squarely on the fence and table of the saw.

## INSIDE CORNER:

Left side

1. Miter right at 45°
2. Save the right side of cut

Right side

1. Miter left at 45°

## Maintenance

1. All bearings are sealed ball bearings. They are lubricated for life and need no further maintenance.
2. Periodically clean all dust and wood chips from around AND UNDER the base and the rotary table. Even though slots are provided to allow debris to pass through, some dust will accumulate.
3. The brushes are designed to give you several years of use. If they ever need replacement follow the instructions on page 7 or return the tool to the nearest service center for repair. Service center locations are listed on the owner's registration card packed with your tool.

## Important

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (other than those described in this manual) should be performed by DEWALT certified service centers or other qualified service organizations. These service organizations service DEWALT tools always using DEWALT replacement parts. Black & Decker (U.S.) Inc. industrial service centers are certified for servicing DEWALT Industrial Tools.

2. Save left side of cut

## OUTSIDE CORNER:

Left side

1. Miter left at 45°
2. Save the right side of cut

Right side

1. Miter right at 45°
2. Save left side of cut

**ALWAYS MAKE DRY RUNS TO CHECK FOR CLEARANCE AND CORRECTNESS OF CUTS.**

## SPECIAL CUTS

**NEVER MAKE ANY CUT WITHOUT FIRMLY CLAMPING THE MATERIAL.**

## Aluminum Cutting:

Aluminum extrusions such as those used when making aluminum screens and storm windows can easily be cut with your saw. Position the material so that you will be cutting the thinnest cross section, as shown in Figure 21. Figure 22 illustrates the wrong way to cut these extrusions. Use a wax lubricant when cutting aluminum such as Johnson's Stick Wax No. 140. Apply the stick wax directly to the saw blade before cutting. Never apply stick wax to a moving blade.

The wax, available at most hardware stores and industrial mill supply houses, provides proper lubrication and keeps chips from adhering to the blade.

## Bowed Material:

When cutting bowed material always position it as shown in Figure 23 and never like that shown in Figure 24. Positioning the material incorrectly will cause it to pinch the blade near the completion of the cut.

## Cutting Plastic Pipe

Plastic pipe can be easily cut with your saw. It should be cut just like wood and **CLAMPED OR HELD FIRMLY TO THE FENCE TO KEEP IT FROM ROLLING.**

## Cutting Large Material

Occasionally you will encounter a piece of wood a little too large to fit beneath the blade guard. A little extra height can be gained by rolling the guard up out of the way, as shown in Figure 19. Avoid doing this as much as possible, but if need be, the saw will operate properly and make the bigger cut. **NEVER TIE, TAPE, OR OTHERWISE HOLD THE GUARD OPEN WHEN OPERATING THIS SAW.**