

CRAFTSMAN®

10" ELECTRONIC CABINETMAKERS RADIAL ARM SAW

- Assembly
- Operation
- Repair Parts

Sold by: SEARS CANADA INC., TORONTO, ONTARIO, CANADA M5B 2B8

Save this manual for future reference

SEARS

owner's manual

STOCK NO.

MODEL NO. 113.278761C

Serial Number\_

Model and serial

number may be found at the rear of the base.

You should record both model and serial number

FOR YOUR

INSTRUCTIONS

SAFETY:

READ ALL

CAREFULLY

in a safe place for future use.

0927876

Printed in U.S.A.

### FULL THREE YEAR WARRANTY ON CRAFTSMAN TOOL

If this Craftsman Tool fails to operate within three years from the date of purchase, return it to the nearest Sears Canada Inc. ("Sears") store and "Sears" will repair it, free of charge.

If this tool is used for commercial or rental purposes this warranty applies for only 90 days from the date of purchase.

This warranty is in addition to any statutory warranty.

### SEARS CANADA INC., TORONTO, ONTARIO, CANADA M5B 2B8

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This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries, including:

1. Severe cuts, and loss of fingers or other body parts due to contact with the blade

2. Eye impact injuries, and blindness, from being hit by a thrown workpiece, workpiece chips or pieces of blade

3. Bodily impact injuries, broken bones, and internal organ damage from being hit by a thrown workpiece

4. Shock or electrocution

5. Burns.

### Safety Symbol and Signal Words

An exclamation mark inside a triangle is the safety alert symbol.

It is used to draw attention to safety information in the manual and on the saw. It is followed by a signal word, DANGER, WARNING, or CAUTION, which tells the level of risk:

**DANGER:** means if the safety information is not followed someone will be seriously injured or killed.

**WARNING:** means if the safety information is not followed someone **could** be seriously injured or killed.

**CAUTION:** means if the safety information is not followed someone **might** be injured.

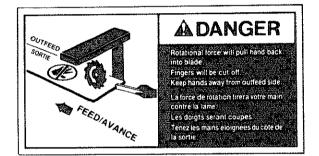
Read and follow all safety information and instructions.

### **Major Hazards**

Three major hazards are associated with using the radial arm saw for ripping. They are outfeed zone hazard, kickback, and wrong way feed.

This section only briefly explains these hazards. Read the ripping and crosscutting safety sections for more detailed explanations of these and other hazards.

#### **Outfeed Zone Hazard**



If you reach around the blade to the outfeed side when ripping, and try to hold down or pull the workpiece through to complete a cut, the rotational force of the blade will pull your hand back into the blade.

Fingers will be cut off.

Read and follow the information and instructions under ripping safety.

#### **Kickback Hazard**

Kickback is the uncontrolled propelling of the workpiece back toward the user during ripping.

The cause of kickback is the binding or pinching of the blade in the workpiece. Several conditions can cause the blade to bind or pinch.

When a workpiece kicks back, it could hit hard enough to cause internal organ injury, broken bones, or death.

Read and follow the information and instructions under ripping safety.



#### Wrong Way Feed Hazard

Wrong way feed is ripping by feeding the workpiece into the outfeed side of the blade.

The rotational force of the blade can grab and pull the workpiece.

Before you can let go or pull back, the force could pull your hand along with the workpiece into the blade. Fingers or hand could be cut off.

The propelled workpiece could hit a bystander, causing severe impact injury or death.

Read and follow the information and instructions under ripping safety.



### **Safety Instructions**

Read and follow all safety instructions.

#### **Personal Safety Instructions**

1. Wear safety goggles labeled CSA Z94-3-M88 on the package. It means the goggles meet impact standards set by the Canadian Standards Association. Regular eyeglasses are not safety goggles.

2. Wear close fitting clothes, short sleeved shirts, and non-slip shoes. Tie up long hair. Do not wear gloves, ties, jewelry, loose clothing, or long sleeves. These can get caught in the spinning blade and pull body parts into the blade.

3. Wear dust mask to keep from inhaling fine particles.

4. Wear ear protectors, plugs or muffs if you use saw daily.

5. Keep good footing and balance; do not over-reach.

#### Work Area Safety Instructions

1. Keep children, pets, and visitors out of work area; they could be hit by a thrown workpiece, workpiece chips or pieces of blade.

2. Turn saw off, remove yellow key, and unplug before leaving work area. Do not leave until blade has stopped spinning.

3. Make work area child-proof: remove yellow key to prevent accidental start-up; store key out of sight and reach; lock work area.

4. Keep floors clean and free of sawdust, wax and other slippery materials.

5. Keep work area well lighted and uncluttered.

6. Use saw only in dry area. Do not use in wet or damp areas.



#### **Saw Safety Instructions**

1. Use guard, pawls and spreader according to instructions. Keep them in working order.

2. Routinely check saw for broken or damaged parts. Repair or replace damaged parts before using saw. Check new or repaired parts for alignment, binding, and correct installation.

3. Unplug saw before doing maintenance, making adjustments, correcting alignment, or changing blades.

4. Do not force saw. Use saw, blades and accessories only as intended.

5. Have yellow key out and saw switched off before plugging in power cord.

#### **Workpiece Safety Instructions**

1. Cut only wood, woodlike or plastic materials. Do not cut metal.

2. Cut only one workpiece at a time. Stacking or placing workpieces edge to edge can cause user to lose control of workpiece. 6. Before turning on saw, clear table of all objects except workpiece to be cut and necessary fixtures, clamps, or feather-boards.

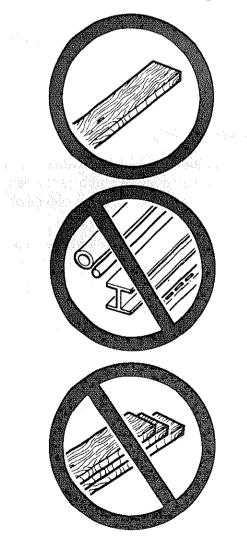
7. If blade jams, turn saw off immediately, remove yellow key, then free blade. Do not try to free blade with saw on.

8. Turn saw off if it vibrates too much or makes an odd sound. Correct any problem before restarting saw.

9. Do not layout, assemble, or setup work with saw on, or while blade is spinning.

10. Keep saw table clean.

11. Store items away from saw. Do not climb on saw or stand on saw table to reach items because saw can tip over.



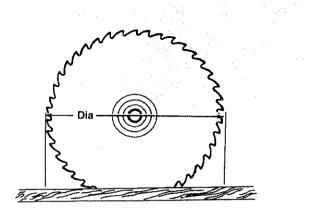
3. Rip only workpieces longer than the diameter of the blade. Do not rip workpieces that are shorter than the diameter of the blade being used.

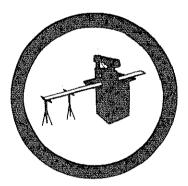
4. Workpieces that extend beyond the saw table can shift, twist, rise up from the table, or fall as they are cut. Support workpiece with table extensions the same height as the saw table.

5. To prevent tipping, support outer ends of extensions with sturdy legs or an outrigger.

6. Do not use another person to help support workpieces or to aid by pushing or pulling on workpieces, because these actions can cause kickback. Use table extensions.

7. Use clamps or vice to hold workpiece. It's safer than using your hands.







#### **Blade Safety Instructions**

1. Use only blades marked for at least 3450 rpm.

2. Use only 10" or smaller diameter blades.

3. Use blades for their recommended cutting procedures.

4. Keep blade sharp and clean.

5. Do not overtighten blade nut because blade collar could warp.

6. Do not turn saw on and off in rapid sequence because blade can loosen.

7. Blade should stop within 15 seconds after saw is switched off. If blade takes longer, the saw needs repair. Contact Sears Service Center.







#### **On-Product Safety Labels**

There are several safety labels on the saw. They alert the user to hazards explained in the manual and remind the user how to avoid the hazard.

Note where they are located on the saw. Read and follow the safety information and instructions in these labels. Refer to the manual for detailed explanations and instructions.

On the outfeed side of the guard is this safety label to alert you to wrong way feed:

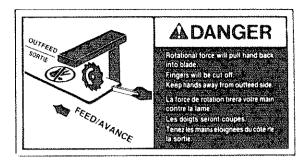


On the infeed side of the guard is this safety label to alert you to kickback, and to remind you to lower the guard nose (hold down) for ripping:



On the side surface of the motor, visible from the infeed side when the saw is in a rip position, is this safety label to alert you to outfeed zone hazard:

Near the saw handle is this safety label to alert you to thrown objects and to remind you to wear safety goggles:





On the bottom surface of the motor. visible when the cutting tool is horizontal, is this safety label to alert you use a guard when edge molding, and to position cutting tool behind fence: (see Accessories Section)



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- Need and Understand on warming and instructions which is dely lock proper warming and instructions which is dely lock proper warming in a property guard the cutting tool shrind the fance by moving the arms of the felt and criting socie behind the fance by moving the arms to the felt and criting into the socie of the property for the socie of the profile profile profile for the profile of the profile of the profile of the profile profile of the profile profile profile

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- supporter Placet lout? de coupe derrière la guide er deplacent to bras vers is gauche et en verrant te bouton de bride de lacon à ce que cette en quette soit en face du guide, ou fabriques un

plaze 3. Ansurer-vous que la prece de travail

quetts anti en foce du guide, du tañnest un guide auximiser les tau explique dans le monuel du proportitaire 5. Avec la sociel est debranchée et la C-d. de 1 monuel rupteur colleste fastes hourner la lamo manuellement pour vous assum au effer re touche pas un profegi tance au grude ou a toute autre parte de la vice

On the front panel is this general safety instruction label:



- Read manual before using saw. Wear safety goggles that meet CSA 294-3-M88 standards. Do not do freehand cuts. Push carriage to full rear position after each cross cut. Know how to reduce the risk of kickback. See instructions for ripping. When ripping use push stick when blade is set 2 method or more firm fence.
- 76 5

er a sine after the set and that is the same

- inches or more from fence.
- When ripping use push block and auxiliary fence when blade is set between 1/2 and 2 inches from fence. Do not make rip cuts narrower than 1/2 inch.
   Keep hands out of path of blade.
   Do not reach around saw blade.
   Turn power off and wait for blade to stop before adjusting or servicing.
- or servicing. 11. Do not expose to rain or use in damp locations

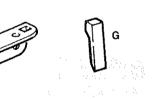
### **Identify Parts**

#### The following parts are included:

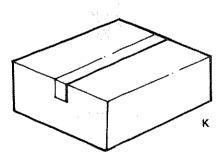
Note: Before beginning assembly, check that all parts are included. If you are missing any part, do not assemble saw. Contact your Sears Service Center to get the missing part. Sometimes small parts can get lost in packaging material. Do not throw away any packaging until saw is put together. Check packaging for missing parts before contacting Sears. A complete parts list (Repair Parts) is at the end of the manual. Use the list to identify the number of the missing part. della di secondo de la constante Constante Constante

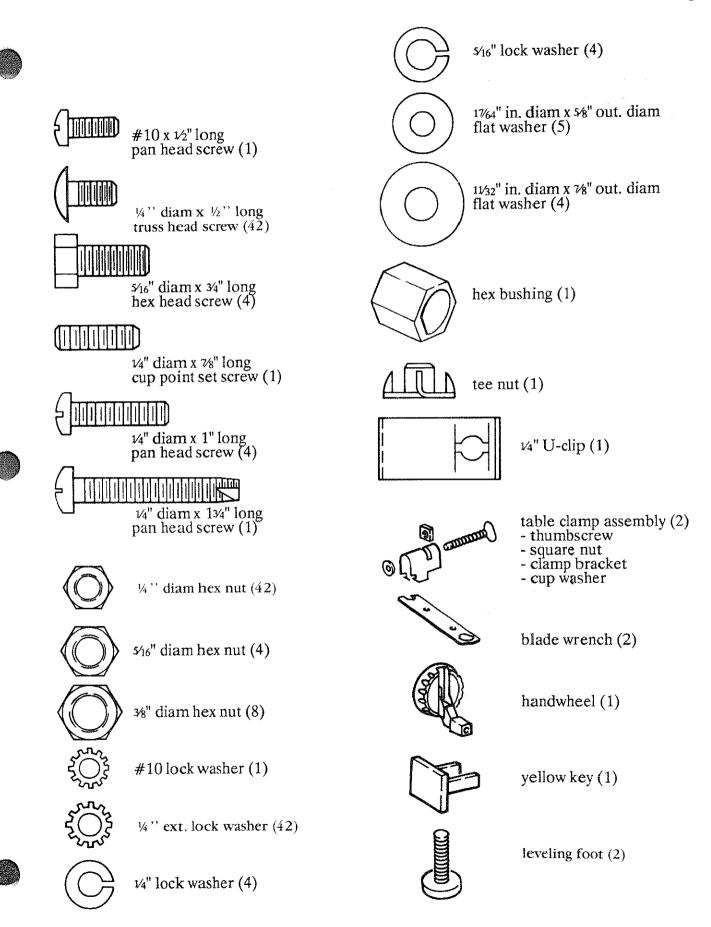
- A. Basic Saw Assembly......1
- B. Rear Table ..... 1
- C. Spacer Table .....1
- **D**. Fence (wooden) ...... 1
- E. Front Table ..... 1
- F. Table Support.....2
- G. Trim Cap ......2
- H. Loose Parts Bags .....\*
- K. Cabinet Box ..... 1

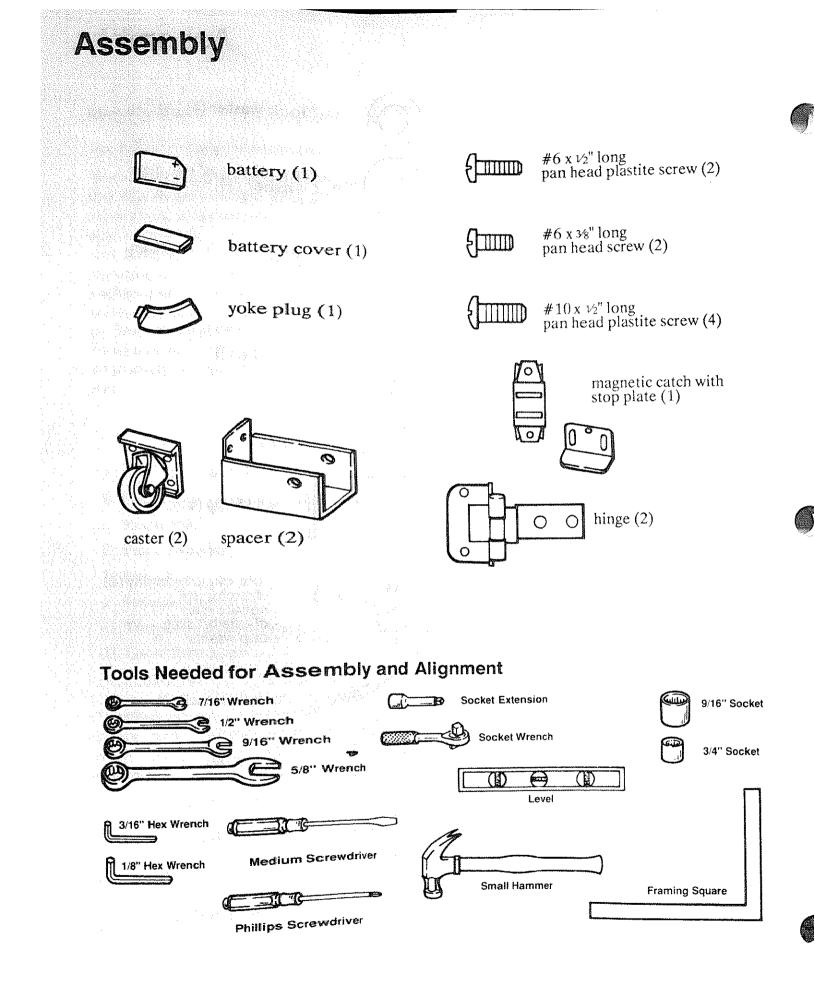
\*Number varies; bags can contain other smaller bags. Note: To make assembly easier keep contents of each bag together and separate from contents of other bags.













#### **Assembly Steps**

It is important for your safety and to get accurate cuts that you put the saw together according to these instructions.

Follow these steps in order.

#### Attach Handwheel

- 1. Set out:
  - -handwheel
  - -hex bushing
  - -#10 x 1/2" long pan head screw
  - -#10 lock washer.

2. Put hex bushing into opening in back of handwheel.

3. Align hex bushing on elevation shaft.

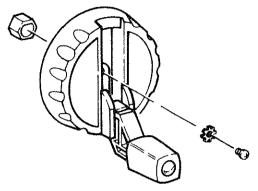
4. Put washer on screw; put screw into hole in center of handwheel and tighten with screwdriver.

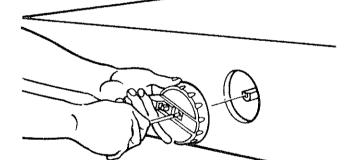
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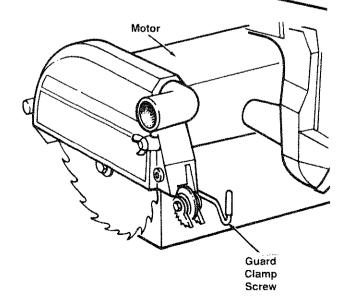
Plugging in saw during assembly could result in electrical shock, or severe cuts from contact with spinning blade.

Do not plug in saw at any time during assembly.

Plug in saw only when it is to be used.







#### **Mount Motor**

1. Loosen guard clamp screw and lift guard off blade.



2. Use both blade wrenches in scissor action to loosen blade nut. Note: Arbor shaft has left-hand threads. Turn nut clockwise to loosen.

3. Remove and set aside nut, blade collars and blade. They will be re-installed later during alignment and adjustment.

4. Lock rip lock. Turn handwheel clockwise to raise radial arm about 3".

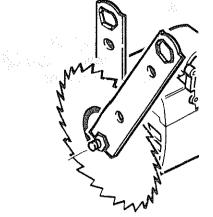
5. Remove styrofoam packing blocks, and clean small pieces of styrofoam off saw. Lift motor out of styrofoam base and set on center channel of saw.

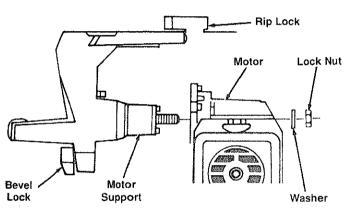
6. Remove lock nut and flat washer from motor support.

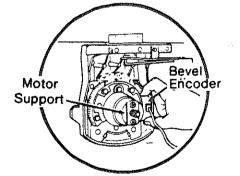
7. Slide bevel encoder to top position so it fits into notch in motor support bracket.

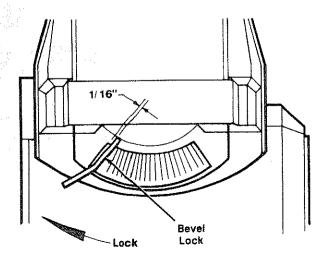
8. Slide motor onto motor support. Make sure motor is firmly in place.

9. Re-install flat washer and lock nut. Tighten lock nut and at same time move bevel lock (located near saw handle) back and forth. Do not over tighten nut.









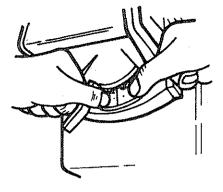
10. Push bevel lock to left (locking direction) as far as it will go. Space between casting and bevel lock should be about  $v_{16}$ ":

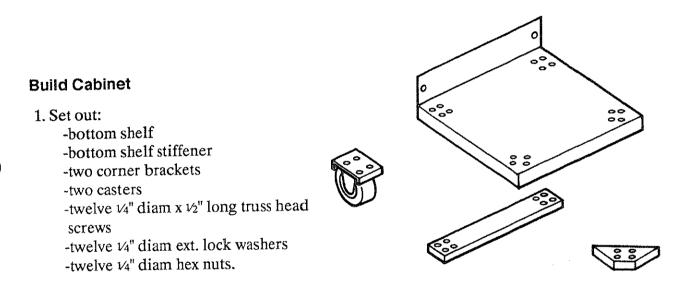
to increase space, unlock bevel lock then tighten lock nut on motor support; to decrease space, unlock bevel lock then loosen lock nut on motor support.

#### Install Yoke Plug

1. Lock bevel lock.

2. With tabs on outside, insert one end of yoke plug into opening in blade carriage, just behind bevel lock. Push until yoke plug snaps in place.





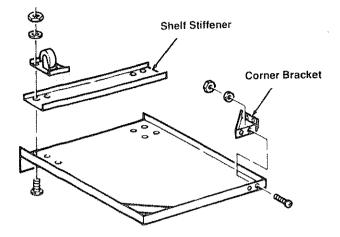
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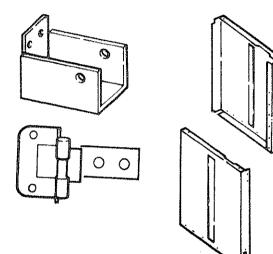
2. Put bottom shelf upside down on floor so long edge of raised (rear) side points down.

3. Attach corner brackets to front of shelf: use two screws per bracket (*insert screws through shelf*); on end of each screw put washer, then nut and wrench tighten.

4. Put bottom shelf stiffener across rear of shelf. Put casters on top of shelf stiffener.

5. Attach casters to stiffener and shelf: use four screws per caster (*insert screws through shelf*); on end of each screw put washer, then nut, and wrench tighten.





#### Assemble Side Panels

1. Set out:

-right side panel

-left side panel

-two spacers

-two hinges

-eight 1/4" diam x 1/2" long truss head screws

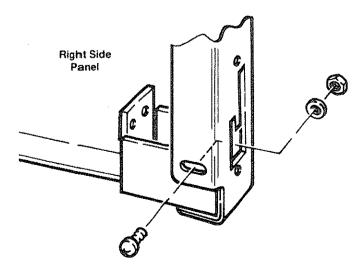
-eight 14" diam ext. lock washers -eight 14" diam hex nuts.

2. Identify right side panel by locating letter "R" stamped near center of rear edge. Position right side panel upright, so "J" slot is at bottom and facing you.

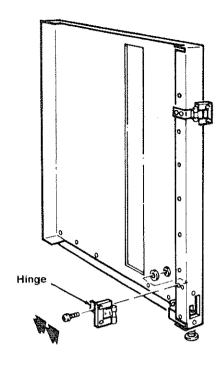
3. Put spacer inside front bottom edge of side panel, so two holes face "J" slot and large hole rests on bottom edge.

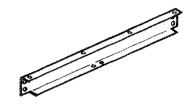
4. Attach spacer to side panel: use two screws (*insert screws through side panel*); on end of each screw put washer, then nut, and wrench tighten.

5. In similar way, attach spacer to left side panel.



6. Attach two hinges to right side panel: use two screws per hinge (*insert screws through hinge*); on end of each screw put washer, then nut, and wrench tighten. **Note:** Attachment this way makes door open left to right; to make door open right to left, attach hinges to left side panel.





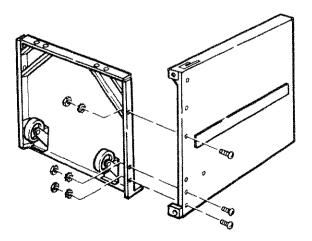
#### Attach Side Panels to Bottom Shelf

- 1. Set out:
  - -four leveling feet
  - -two skirts
  - -eighteen 1/4" diam x 1/2" long truss head screws
  - -eighteen 14" diam ext. lock washers
  - -eighteen 14" diam hex nuts
  - -eight 3/8" diam hex nuts.

2. Put bottom shelf on floor so under side faces you and raised (rear) side is flat on floor. Slide right side panel into place so holes in side panel line up with holes in bottom shelf. Note: *Make sure J-slot is at top*.

3. Attach panel to shelf: use three screws (*insert screws through panel*); on end of each screw put washer, then 1/4" nut, and wrench tighten.

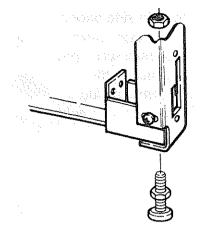
4. In similar way, attach left side panel.



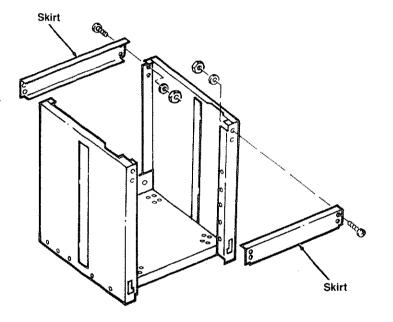


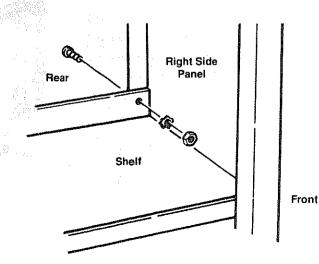
5. Screw 3%" nut to within 1/2" of bottom of each leveling foot.

6. Insert leveling feet through holes at four bottom corners of side panels. On end of each leveling foot put another 3%" nut and finger tighten until nut meets surface.



7. Turn cabinet right side up.
8. Attach skirts, across front and rear of cabinet, to side panels: use four screws per skirt (*insert screws through skirt*); on end of each screw put washer, then 1/4" nut, and finger tighten.



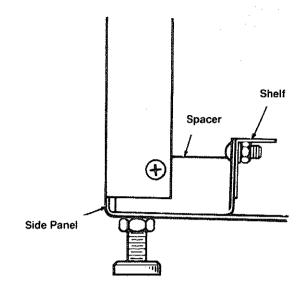


9. Put screw through hole at bottom rear of right side panel and through raised edge of bottom shelf. On end of screw put washer, then 1/4" nut, and wrench tighten.

10. Repeat for left side panel.

11. Put screw through hole at back of spacer, then through front edge of shelf. On end of screw put washer, then 1/4" nut, and wrench tighten.

12. Repeat for other spacer.



#### Attach Door

#### 1. Set out:

-door

-magnetic catch with stop plate

-two #6 x 1/2" long pan head plastite screws

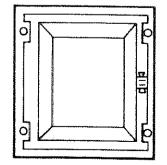
-two #6 x 3/8" long pan head screws -four #10 x 1/2" long pan head plastite screws. Magnetic Catch



Magnetic Stop Plate



2. Put door face down on floor. Attach magnetic catch to inside surface of door: use two #6 x 1/2" long screws. Note: *Illustration shown is for door that opens left to right; put catch on opposite side for door that opens right to left.* 





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3. Attach magnetic stop plate to inside edge of left side panel: line up with small holes in panel; use two #6 x 3%" long screws. Note: Attach to right side panel for door that opens right to left.

4. Attach door to hinges on side panel: use four  $#10 \times \frac{1}{2}$  long screws.

#### Mount Basic Saw Assembly

1. Set out:

-basic saw assembly

-four 1/4" diam x 1/2" long truss head screws

-four 1/4" diam ext. lock washers -four 1/4" diam hex nuts.

2. Lift saw assembly by front edge and column and place on cabinet so four holes line up.

3. Attach saw to cabinet: use four screws (*insert screws through saw frame*); on end of each screw put washer, then nut and wrench tighten.

4. Check and wrench tighten all nuts in cabinet.

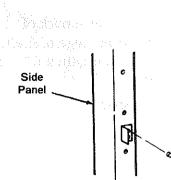
5. Put saw in location where it will be used.

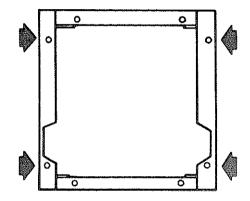


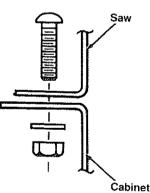
1. If cabinet rocks, adjust leveling feet.

2. Rest a level on radial arm. If arm is level or slants forward, adjust leveling feet so arm slants slightly towards rear.

3. Wrench tighten top nuts on each leveling foot.





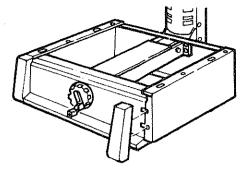


### A WARNING

Saw must slant slightly towards rear to keep blade carriage from rolling forward. Workpiece or saw can move unexpectedly if cabinet or leg set rocks. Fingers, hand or arm could be cut off by blade contact. Adjust leveling feet before using saw.

#### Attach Trim Caps

1. Line up plastic stubs on back of trim caps with holes on front corners of frame and snap into place.



#### Attach Table Supports

#### 1. Set out:

-two table supports -four 5/16" diam x 3/4" long hex head screws -four 11/32" in. diam x 1/8" out. diam flat washers -four 5/16" diam lock washers -four 5/16" diam hex nuts.

#### 2. Put flat washer on each screw.

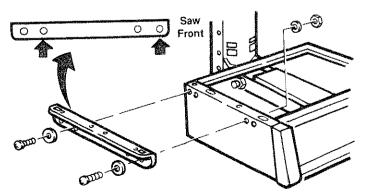
3. Attach supports to side frame, making sure to use correct holes in table supports and side frame: use two screws per support (insert screws through support); on end of each screw put lock washer, then nut and finger tighten so table supports rest in lowest position.

# Saw 0 Front G-ano a

### Install Remaining Hardware

Go to Alignment and Adjustment Section and follow instructions to install remaining parts and hardware. You cannot use the saw until it is aligned and adjusted.

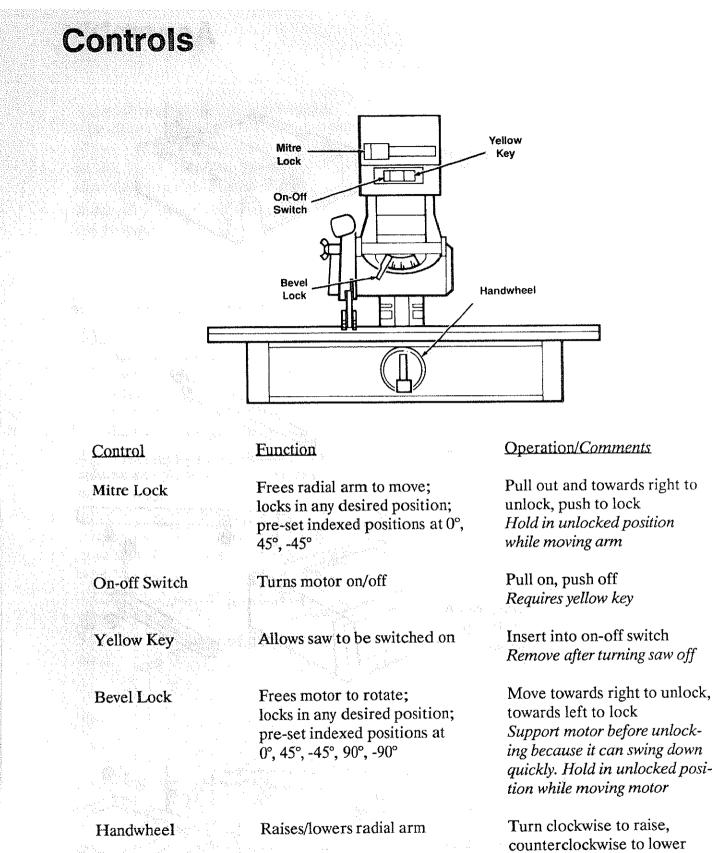
It may be helpful to read the Controls Section before proceeding with alignment and adjustment.





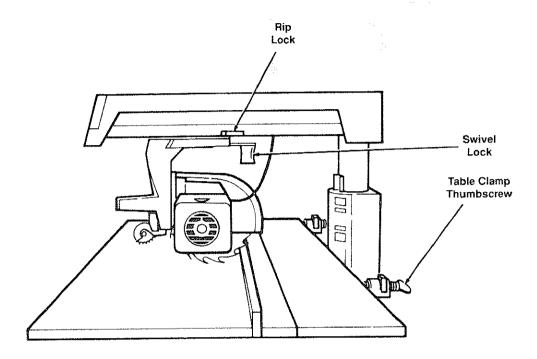






counterclockwise to raise, To fold handle into wheel, squeeze red plastic ears and push handle; pull handle out until ears click into place

### Controls



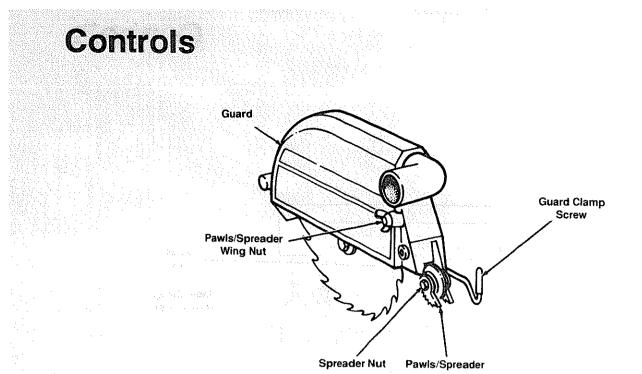
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Control	Function	Operation/Comments
Rip Lock	Frees carriage to move along radial arm; locks in position	Pull to unlock, push to lock Lock before ripping
Swivel Lock	Frees blade carriage to rotate between rip and crosscut posi- tions; locks in position	Pull to unlock; push to lock Hold in unlocked position while moving blade carriage
Table Clamp Thumbscrew	Frees table sections to allow fence changing	Turn clockwise to tighten, counterclockwise to loosen



Control

Guard

#### Function

Partially protects against blade contact; keeps workpiece from fluttering during ripping; acts as sawdust deflector

Guard Clamp Screw

Frees guard to rotate about blade

Pawls/Spreader Frees pawls/spreader to move Wing Nut up and down

Spreader Nut Frees pawls/spreader to move side to side

#### Pawls/Spreader

Reduce kickback by keeping kerf open (spreader function); slow or stop kickback by digging into workpiece (pawls function)

#### Operation/Comments

Lock in level position for crosscut; for ripping, rotate until guard nose just clears top surface of workpiece, then lock in place See Ripping Set-Up for details and illustrations

Turn counterclockwise to loosen, clockwise to tighten

Turn counterclockwise to loosen, clockwise to tighten

Loosen to make adjustment, then tighten For safety reasons spreader must be in line with blade. See Alignment: Spreader to Blade

Set as unit, so pawl is level on workpiece and spreader rides in kerf. For safety reasons set pawls/spreader before ripping. See Ripping Set-Up for details and illustrations

The saw and blade must be aligned correctly for two reasons:

1) to prevent binding of the blade and workpiece, which can cause jams, kickbacks, or thrown workpieces;

2) to make accurate cuts.

### **Alignment and Adjustment Steps**

The following alignments and adjustments **must be made in order.** If you miss an adjustment, you must go back, make the missed adjustment, and repeat all steps from that point on.

These adjustments are like fine tuning a piece of equipment. Often, a series of steps must be repeated more than once in order to get the adjustment right.

There are many adjustments to make. Because some adjustments may be awkward, you may want to ask someone to help you.

Before you start, make sure the framing square is true.

#### Adjust Column Support

The combined goal of this adjustment is:

a) to eliminate looseness between the column and column support, and

b) to make raising and lowering the radial arm a smooth and firm action.

1. Lock radial arm at 0° mitre.

2. Raise and lower radial arm a few turns in each direction. Movement should be smooth but firm.

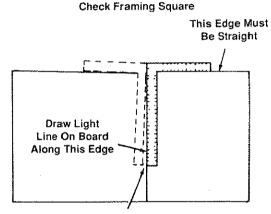
If movement seems difficult, slightly loosen (less than 1/8 turn) four bolts at rear of column support.

### A WARNING

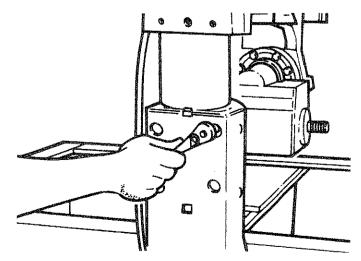
Plugging in saw during alignment could result in accidental start-up and severe cuts from contact with spinning blade.

Do not plug in saw at any time during alignment or adjustment.

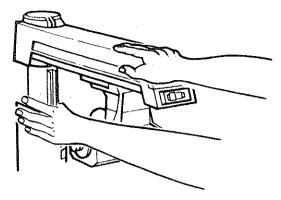
Plug in saw only when it is to be used.



Should Be No Gap Or Overlap Here When Square Is Flipped Over In Dotted Position



3. Feel for movement between column and column support: place index finger of one hand against column and column support; use other hand to push end of radial arm side to side and up and down. If there is no movement, no further adjustment is needed. If there is movement, slightly tighten (less than 1/8 turn) four bolts at rear of column



#### **Adjust Table Supports**

support.

The goal in adjusting the table supports is to make sure that each support is the same distance from the radial arm at all points. This ensures that when the table and blade are installed, the clearance between them will be equal at all points.

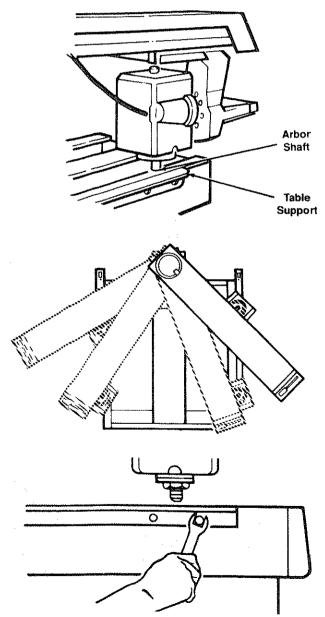
1. Lock motor at 90° bevel (arbor shaft points down). Unlock rip and miter locks.

2. Check clearance between arbor shaft and table supports at front and rear of each support to find highest area (smallest clearance). Start with arbor shaft just touching table support at one area, then check remaining areas, raising radial arm as needed. Note: Make sure arbor shaft is over table support and not saw frame.

3. Position arbor shaft so it just touches highest area found in step 2, and tighten nearest table support screw.

4. Without changing radial arm elevation, adjust clearance between arbor shaft and table supports at three remaining areas: at each area, raise table support to just meet arbor shaft, then tighten nearest table support screw.

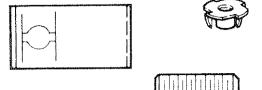
5. Re-check front and rear of each table support, making sure that without changing radial arm elevation, clearance between arbor shaft and supports is equal.



#### **Install Front Table**

1. Set out:

-front table
-tee nut
-t/4" U-clip
-t/4" diam x 7%" long cup point set screw
-four t/4" diam x 1" long pan head screws
-t/4" diam x 13/4" long pan head screw
-five 17/64" in. diam x 5%" out. diam flat washers
-four t/4" lock washers
-four t/4" diam hex nuts.

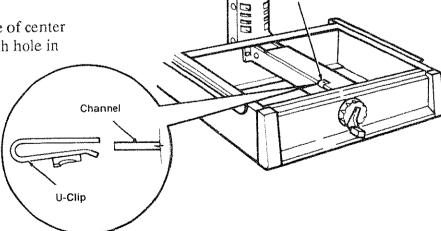


**U-Clip** 

Bottom

2. Identify top and bottom of table: top has countersunk holes. Place table **bottom side up**. Hammer tee nut into leveling hole.

3. Snap U-clip onto left side of center channel so hole lines up with hole in channel.



Тор

4. Place table, **top side up**, on saw so center countersunk hole lines up with hole in U-clip. **Note:** *Table will extend over front edge of saw frame.* 

5. Drop flat washer into each countersunk hole.

6. Start 134" long pan head screw through center hole and into U-clip, but do not fully tighten.

7. Start cup point set screw through leveling hole and into tee nut, but do not fully tighten.

8. Put 1" long pan head screw in each of four remaining holes. On end of each screw, put lock washer then nut and tighten with screwdriver.

#### Make Front Table Flat

1. Place rear table on its edge, across center of front table. Check for gap between surfaces.

If there is no or less than 1/32" gap, tighten cup point set screw until it touches frame (look underneath table), then tighten center (13/4" long) pan head screw.

If there is more than  $\nu_{32}$ " gap, close gap by raising or lowering center of front table:

to raise center, tighten cup point set screw;

to lower center, tighten center (134" long) pan head screw.

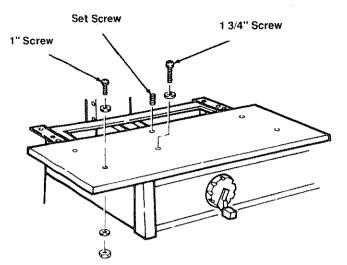
2. When gap is closed, make sure cup point set screw touches frame (look underneath table), and center (134" long) pan head screw is tightened.

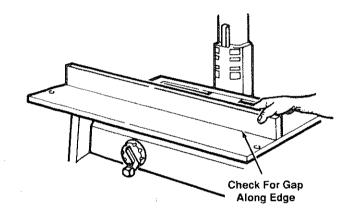
#### Square Crosscut Travel

The goal of this adjustment is to make accurate crosscuts. To do so, the radial arm must be perpendicular to the fence, otherwise, there will be a slight miter angle in all crosscuts.

1. Lock radial arm at 0° mitre.

2. Lock motor at 90° bevel (arbor shaft points down).





3. Lower radial arm until arbor shaft is slightly above table.

4. Unlock rip lock. Move blade carriage until arbor shaft is at rear edge of front table.

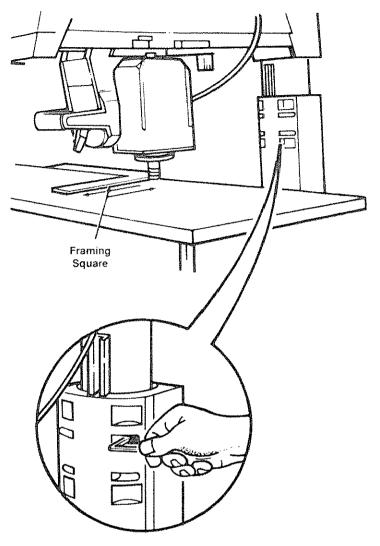
5. Place framing square so long side is off rear edge of table, and short side just touches arbor shaft. Hold square in place, grasp saw handle and pull blade carriage forward. Arbor shaft should just touch square at all points. If it does, no adjustment is needed.

6. If arbor shaft moves into or away from square, adjust radial arm:

to move radial arm toward right, loosen two socket head screws on right, then tighten two screws on left. Note: Loosen and tighten screws equally.

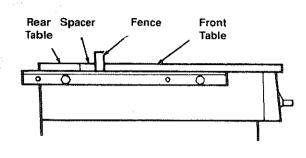
to move radial arm toward left, loosen two socket head screws on left, then tighten two screws on right. Note: Loosen and tighten screws equally.

7. When arbor shaft just touches square at all points, raise and lower radial arm a few times. If movement is difficult, slightly and equally loosen all four socket head screws.



#### Install Table Clamps

1. Insert fence, then spacer table, then rear table.



2. Set out two unassembled table clamps:

-two cup washers

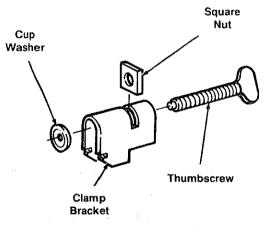
-two clamp brackets

-two square nuts

-two thumbscrews.

3. Drop square nut into slot at top of clamp bracket.

4. Insert thumbscrew through rear opening, and turn clockwise until it comes out other side about 1/2". Note: If you put screw in front opening, clamp will not work.

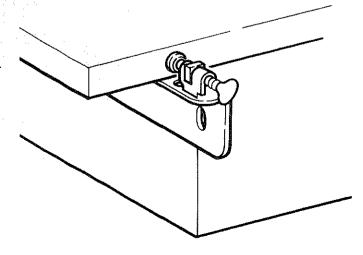


5. Tilt clamp bracket forward and snap into place in opening at rear of table support.

6. Hold cup washer with concave side against rear table. Turn thumbscrew clockwise until it snaps into washer.

7. Repeat steps for other table clamp.

8. Tighten thumbscrews to clamp table sections in place.



#### Install Blade

1. Lock rip lock.

2. Raise radial arm. Lock motor at 0° bevel (arbor shaft horizontal).

3. On arbor shaft put blade collar, then blade, then second blade collar, then blade nut. Note: Concave surfaces of blade collars rest against blade. Make sure directional arrow on blade is on outside and points clockwise.

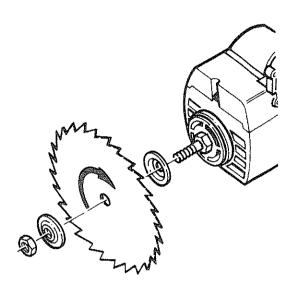
4. Use blade wrenches in scissor action to tighten nut. Note: Arbor shaft has lefthand threads. Turn nut counterclockwise to tighten. Do not overtighten nut because this can cause blade collar to warp and blade to wobble during cutting.

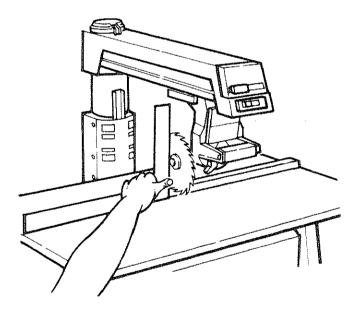
#### Square Blade to Table for Crosscutting

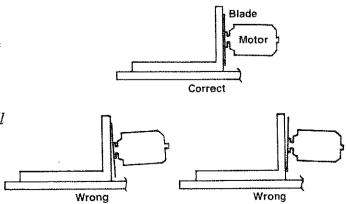
The goal of this adjustment is to make the blade perpendicular to the table so that crosscuts will be accurate; otherwise all crosscuts will have a slight bevel angle.

1. Lower blade until it just clears table. Lock bevel, mitre, rip, and swivel locks.

2. Place square so long edge rests on table and short edge rests against blade surface, not on a tooth.







- 4. If there is a gap, adjust motor:
  - i) unlock bevel lock

ii) loosen four socket head screws behind

blade carriage

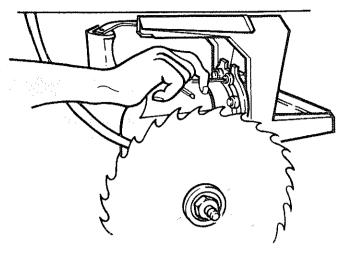
iii) move motor until blade rests flush

against square

iv) lock bevel lock.

5. Re-check alignment and adjust as needed.

6. Tighten four socket head screws behind blade carriage.



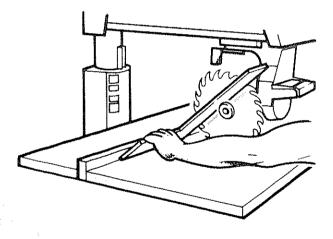
#### **Square Blade to Fence**

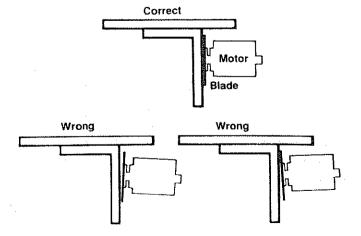
The goal in setting the blade perpendicular to the fence is to reduce the risk of kickback when ripping. This adjustment will also reduce splintering of the workpiece and burning of the kerf during ripping and crosscutting.

1. Lower blade until it just clears table.

2. Place square so short edge is against fence and long edge is against flat surface of blade (not on a tooth), just above blade collar.

3. Unlock rip lock. Pull blade forward as far as you can, yet still have framing square against fence and blade. Lock rip lock.





5. If there is a gap, adjust blade carriage: i) unlock swivel lock

ii) loosen four adjusting screws under blade carriage

iii) grasp saw handle and move blade carriage until blade rests flush against square

iv) lock swivel lock.

6. Re-check alignment and adjust as needed.

7. Tighten four adjusting screws under blade carriage.

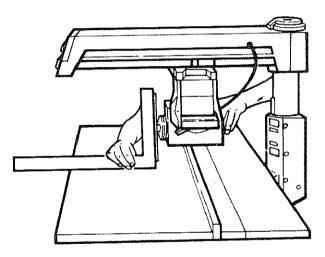
#### Square Blade to Table for Ripping

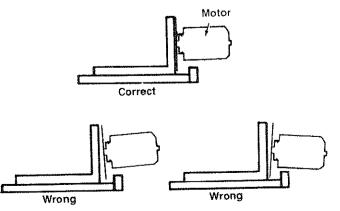
The goal of this adjustment is to make the blade perpendicular to the table so that rip cuts will be accurate; otherwise all rip cuts will have a slight bevel angle.

1. Lock blade in out-rip position (blade towards table front, motor towards column). Lock rip lock.

2. Raise radial arm to allow clearance for square.

3. Place square so long edge is on table and short edge is against blade (not on a tooth), beside blade collar.







Rear

Carriage

Bearing

5. If there is a gap, adjust rear carriage bearing (which is visible when you go to rear of saw and look up under radial arm-carriage bearing rides on central track):

i) hold bolt in place and loosen nut on bearing

ii) rotate bolt until gap closes

iii) hold bolt in place and tighten nut.

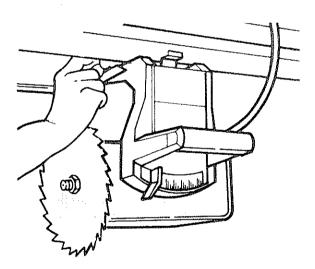
6. Re-check alignment and adjust as needed.

#### Adjust Carriage Bearings

The goal of this adjustment is to eliminate looseness between the carriage bearings and the radial arm. The blade carriage should roll freely along the entire length of the radial arm, but with some resistance.

1. With blade still locked in out-rip position, unlock rip lock and move blade carriage to rear as far as it will go.

2. From front of saw, look up under radial arm to identify front carriage bearing. With thumb and index finger, get pinch-hold inside groove of bearing. Apply force to bearing and at same time, pull blade carriage forward. Force should not stop bearing from turning while carriage is moving.



3. If you can stop bearing from turning while carriage is moving, adjust bearings:

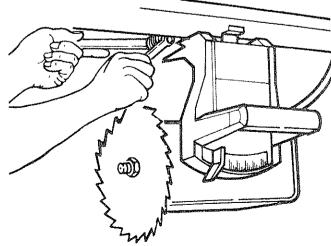
- i) position blade carriage for good access
- to front and rear bearings

ii) lock rip lock

iii) hold front bearing bolt in place and loosen nut

iv) rotate bolt a few degrees, then tighten nut.

Note: Carriage bearings have eccentric bolts. High side of each bolt is marked by



an arrow. Adjust rear carriage bearing same amount, but in opposite direction, as you adjust front carriage bearing. **Note:** Do not overtighten. Overtightening can cause blade carriage to move with difficulty and will reduce life of track and bearings.

4. Before proceeding to next section, repeat steps to Square Blade to Table for Ripping, because adjusting carriage bearings affects that alignment.

#### Make Blade Parallel to Table

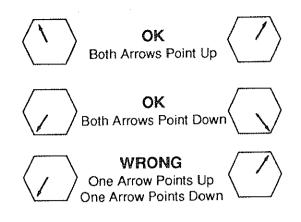
The goal of this adjustment is to keep the workpiece from being thrown or damaged. This adjustment will also reduce splintering of the workpiece and burning of the kerf during ripping and crosscutting.

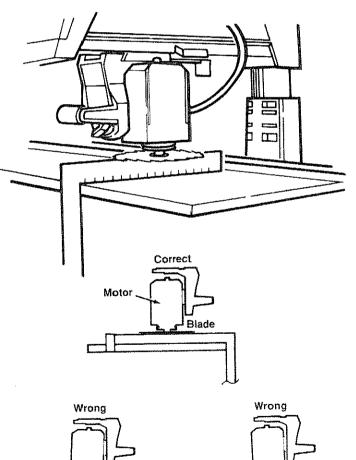
- 1. Lock blade in straight crosscut position.
- 2. Pull blade forward and lock rip lock.
- 3. Raise blade at least 2" above table.

4. Lock motor at 90° bevel (blade horizon tal).

5. Place square so long side is on table under right side of blade, and short side hangs down vertically at front of saw. Push edge of square against fence.

6. Lower radial arm until blade surface, not a tooth, just rests on square.





8. If there is a gap, adjust motor support: i) unlock bevel lock

ii) loosen two screws on back of motor

support

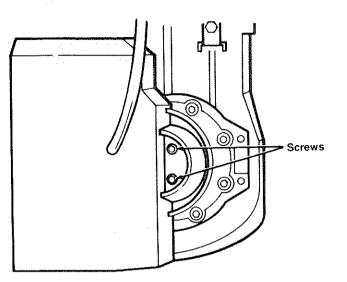
iii) move motor support until blade rests flush against square

iv) lock bevel lock.

9. Re-check alignment and adjust as needed.

10. Tighten motor support screws.

Blade alignment and adjustment are complete. Note: It is important that you periodically check alignment and adjustment to insure accurate cuts and improve the safety of cutting procedures. Be aware that alignment in one plane necessarily affects alignment in other planes. Thus, the blade may be perfectly aligned for one type of cut but not another.



#### Install Guard

The guard is a very important safety feature. It covers a large part of the blade and helps protect against severe cuts. Always use the guard and adjust it according to instructions for the type of cut.

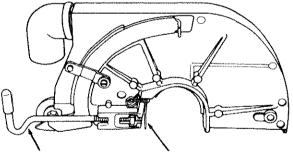
1. Raise blade at least 5" from table.

2. Lock motor at 0° bevel (blade vertical).

3. Loosen guard clamp screw until it no longer touches metal plate.

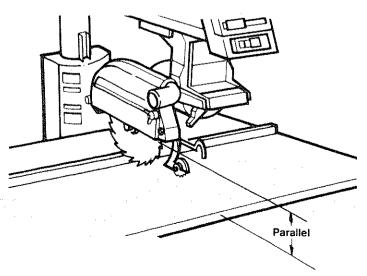
4. Place guard over blade so guard clamp screw is towards table front. Guard will fall into place when ridge on inside of guard slides into slot on motor.

5. Adjust guard to make sure bottom edge is parallel to table. Tighten guard clamp screw.



Guard Clamp Screw

Metal Plate



国人的普遍资源

## **Alignment and Adjustment**

#### Align Spreader to Blade

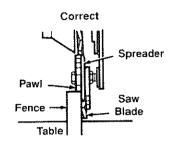
The goal of this adjustment is to make the spreader directly in line with the blade. Spreader alignment is an important safety factor. The spreader rides in the kerf of the cut workpiece during ripping to help keep the two sides of the workpiece from pinching on the blade. Blade pinching is a cause of kickback.

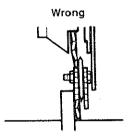
1. Lock blade in in-rip position (blade towards column, motor towards table front).

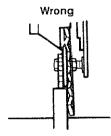
2. Lower blade until it just clears table.

3. Unlock rip lock, move blade back until it touches fence, and lock rip lock.

4. Loosen pawls/spreader wing nut and lower pawls/spreader to fence. Spreader should rest flat against fence, and one set of pawls should rest on top of fence.



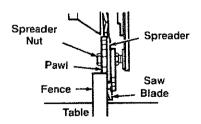




#### 5. If adjustment is needed:

- i) loosen both spreader nuts
- ii) slide spreader against fence and rest
- pawls on fence
- iii) tighten spreader nuts.

6. Raise pawls/spreader unit up to guard and tighten wing nut.





The digital display runs on battery power. It tells the position of the blade and radial arm at the touch of a button. The display automatically turns itself off approximately three minutes after a change in blade or arm position has been made. The system continues to track the position of the blade and arm even when the display is turned off.

## **Button Functions**

**ON/OFF** Turns display on and off.

**REF SET** Used to set "zero" reference points.

Displays bevel angle. Display is positive when motor has been moved counterclockwise from zero reference point; negative when motor has been moved clockwise

from zero reference point.

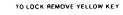
**Error Messages** 

BEVEL

The zero reference points you set according to the instructions later in this section will be stored in memory at all times, whether the display is on or off. If an error occurs, you will see either of these messages displayed.

An error can be caused by sudden movement of the radial arm or blade carriage when the electronic display is off. When this happens, reset the zero reference point for the function showing the error.

When the display is faded or hard to read, replace the battery and reset all the zero reference points. SEARS / CRAFTSMAN



ELEV

Displays distance between table and blade. Display is positive when blade is above zero reference point; negative when blade is below zero reference point.

MITER

Displays mitre angle. Display is positive when blade is to right of zero reference point; negative when blade is to left of zero reference point.

RIP

Displays distance between blade and fence in in-rip or out-rip positions.

8 E.E E or

8888

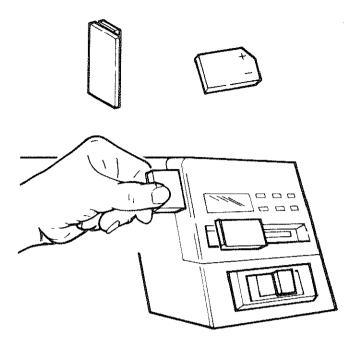
### **Install Battery**

1. Set out

-battery

-battery cover.

2. Position battery with angled corner on top right and slide battery all the way into opening behind digital display, pushing slightly downward until it snaps into place.



3. Look at display. It should look like this: **If it shows nothing**, push in and slightly upwards on battery to remove it, then reinstall.

If there still is no display, remove battery, wipe off contacts, then re-install. If there is still no display, try a new 6V alkaline battery or contact Sears.

4. When display shows correctly, snap battery cover into place.

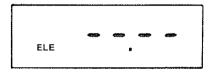
5. Follow steps to align encoders and set zero reference points.

## **To Replace Battery**

1. Use screwdriver to pry off battery cover.

2. Push in and slightly upwards on battery to remove it. Install new 6V alkaline battery.

3. Follow steps to set zero reference points.





#### Align Encoders

#### Mitre Encoder

- 1. Turn display on.
- 2. Lock radial arm at 0° mitre.
- 3. Push MITER button.

4. Push REF SET button. Display will read:

5. Unlock mitre lock, move radial arm to right until it snaps into pre-set indexed position and lock mitre lock. Display should read:

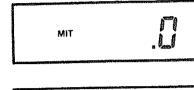
6. Unlock mitre lock, move radial arm to left until it snaps into pre-set indexed position, and lock mitre lock. Display should read:

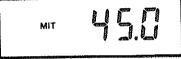
7. If display reaches as it should, mitre encoder is aligned correctly—no adjustment is needed.

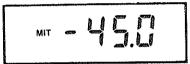
8. If display does not read as it should:
i) unscrew two screws from back cover of radial arm, and remove cover
ii) unlock mitre lock, move arm to right until it snaps into pre-set indexed position, and lock mitre lock
iii) loosen mitre encoder mounting screws inside rear of radial arm to allow encoder to slide side to side iv) slide or slightly tap encoder until display reacts 45°

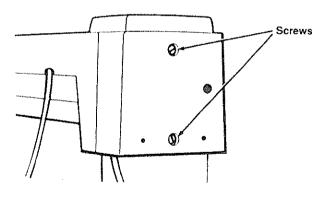
v) tighten mitre encoder mounting screws.

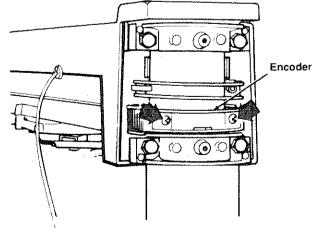
9. Repeat steps to align mitre encoder. When display reads as it should, re-install back cover.

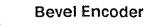












1. Turn display on.

2. Lock radial arm at  $0^{\circ}$  mitre. Lock motor at  $0^{\circ}$  bevel.

3. Push BEVEL button.

4. Push REF SET button. Display will read:

5. Support motor, unlock bevel lock, move motor counterclockwise until it snaps into pre-set indexed position and lock bevel lock. Display should read:

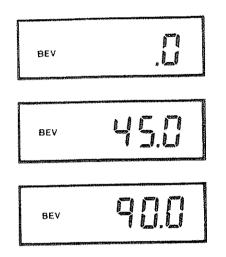
6. Support motor, unlock bevel lock, move motor counterclockwise until it snaps into next pre-set indexed position (blade horizontal) and lock bevel lock. Display should read:

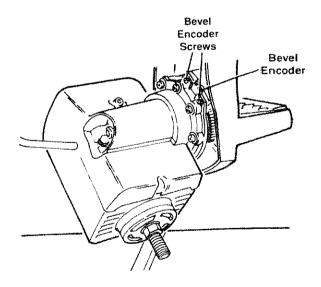
7. If display reads as it should, bevel encoder is aligned correctly--no adjustment is needed.

- 8. If display does not read as it should:
  i) unlock bevel lock, move motor clockwise until it snaps into pre-set indexed position, and lock bevel lock
  ii) loosen bevel encoder screws on backside of blade carriage to allow encoder to slide side to side
  iii) slide or slightly tap encoder until display reads 45°
  iv) tighten bevel encoder screws.
- 9. Repeat steps to align bevel encoder.

# Set Zero Reference Points For Bevel, Mitre, and Elevation

1. Set blade in straight crosscut position  $(0^{\circ} \text{ mitre}) (0^{\circ} \text{ bevel})$ . Lower blade until it just touches table. Note: This is the usual blade position for setting these zero reference points.





2. Turn display on.

3. Push MITER button, then push REF SET button. Display will read:

4. Push BEVEL button, then push REF SET button. Display will read:

5. Push ELEV button, then push REF SET button. Display will read:

## Set Zero Reference Point For In-Rip

1. Put fence in front position and tighten table clamps.

2. Lock blade in in-rip position (blade towards column, motor towards table front).

3. Unlock rip lock, push blade against fence, and lock rip lock.

4. Push RIP button, then push REF SET button. Display should read:

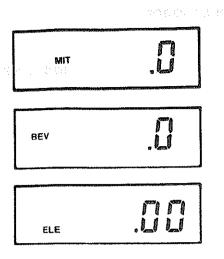
If it reads O-RIP instead of RIP, push RIP button then push REF SET button. If display reads 10.00 instead of .00, push REF SET button.

### Set Zero Reference Point For Out-Rip

1. Unlock rip lock and pull blade away from fence.

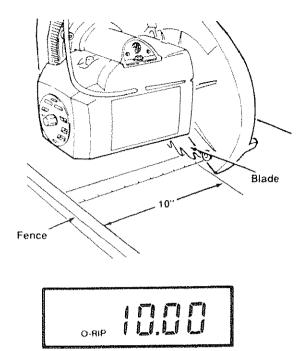
2. Loosen table clamps, move fence to rear position, and tighten table clamps.

3. Lock blade in out-rip position (motor towards column, blade towards table front).



RIP

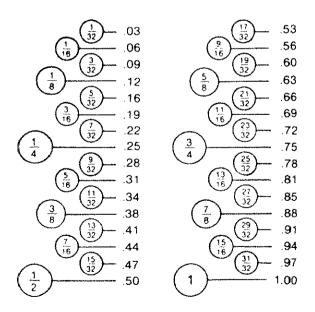
4. Position blade 10" from fence, as measured to nearest tooth, and lock rip lock.



5. Push RIP button, then push REF SET button. Display should read: If it reads RIP instead of O-RIP, push RIP button, then push REF SET button. If it reads .00 instead of 10.00, push REF SET button.

### **Conversion Table**

Decimal equivalents of fractions, rounded to nearest hundreth inch:



## **Electrical Connections**

### **Motor Specifications**

The AC motor used in the saw is a capacitor-start, non-reversible type. The models covered in this manual have the following specifications:

Voltage	120
Hertz (cycles)	60 <sup></sup>
Phase	single
RPM	3450
Arbor Shaft Rotation	clockwise

**Note:** If saw does not start when switched on, immediately turn saw off and refer to Troubleshooting. Leaving the switch on will destroy the motor.

### **Power Supply**

A WARNING

Saw is factory wired for 120V operation. Connect to 120V, 15-AMP branch circuit and use 15-AMP time delay fuse or circuit breaker. Failure to connect in this way could result in injury from shock or fire.

The saw must be properly grounded. Not all outlets are properly grounded. If you are not sure that your outlet is properly grounded, have it checked by a qualified electrician.

## 

If not properly grounded, this power tool could cause electrical shock, particularly when used in damp locations.

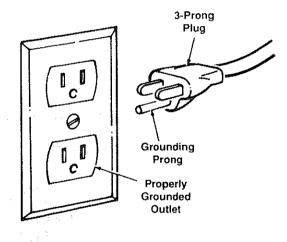
## A WARNING

If electrical shock occurs, your reaction to shock could bring hands into contact with blade.

## A WARNING

To avoid electric shock or fire, immediately replace worn, cut, or damaged power cord.

The unit is wired for 120V and has a plug that looks like this:



The power tool is equipped with a 3-conductor cord and grounding type plug listed by Canadian Standards Association. The ground conductor has a green jacket and is attached to the tool housing at one end and to the ground prong in the attachment plug at the other end.

The plug requires a mating 3-conductor grounded type outlet as shown above. If you have an outlet that is of the 2-prong type, it is recommended that you have a qualified electrician replace it with a properly grounded 3-prong outlet.

## **Electrical Connections**

## **Extension Cords**

The use of any extension cord will cause some loss of power. Determine the minimum wire size (American Wire Gauge No. (AWG #)) extension cord per table. Use only 3-wire extension cords with 3prong grounding type plug and 3-pole receptacles which accept the tool's plug.

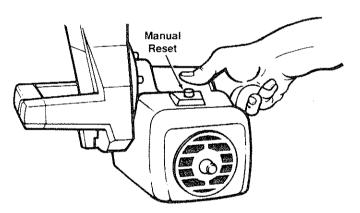
#### Motor Protection & Reset Button

The motor protector opens the power line circuit and stops the motor when the motor temperature exceeds a safe level, the motor is overloaded, or a low voltage condition exists.

When the protector activates, immediately turn saw off, remove yellow key and wait for motor to cool. Push red re-set button and listen/feel for click to indicate protector is re-set. If you do not hear/feel a click, motor is still too hot. Wait a while longer and repeat.

Wire Sizes Required (AWG #)			
Cord Length	120V	240V	
0-25 ft 26-50ft 51-100ft	No. 14 No. 12 No. 10	No. 16 No. 14 No. 12	

Note: The smaller the gauge number, the heavier the cord. For circuits farther away from the electrical circuit box, wire size must be increased proportionately to deliver ample voltage to the motor.



## **Crosscutting Defined**

Crosscutting is cutting a workpiece to length. The workpiece is held firmly against the fence, and the blade is pulled through the workpiece to make the cut. Straight, bevel, mitre, and compound cuts can be made.

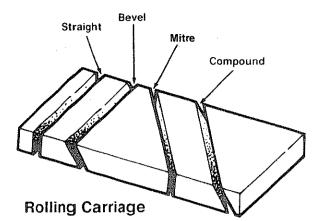
## **Crosscutting Safety**

The hazards associated with crosscutting include: exposed blade teeth, rolling carriage, and thrown workpiece. This section explains these hazards and tells how to avoid them or reduce the risk of their happening. Read this section before making any type of crosscut. Follow these steps every time you make a crosscut.

#### Exposed Blade Teeth

### A WARNING

- During crosscutting, blade teeth can be exposed. To reduce risk of having fingers, hand or arm cut off:
- ✓ Set bottom edge of guard parallel to table to cover upper half of blade.
- ✓ Lower pawls to clear fence or workpiece, whichever is higher, by 1⁄4".
   Lowered pawls act as partial barrier to front of blade.
- ✓ Keep hands away from blade and out of blade path. Keep hand holding down workpiece at least 8" from blade.
- ✓ Blade can come off table edge beyond 30° left mitre position. Use right mitre position whenever possible.
- ✓ Do not cut freehand. You will not be able to control workpiece.
- ✓ If blade jams, turn off saw, remove yellow key, then free blade.



## A WARNING

When saw is turned on, blade can suddenly come forward. To reduce risk of this happening:

- ✓ Keep one hand on saw handle when turning saw on.
- ✓ Adjust leveling feet to make sure radial arm slants slightly toward rear.

#### **Thrown Workpiece**

## A CAUTION

Workpiece could be picked up by spinning blade and thrown. You might be hit by thrown workpiece. To reduce risk of thrown workpiece:

- ✓ Make sure installed fence is at least half as high as the workpiece, and never less than ¾".
- ✓ Start and finish cut with blade in rearmost position, behind fence.
- ✓ Firmly hold workpiece flat on table and up against fence. Cut only one workpiece at a time.
- ✓ Pull blade through workpiece only distance needed to complete cut, and never more than half diameter of blade.
- ✓ Do not touch or move workpieces until blade has stopped spinning.
- √Use length stop only on end of workpiece which is held down.
- ✓ Use table extensions to support workpieces that extend beyond table.

## **Crosscut Kerfs**

A kerf or shallow cut is needed in the table and fence to serve as a path for the blade and to ensure that the blade cuts all the way through the workpiece. A kerf is needed for each different cutting path.

To make an approximately  $\nu_{16}$ " deep kerf:

1. Prepare table:

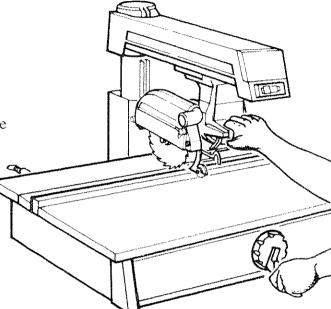
-put fence in front position -tighten table clamps.

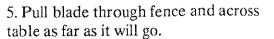
2. Prepare blade:

-lock blade in crosscut position -lock radial arm at desired miter angle -lock motor at desired bevel angle -unlock rip lock and push blade to rearmost position, behind fence -lower blade to just clear table -lower pawls to clear fence by 1/4".

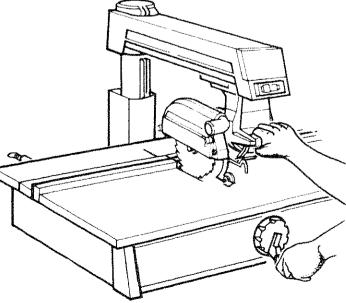
3. Grasp saw handle, then turn saw on. Keep one hand on saw handle through step 6.

4. Slowly lower blade until it touches table, then lower by another turn of hand-wheel.





6. Push blade to rearmost position, behind fence, and turn saw off. Keep hand on saw handle until blade stops spinning.



#### Making Crosscuts

Follow these steps to make crosscuts.

1. Prepare table:

-put fence in front position -tighten table clamps.

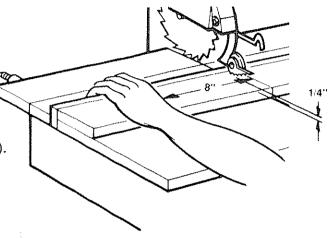
2. Prepare blade:

-lock blade in crosscut position -lock radial arm at desired mitre angle -lock motor at desired bevel angle -unlock rip lock and push blade to rearmost position, behind fence -lower blade into kerf but not touching kerf bottom (blade should move freely).

3. Position workpiece against fence, and lower pawls to clear fence or workpiece, whichever is higher, by 14".

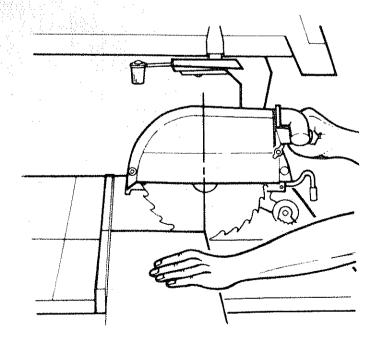
4. Grasp saw handle, then turn saw on. Keep one hand on saw handle through step 7.

5. Hold workpiece down and against fence. Keep hand at least 8" away from blade.



6. Pull blade through fence and workpiece only far enough to complete cut, and never more than half diameter of blade.

7. Push blade carriage to rearmost position, behind fence, and turn saw off. Keep hand on saw handle until blade stops spinning.



## **Repetitive Crosscutting**

Repetitive crosscutting is the repeated and continuous cutting of many pieces of lumber to the same length. Carriage and length stops can help make this type of crosscutting more efficient. A lower blade guard offers protection against the side of the blade (See Accessories).

A carriage stop defines the distance needed to pull the blade through to complete each cut. This will prevent pulling the blade through more than the recommended distance.

To make a carriage stop use 1x2 lumber:

i) cut two pieces, each 2" long
ii) clamp a piece on each side of radial arm, so blade carriage stops at distance needed to complete cut
iii) check that clamps do not interfere with hand grip on saw handle.

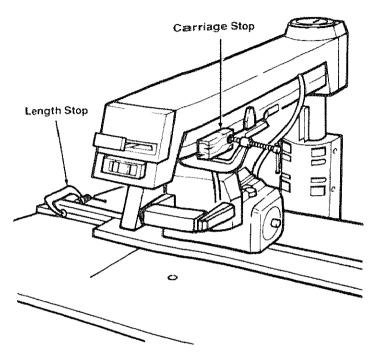
A length stop defines the cut length and ensures that all pieces will be cut to the same size. Clamp a piece of 1x2 lumber on the fence to define the cut length. Use a length stop only on the end of the workpiece which is held down.

### **Crosscutting Hints**

1. To extend life of table top, buy auxiliary table cover (see Accessories) or make one out of 1/4" plywood or fiberboard. Clamp or nail to original table top, section by section. If you use nails, nail in the four corners to make sure blade will not contact nails.

2. Make several fences, so each will have only a few kerfs (See Cutting Aides). Too many kerfs in a fence weaken it.

3. When making mitre or bevel cuts, use extra force to hold workpiece down be-



cause it tends to move during these types of cuts.

4. When cutting hard woods, like oak, or making compound cuts, keep arm holding saw handle rigid and pull blade through slowly.

5. Keep table clean of chips and sawdust.

6. Use the right blade for each job.

7. Use sharp blades.

8. To keep cut line accurate, periodically check blade alignment.

9. Do not cut severly warped or crooked workpieces.

## **Ripping Defined**

Ripping is changing the width of a workpiece by cutting along its length. The workpiece is fed into the blade, which rotates in a fixed position, parallel to the fence, a set distance from the fence. A solid fence (no kerfs) serves as a guide for the workpiece. Place the fence in the front position for narrower workpieces, and in the rear for wider ones.

### In-Rip and Out-Rip Positions

In-rip and out-rip refer to blade position.

**In-rip:** the blade is toward the column, and the motor is toward the table front. Inrip is recommended because this position allows better visibility of the workpiece and your hands. Use in-rip when you set the blade 1/2 to 16" from the fence.

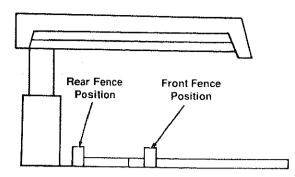
**Out-rip:** the blade is toward the table front, and the motor is toward the column. Use out-rip **only** when you set the blade 12" or more from the fence.

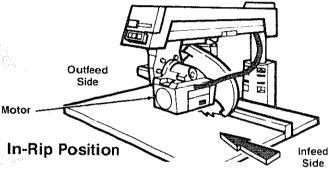
### Infeed and Outfeed Directions

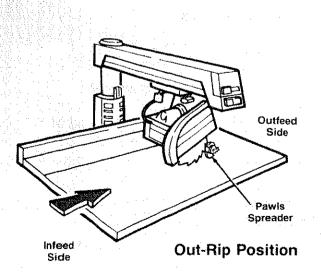
Infeed and outfeed refer to sides of the blade.

Infeed: the side of the blade where the guard nose is. Always start a rip cut at the infeed side and push the workpiece through to the outfeed side.

Outfeed: the side of the blade where the pawls and spreader are. Never start a rip cut at the outfeed side. This is wrong way feed. Never put hands on the outfeed side of the blade when ripping because they can be pulled back into the spinning blade.

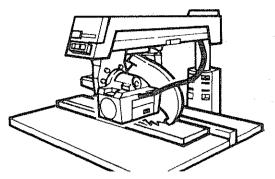






## Workpiece Positioning

Always set up so that the widest part of the workpiece is between the blade and fence. This gives you greater clearance for push sticks, and allows better stability for feeding the workpiece.



Example: to rip 1" off a 10" wide workpiece, set blade in in-rip position, 9" from fence.

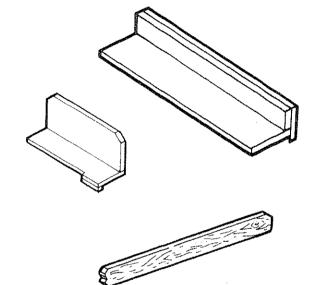
### **Push Sticks and Push Blocks**

Use push sticks and push blocks instead of the hands to push the workpiece through to complete cuts. They help keep hands away from the blade. A push block is used with an auxiliary fence (see Cutting Aides).

Use a push block and auxiliary fence when the blade is set 1/2 to 2" from the fence.

Use a push stick when the blade is set 2" or more from the fence.

Do not set the blade closer than 1/2" to the fence. The radial saw is the wrong tool for such a narrow a cut. A band saw would be more appropriate for this type of cut.



## **Ripping Safety**

The hazards associated with ripping include: outfeed zone hazard, kickback, and wrong way feed. This section explains these hazards and tells how to avoid them or reduce the risk of their happening. **Read this section before making any type** of rip cut. Follow these steps every time you make a rip cut.

#### **Outfeed Zone Hazard**

## A DANGER

Rotational force of blade can pull hands and fingers back into blade. Touching, holding, or pulling on outfeed side of workpiece while blade is still spinning will result in fingers, hand or arm being cut off. To reduce risk of outfeed hazard:

- ✓ Set pawls and spreader; they act as partial barrier to outfeed side.
- $\checkmark$  Start and finish cut from infeed side.
- $\checkmark$  Keep both hands on infeed side.
- ✓ Keep hands away from outfeed side.
- ✓ Push workpiece through to complete cut. Do not reach around to pull it.
- ✓ If blade jams, turn saw off, remove yellow key, then free blade.

#### Kickback

Kickback is the uncontrolled propelling of the workpiece back toward the user.

## A WARNING

Kickback can happen when blade is pinched or bound by workpiece. Pinching or binding can happen when:

• pawls and spreader are not used or not set correctly

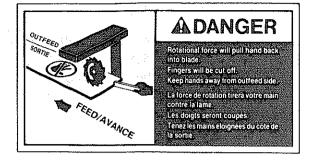
- spreader is not aligned with blade
- blade is not parallel to fence

• workpiece is twisted or warped and rocks on table top

• pressure is put on outfeed side of workpiece

• workpiece is released before being pushed past pawls and spreader

• user touches or tries to pull workpiece through outfeed side before blade has stopped spinning.





### To reduce risk of kickback:

- ✓ Set pawls and spreader according to ripping set-up procedure. Correctly set spreader is more likely to prevent workpiece from binding or pinching blade; correctly set pawls are more likely to grab into workpiece to stop or slow kickback if one happens.
- ✓ Check that spreader is in line with blade (see Alignment: Spreader to Blade).
- ✓ Cut only straight workpieces so surface will lie flat on table and edge will stay tight against fence. If you must cut an irregular workpiece, attach a straight edge (see Cutting Aides).

- ✓ Push workpiece through from infeed to outfeed side until it is completely past pawls and spreader.
- ✓ Use featherboard (see Cutting Aides).
- ✓ Keep hands away from outfeed side.
- ✓ If blade jams, turn saw off, remove yellow key, then free blade.
- ✓ When cutting composition materials, or other materials with one smooth and one rough side, put rough side up so pawls will be more likely to grab.

#### Wrong Way Feed

Wrong way feed is ripping by feeding the workpiece into the outfeed side of the blade.

## 

Rotational force of blade will pull workpiece through violently if workpiece is fed in same direction as blade rotates (wrong way feed). Hands and fingers could be pulled along with workpiece into spinning blade before you can let go or pull back. Fingers, hand or arm could be cut off. Propelled workpiece could hit bystander.

To eliminate risk of wrong way feed:

- ✓ Feed workpiece against blade rotation.
- ✓ Set pawls and spreader; they act as partial barrier to outfeed side.



### **Guard Nose Function**

The guard nose (hold down) must be set correctly during ripping to act as a partial barrier against the infeed side of the blade, to help keep the workpiece flat on the table, and to deflect workpiece chips. It must be lowered to just clear the workpiece.

The guard nose must be re-set each time a different thickness workpiece is cut. Follow the Ripping Set-Up Procedure to correctly set the guard nose. Set guard nose first, then set pawls and speader.

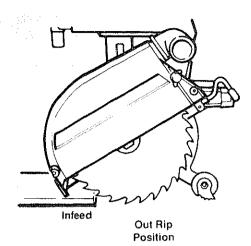
### **Pawls and Spreader Function**

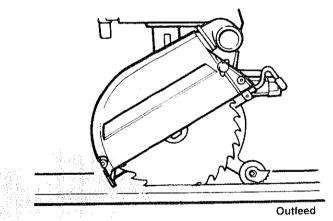
The pawls and spreader must be set correctly during ripping to reduce the risk of kickback, to prevent wrong way feed, and to act as a partial barrier to the hazardous outfeed side of the blade.

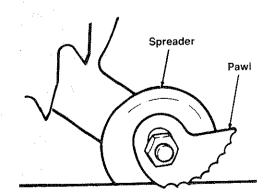
The spreader rides in the workpiece kerf to keep it open. This reduces the chances that the cut workpiece will spring closed and pinch the blade. Pinching the blade is a cause of kickback.

The pawls rest level on the upper surface of the workpiece. During cutting they allow the workpiece to pass freely from the infeed to the outfeed side, but help stop the kickback motion from outfeed to infeed side by grabbing into the workpiece surface.

The spreader and pawls must be re-set each time a different thickness workpiece is cut. Follow the Ripping Set-Up Procedure to correctly set the pawls and spreader.







## **Ripping Set-up Procedure**

Follow these steps before ripping. These steps must be repeated each time a different thickness workpiece is ripped. A kerf must be made for each different width cut.

1. Prepare table:

-insert solid (no kerfs) fence (Note: Use auxiliary fence when blade is set v<sub>2</sub> to 2" from fence) -tighten table clamps.

2. Prepare blade:

-lock radial arm at 0° mitre
-lock motor at desired bevel angle
-lock blade in in-rip position\*
-lower blade to just clear table
-lock blade carriage desired distance
from fence. Make sure widest part of
workpiece will be between blade and fence.

\*use out-rip position **only** when blade is set 12" or more from fence

- 3. Make kerf:
  - i) turn saw on
  - ii) lower blade about  $\nu_{16}$ " into table
  - iii) turn saw off and remove yellow key.

4. Place workpiece parallel to and up against blade. Note: *Workpiece will be between blade and table front.* 

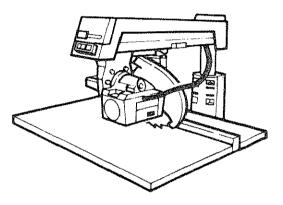
5. Lower guard nose until it just clears top surface of workpiece, then tighten guard clamp screw.

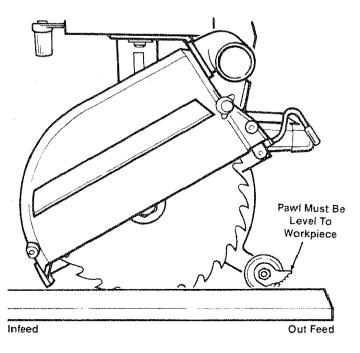
6. Lower pawls and spreader so spreader hangs along side of workpiece, in line with blade, and one set of pawls rests level on workpiece surface, then tighten pawls/spreader wing nut.

7. Test setting: push workpiece toward outfeed side to see that workpiece moves freely; push workpiece toward infeed side to see that pawls grab. If these conditions are not met, re-set pawls until they are.

## A WARNING

If workpiece is pushed along fence with kerfs, workpiece could get caught on kerf, pinch blade and cause kickback. Do not use crosscutting fence for ripping.





8. Remove workpiece from table.

9. Ready push stick (push block if using auxiliary fence).

10. Set up table extension(s) and support their outer ends. Do not use another person to support workpieces because this can cause kickback and it exposes helper to potential hazards at outfeed side.

## Making Rip Cuts

Follow these steps to make in-rip cuts. For out-rip cuts, reverse hand functions; that is, put right hand on table and use left hand to support and push workpiece.

- 1. Follow ripping set-up procedure.
- 2. Insert yellow key and turn saw on.

3. Stand at infeed side and out of line of workpiece, in case of kickback. Start and finish cut from infeed side.

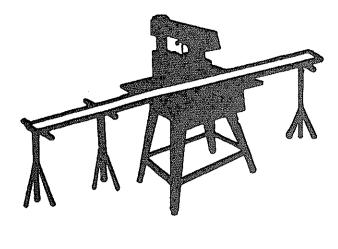
4. Put workpiece on table, in front of guard nose, and tight against fence. To hold workpiece in position, put left hand on table, at least 8" in front of guard nose, and lightly press fingers against workpiece. Support workpiece with table extension or right hand.

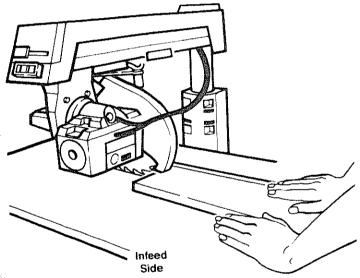
5. With right hand, push workpiece under guard nose and into blade. Keep left hand fixed on table, applying slight pressure to keep workpiece against fence.

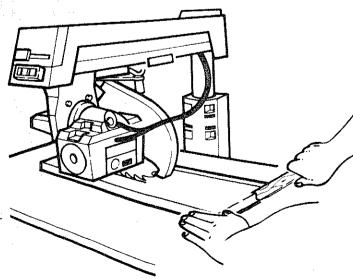
6. Use right hand to continue to apply feed pressure to part of workpiece close to fence. Keep hand at least 8" in front of guard nose.

7. When end of workpiece gets to table, use push stick or block, instead of hand, on part of workpiece between blade and fence to push until workpiece is completely past pawls and spreader.

8. Turn saw off and wait for blade to stop spinning before touching workpiece.







## Dado Blades, Molding Heads

See Accessories for information on safety, installation and use of dado blades and molding heads.

### Edging

Edging is the use of a dado blade or molding head in the horizontal position. It is an advanced technique that requires a molding head guard and a special fence. See Accessories for information on safety, installation and use of dado blades and molding heads for edging. See Cutting Aides for information on making the special fence.

## <u>A DANGER</u>

Edging without a guard could bring hands and fingers too close to cutting tool.

Hands, fingers, and arm could be cut off.

 buy, install, and follow instructions for molding head guard

 use only dado or molding head for edging

 do not use blade because blade cannot be guarded when horizontal

 read and follow instructions in Accessories section of manual.

### **Ripping Hints**

1. To extend life of table top, buy an auxiliary table cover (see Accessories), or make one out of  $\nu_4$ " plywood or fiberboard. Clamp or nail to original table top, section by section. If you use nails, nail in the four corners to make sure blade will not contact nails.

2. Keep table clean of chips and sawdust.

3. Use sharp blades.

4. Use the right blade for each job.

5. For workpiece with one smooth and one rough surface, such as paneling or finished fiberboard, cut with rough surface up so pawls will be more likely to grab in case of kickback.

6. To keep cut line accurate, periodically check blade alignment.

7. If you must cut an irregular workpiece, attach a straight edge (see Cutting Aides).

# **Cutting Aides**

Cutting aides include push sticks, fences, auxiliary fences, push blocks, featherboards, and straight edges.

## **Push Sticks**

To make a push stick, use 3/4" knot-free lumber, or a standard 1x2. Cut to dimensions shown (inches).

#### Fences

Fences are required for all saw operations.

To make a fence, use 34" knot-free lumber cut to table length. Do not use particle board or other composite materials because they are not strong enough. Note: Installed fence must be at least half as high as the workpiece, and never less than 34". The fence can be as high or higher than the workpiece.

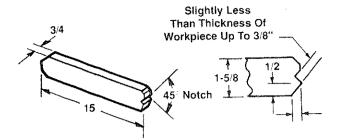
## Auxiliary Fence and Push Block for Ripping

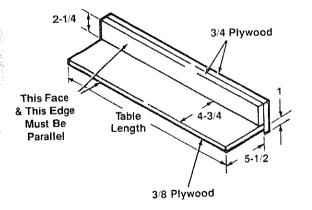
An auxiliary fence must be used when making very narrow rip cuts that don't allow enough room for a push stick without bringing it too close to the blade. An auxiliary fence must always be used with a push block.

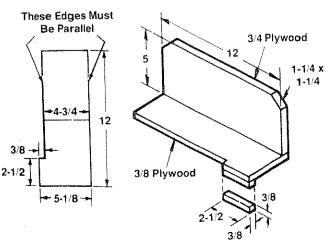
To make an auxiliary fence, use one piece of 3's" plywood and two pieces of 3'4" plywood. Cut to dimensions shown (inches). Glue pieces together, and reinforce with nails.

To make a push block, use one piece of 3/4" plywood and one piece of 3/8" plywood. Cut to dimensions shown (inches). Glue pieces together and reinforce with nails.

Lay the push block on top of the auxiliary fence to make sure their widths match exactly, and are each 434".







# **Cutting Aides**

### Auxiliary Fence for Edging

You must use an auxiliary fence for edging because you cannot completely locate the cutting tool behind a rip fence. Also, edging requires the use of a molding head guard (see Accessories).

To make an auxiliary fence for edging, use 34" knot-free lumber. Cut two pieces to dimensions shown (inches). To form fence, glue both pieces at right angles to a piece of lumber 34" x 1". Reinforce with nails.

Install the fence in the front position. Reverse order of rear and spacer tables, because to use molding head or drum sander with arbor vertical, you may have to make a  $3" \times 3\nu_2"$  opening in rear table for arbor clearance in order to get cutting tool closer to table. (Spacer table is too narrow for such an opening.)

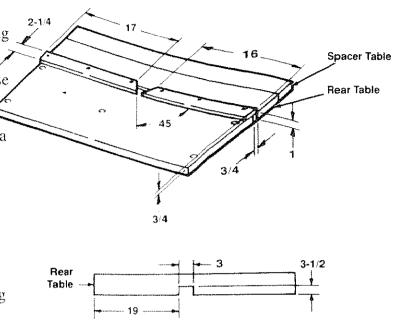
Note: Initial edge cut will round angled edges of fence.

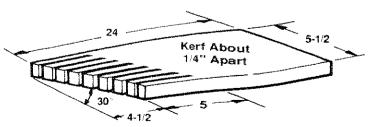
Note: When using drum sander, vacuum motor often to prevent sawdust/powder build-up, because powder interferes with motor ventilation and can clog starter switch.

### Featherboard

Use a featherboard on the infeed side during ripping to help keep the workpiece against the fence.

To make a featherboard, use knot-free  $\frac{34}{100}$  umber 5½'' wide. Mitre crosscut lumber at a 30° angle to 24''. Rip to make 5'' long cuts about  $\frac{14}{100}$  apart.





## **Cutting Aides**

Clamp the featherboard to the front table, so that the angled edge of the featherboard is against the workpiece on the infeed side of the blade. Do not clamp the featherboard against the cut off part (outfeed side) of the workpiece. If clamped to the outfeed side, the featherboard can squeeze the kerf closed, put binding pressure on the blade, and cause kickback.

Straight Edge for Irregular Workpiece

## A WARNING

If you try to rip an irregular workpiece, it could bind blade and cause kickback.

If the workpiece you want to rip does not have a straight edge, attach a straightedged board to the workpiece:

i) place irregular side of workpiece against fence

ii) put straight-edged board on top ofworkpiece and against fenceiii) tack straight edged board to workpiece.

Note: Straight-edged board must not extend beyond leading end of workpiece and should cover workpiece width only enough to pass between blade and fence.

**Note:** Use fence at least as high as combined heights of workpiece and straightedged board. Feather Board This Side

## Accessories

## Accessories Safety

1. Use only accessories listed in this section. Use of any other accessory or attachment might increase the risk of injury to you or others.

2. Read and follow instructions that come with accessory.

3. Do not install accessories on both ends of arbor shaft at same time.

4. Do not use twist drill bits longer than 7" because they can bend and break.

5. Use a spade type drill 1" or smaller in diameter for drilling only wood or plastic.

6. Do not use reduced shank drills.

7. Remove blade wrenches before turning saw on.

## 

Grinding wheels, abrasive or cut off wheels, or wire wheels can break explosively and throw pieces. You can be blinded or receive a life threatening puncture wound. Do not use grinding wheels, abrasive or cut off wheels, or wire wheels.

## A WARNING

When using accessory shaft, exposed arbor shaft can pull in clothing, hair or jewelry as it rotates. Broken bones and severe cuts could occur.

Follow personal safety instructions. Locate arbor shaft under radial arm: lock blade carriage in out-rip position, then bevel motor to -90°.

### Information for Dado

1. Put inside loose collar on arbor shaft first, then install dado. Tighten blade nut directly against outside surface of dado. 2. Saw arbor is designed for dado up to 13/16" wide. Use of wider dado could cause dado and blade nut to spin off. To make larger than 13/16" wide cut, take several passes with dado.

3. To avoid excessive load on motor when making a 13/16" wide cut, limit depth of cut to 1/8" in one pass.

## Information for Edging

Edging is the use of a dado or molding head in the horizontal position. Edging requires the use of a molding head guard and an auxiliary fence (see Cutting Aides).

1. Use molding head guard for edging with molding head and dado blade. Follow instructions that come with guard. Do not edge with a blade.

## A DANGER

Edging without a guard can bring hands and fingers too close to blade. Hands, fingers and arm could be cut off. Buy, install, and follow instructions for molding head guard.

## 

Blade cannot be guarded in horizontal position. Edge with guarded molding head or dado. Do not edge with blade.

2. Install auxiliary fence (see Cutting Aides) to allow positioning of cutting tool behind fence.

3. Whenever possible, edge with arm locked at indexed 0° miter, so blade carriage is more likely to lock firmly.

# Accessories

## A DANGER

Edging without an auxiliary fence when arm is at 0° mitre position prevents complete location of cutting tool behind fence. Make and use auxiliary fence to edge with arm locked at 0° mitre.

4. If saw handle gets in way with radial arm locked at 0° mitre, edging can be done at 30° left mitre. In this position, cutting tool can be located behind either a regular or auxiliary fence.

i) lock arm at 30° left mitre

ii) unlock swivel lock, move saw handle
90° towards left, so motor surface
squarely faces front
iii) lock swivel lock.

Note: This is not a pre-set indexed blade carriage position. Saw forces may affect swivel lock's ability to hold carriage firmly in place.

5. Before edging, with saw unplugged and yellow key out, turn cutting tool by hand to make sure it does not strike guard or any other part of saw.

## Lower Blade Guard

The following safety information and instructions apply to all blades and accessories.

The lower blade guard is required by the Occupational Safety and Health Administration (OSHA) if the radial saw is used commercially. The lower blade guard is intended for use only in repetitive 90° crosscutting. Contact Sears Parts Department for availability, quoting the model number of your radial arm saw.

**Repetitive 90° crosscutting** is the repeated and continuous cutting of many pieces of lumber to the same length with the saw placed in the 90° crosscut position.

In repetitive 90° crosscutting, the guard may reduce the chance of accidentally touching the blade from the side. This protection is possible ONLY when:

• the blade is in its rearmost position and

• the guard is resting on the table so the leading and trailing teeth of the blade are not exposed from the sides.

The lower guard ONLY provides protection against minor lacerations and bruises that occur from contact with the flat sides of the spinning blade.

## A WARNING

Lower blade guard will not provide any protection if blade is pulled over your hand, or your hand enters blade path from front or rear of blade. Fingers or hand can be cut or cut off.

## A WARNING

Remove lower blade guard for ALL other types of cuts except repetitive 90° crosscutting. Using lower guard other than for repetitive 90° crosscutting will increase risk of certain hazards:

• During rip and bevel cuts, the workpiece or narrow cut-off pieces can be pinched between the guard and the blade. Workpiece or cut-off pieces can kickback.

• In the bevel position the blade teeth are fully exposed. Fingers or hand can be cut off.

• Cut off pieces can jam between the guard and blade. Turn saw off and wait for blade to stop before freeing a jammed guard or blade.

## Accessories

• Workpiece or cut-off pieces can be violently thrown by the blade. Wear safety goggles.

## A CAUTION

Lower blade guard can get caught or jam in fence or table kerfs.

Read and follow the warning on the lower outer guard:

WARNING: TO AVOID INJURY SHUT OFF POWER BEFORE CLEARING A JAMMED LOWER GUARD

## General Information

When new, the saw requires no lubrication. The saw has been partially aligned and all bearings are lubricated and sealed for life. In time, in order to keep the saw in good working order, it will be necessary to clean, lubricate and re-align.

### A WARNING

To avoid shock, burns, or lacerations from accidental start up of saw, turn power switch off and unplug saw before doing maintenance or servicing saw.

### Cleaning

Periodically remove any heavy build-up of sawdust that may accumulate on the saw. The absorbing tendency of sawdust will draw lubricants away from the areas where they are needed. Wipe the carriage bearings and track surfaces with a dry or lightly oiled cloth. If packed sawdust and grease build up repeatedly on the carriage bearings, inspect the track wipers for wear and replace if necessary.

To avoid motor damage due to sawdust build-up, which interferes with normal motor ventilation, vacuum the motor often.

#### Lubrication

**Do not** lubricate motor bearings, carriage bearings, or the area between the mitre locking rings and the column tube. Motor and carriage bearings are sealed and do not need added lubrication.

You can lubricate other points if necessary, but only when sticking or binding occurs. Use a small amount of SAE No 10W-30 automotive engine oil. Excess oil attracts airborn dust and sawdust.

## To lubricate swivel index pin:

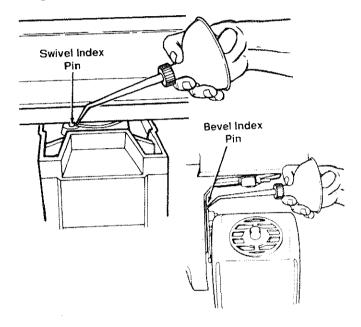
1. Rotate blade to either rip position.

2. Apply a few drops of oil along index pin, as shown below.

## To lubricate bevel index pin:

1. Bevel motor to 45°.

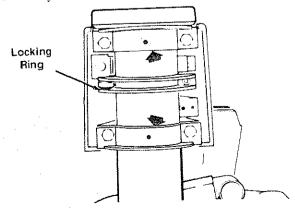
2. Apply a few drops of oil along index pin, as shown below.



# To lubricate the bearing points where the radial arm attaches to the column tube:

1. Remove rear arm cover.

2. Apply oil to two areas indicated by arrows. Note: Do not get oil on locking ring; oil will make it slippery and unable to lock securely in non-indexed mitre positions.



#### Other areas to lubricate include:

• cam surfaces of the rip lock assembly

• between column tube and column support (Elevate radial arm to highest point, then wipe face of column tube with light film of oil.)

#### Adjustments for Wear

#### Swivel Lock

The swivel lock is a friction lock that prevents play between the casting and blade carriage. If the carriage can be moved by hand when the lock is locked, adjust:

1. Unlock swivel lock.

2. Remove screw and nut from swivel lock knob.

3. Note: Lever portion of swivel lock contains wrench used to make this adjustment. Separate wrench from lever by turning wrench a few degrees counter-clockwise to release tab.

4. Position wrench across corners of square nut and move wrench to line up with lever.

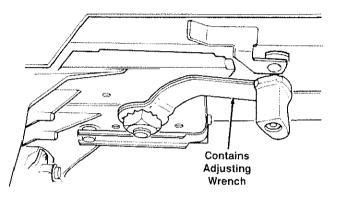
5. Test adjustment: hold wrench in place, move blade carriage to a non-indexed position, and lock swivel lock. Try to move blade carriage by hand. If you can, further tighten square nut.

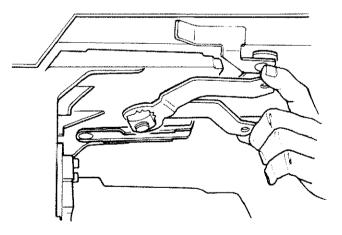
6. Unlock swivel lock and move blade to rip position. If carriage does not "snap" securely into pre-set position, loosen square nut one quarter turn.

7. Re-install wrench and knob.

#### **Bevel Lock**

If the motor can be moved by hand when the bevel lock is locked, if the lock offers little resistence when being locked, or if





the space between the lock lever and casting is different from approximately  $\nu_{16}$ ", adjust according to step 10 in Mount Motor section of Assembly.

#### **Carriage Bearings**

The carriage should roll freely but with some resistance for the entire length of travel. If the carriage moves too freely or with too much resistance, adjust the bearings according to the instructions in Alignment and Adjustment.

### Arm and Column

If you can move the end of the radial arm up and down when the arm is **un**locked between 0 and 45° mitre, adjust:

1. Remove rear arm cover.

2. Evenly tighten top two hex head tapping screws, then tighten bottom two hex head screws, but not as tightly as the top ones.

3. Re-install rear arm cover.

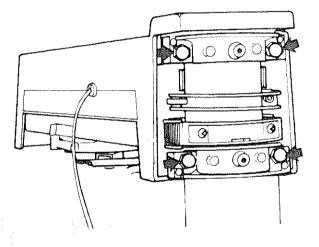
#### Mitre Lock

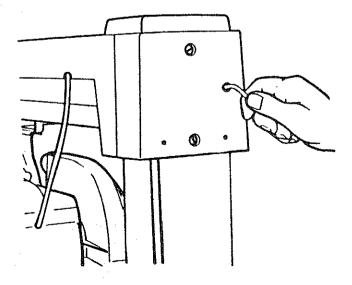
If the radial arm can be moved side to side by hand when locked between 0 and 45° mitre, adjust:

1. Unlock mitre lock and move radial arm to any non-indexed position.

2. Tighten socket cap screw, in rear of arm cover, one quarter turn.

3. Lock mitre lock and try to move radial arm. If arm still moves, slightly tighten socket cap screw. If lock is too difficult to lock, slightly loosen socket cap screw.



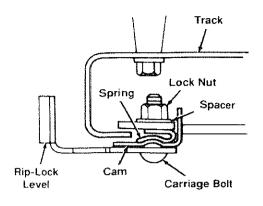


### Rip Lock

If the blade carriage can be moved by pushing/pulling on the saw handle when the rip lock is locked, adjust:

1. Hold rip lock in unlocked position and tighten locknut one quarter turn.

2. Test adjustment: if carriage moves with difficulty, slightly loosen locknut; if carriage moves easily, lock rip lock and try to move carriage along arm.



#### **Replacing Pawls**

Make sure the teeth of the pawls are always sharp. If they become dull the pawls must be replaced:

- 1. Remove hex nut and old pawls.
- 2. Install new pawls and spreader.

3. Align spreader to blade according to instructions in Alignment and Adjustment.

## Blade Changing

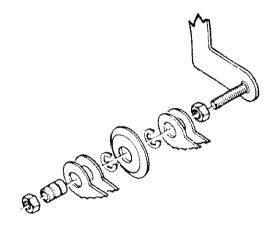
To change the saw blade:

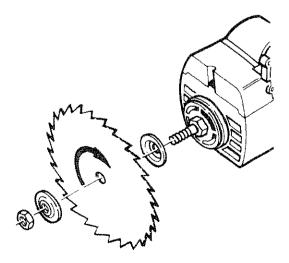
1. Turn switch off, remove yellow key, and unplug saw.

2. Use both blade wrenches in scissor action to loosen blade nut. Note: Arbor shaft has left-hand threads. Turn nut clockwise to loosen.

3. Remove nut, blade collar, and blade. Insert new blade, making sure that arrow is on outside and points clockwise.

4. Re-install blade collar and nut. Note: Do not overtighten nut because this can cause blade collar to warp and blade to wobble during cutting.





#### Motor Problem

Motor overheats or stalls

### Possible Cause(s)

Overloaded power line

Feeding rate too fast

Improper motor cooling

Saw blade has heel

Need 15 amp circuit

Need 15 amp slow-blow fuse

Low voltage

#### Motor starts slowly or fails to come to full power

Motor will not run

OD

While motor is running, fuses

blow

## Incorrect gauge extension cord

Overloaded power line

Undersize wires or circuit too long

Sawdust build-up

Protector circuit open

Low voltage

Sawdust build-up Bent or bound-up arbor shaft

Internal damage Fuses blow when motor is turned

Frequent opening of fuses or circuit breakers.

#### What to Do

Reduce line load by removing other lights, appliances

Slow rate of feed

Vacuum sawdust from motor to allow normal air circulation

Check alignment

Call your electrician

Install correct fuses

Check voltage. Normal loads can be safely handled at 10% above or below nameplate voltage; heavy loads need same voltage at motor terminal as on nameplate

Refer to table in Electrical Connections

Reduce line load by removing other lights, appliances

Increase wire size or shorten length of wiring

Vacuum motor

Push re-set button; listen and feel for click

Check power line for correct voltage

Vacuum motor

Check that shaft turns freely by hand; if it doesn't, return to Sears

Take saw to Sears for service

Slow feed rate

Replace with 15 amp slow-blow fuse or circuit breaker

Motor overloaded

#### **Cutting Problem**

Crosscuts not accurate at indexed

Inaccurate cut

miter positions

#### Possible Cause(s)

Loose locks

Saw blade out of alignment

Sawdust between workpiece and fence

Fence not straight

Swivel lock loose or not locked

Crosscut travel not square with fence

Carriage assembly loose on arm

Arm not indexing properly

Looseness between column tube and column support

Table not parallel with radial arm

Blade not square to table

Table not parallel to radial arm

Bevel lock loose

Work table not flat

Carriage bearings loose

Workpiece kerf rough with tooth marks from blade

Depth of crosscut varies from one side of workpiece to other

Saw cuts at slight bevel

Blade tends to advance through workpiece too fast during crosscutting Blade not square to fence

Using improper blade for desired finish cut

Blade dull

User pulls blade through workpiece too fast

What to Do

Check mitre, rip, bevel, and swivel locks. See Adjustments for Wear

Check alignment

Keep front table clean

Replace fence

Adjust swivel lock for wear

Square blade crosscut travel

Adjust carriage bearings, then realign saw

Adjust mitre lock for wear

Adjust column support

Adjust table supports

Square blade to table for crosscutting and ripping

Adjust table supports

Adjust bevel lock for wear

Replace table

Adjust carriage bearings, then realign saw

Square blade to fence

Use proper smooth-cutting blade

Sharpen or replace blade

Pull blade slowly and steadily through workpiece

#### Cutting Problem

Workpiece strikes spreader during ripping

Workpiece binds, smokes, and motor slows or stops when ripping

Board pulls away from fence during ripping

Saw Problem

Radial arm moves when locked in a non-indexed miter position

Motor moves when bevel lock is locked

Blade carriage moves when rip lock is locked

Blade carriage does not travel smoothly on arm

Blade does not stop spinning within 15 seconds after saw is turned off

#### Possible Cause(s)

Spreader not in line with blade

Saw blade out of alignment

Warped workpiece

Feed rate too fast

Carriage assembly loose

Fence not straight

Dull or incorrect blade

Blade out of alignment

May occur as normal result of applying feed pressure

#### Possible Cause(s)

Mitre not locked firmly

#### Bevel not locked firmly

Rip lock not locked firmly

Dirty track

Carriage bearing set too tight

Rip lock too tight

Worn arm track

Bad carriage bearing

Blade nut loose

Internal damage

#### What to Do

Align spreader to blade

Re-align

Do not cut severely warped pieces

Slow feed rate

Adjust carriage bearings, then realign saw

Replace fence

Sharpen or replace blade

#### Re-align

Use featherboard on infeed side

#### What to do

Adjust mitre lock for wear

Adjust bevel lock for wear

Adjust rip lock for wear

Clean and lubricate track

Adjust carriage bearings, then realign saw

Adjust rip lock

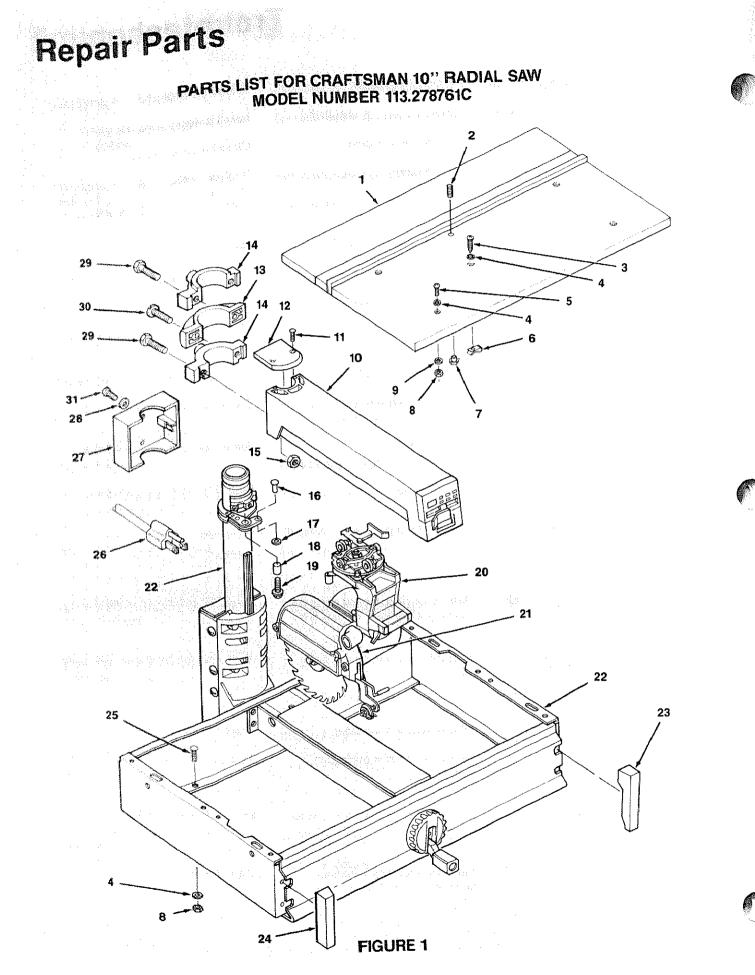
Have Sears replace arm track

Replace carriage bearing

Tighten blade nut

Take saw back to Sears for service

Electronics Problem	Possible Cause(s)	What to Do
No display when ON/OFF button pushed	Battery incorrectly installed	Install battery correctly
	Battery contacts dirty	Clean battery contacts
	Dead battery	Replace with 6V, size J battery
	Display failure	Have electronics checked by Sears
Display shows: ele	Normal at battery installation	No action
	Reference points not set	Set "0" reference points
	Poor battery contact	Clean battery contacts
	Display failure	Have electronics checked by Sears
Display dim	Low battery voltage	Replace with 6V, size J battery
	Saw very cold	Allow saw to warm above 32°F
Display dark	Saw very warm	Allow saw to cool below 120°F
Display blanks after a few minutes	Normal	Push ON/OFF to see display
Display blanks when moving car- riage, then re-appears when mo- tion stops	Normal when position is changed rapidly	No action
Display shows: EEE.E or EE.EE	Arm or carriage moved abruptly or too rapidly when display is off	Re-set "0" reference point(s)
Display resets but immediately shows EEE.E or EE.EE when carriage is moved	Defective encoder or display in- dicator	Have electronics checked by Sears
Display does not change when arm or carriage is moved	Wrong function selected	Select correct function
	Defective encoder or display in- dicator	Have electronics checked by Sears
Display does not read 0° or 45° at bevel or mitre indexes	"0" reference points not set at in- dexed points	Set "0" reference points
	Mitre and bevel encoders not aligned	Align encoders



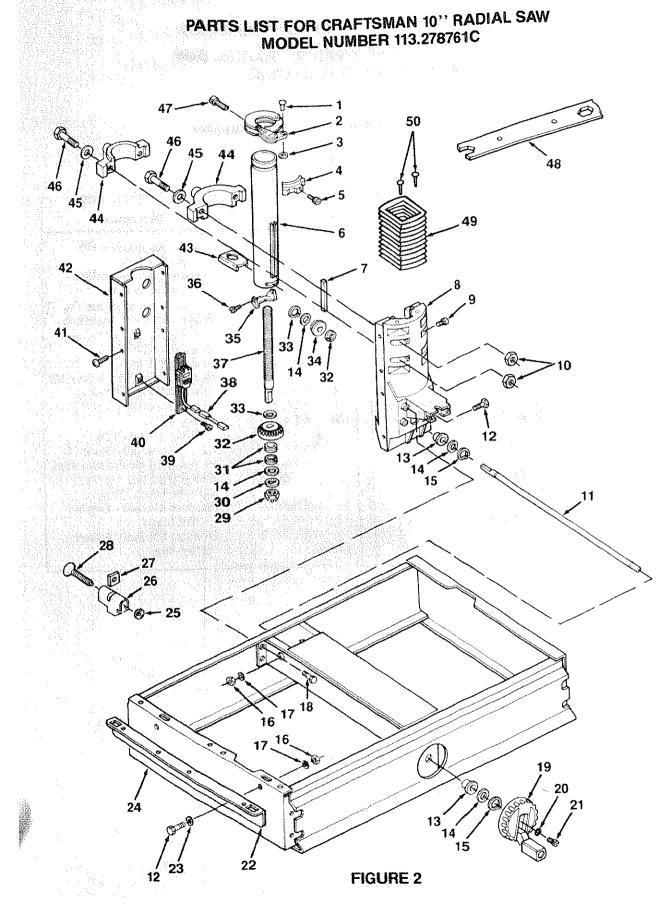
#### PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBER 113.278761C

#### Always order by Part Number - Not by Key Number

#### **FIGURE 1**

Key No.	Part No.	Description	Key No.	Part No.	Description
1		Table Board Set (See fig. 8)	19	815856-1	Screw Hex Washer Hd
2	60074	Screw, Hex Soc. Set	00		5/16-18 x 1-1/4
3	806828-4	1/4-20 x 7/8 Screw, Pan Hd TY "T"	20		Yoke & Motor Assembly (See Fig. 3 & 4)
3	000020-4	1/4-20 x 1-3/4	21		Guard Assembly (See Fig. 7)
4	STD551025	* Washer, 17/64 x 5/8 x 1/32	22		Base & Column Assembly
5	STD512510	* Screw, Pan Hd 1/4-20 x 1			(See Fig. 2)
6	815989	Clip "U" 1/4-20	23	818192	Cap, Trim R.H.
7	37384	Nut, Tee	24	818193	Cap, Trim L.H.
8	STD541025	* Nut, Hex 1/4-20	25	60314	Screw, Truss Hd 1/4-20 x 1/2
9	STD551225	* Lockwasher 1/4	26	816114	Cord, W/Plug
10	<b>—</b>	Arm Assembly (See Fig. 5)	27	815773	Cover, Rear Arm
11	STD511107	* Screw, Pan Hd TY ''TT'' 10-32 x 7/8	28	STD551010	* Washer, Flat 13/64 x 7/16 x 1/16
12	815820	Cap, Arm	29	60339	Bolt Hex Hd 3/8-16 x 2-1/8
13	815710	Strap	30	808380-6	Screw, Pan Hd Plastite #8x1
14	815649	Bearing, Arm	31	STD601105	* Screw, Pan Hd. TY ''TT''
15	STD541037	* Nut, Hex 3/8-16			10-32 x 1/2
16	815774	Rivet, 1/4 x 1/2		SP5577A	Owners Manual - English
17	60208	Nut, Push		0000000	(Not Illus.)
18	815980	Bushing		SP5577B	Owners Manual - French (Not Illus.)

\* Standard Hardware Item - May Be Purchased Locally



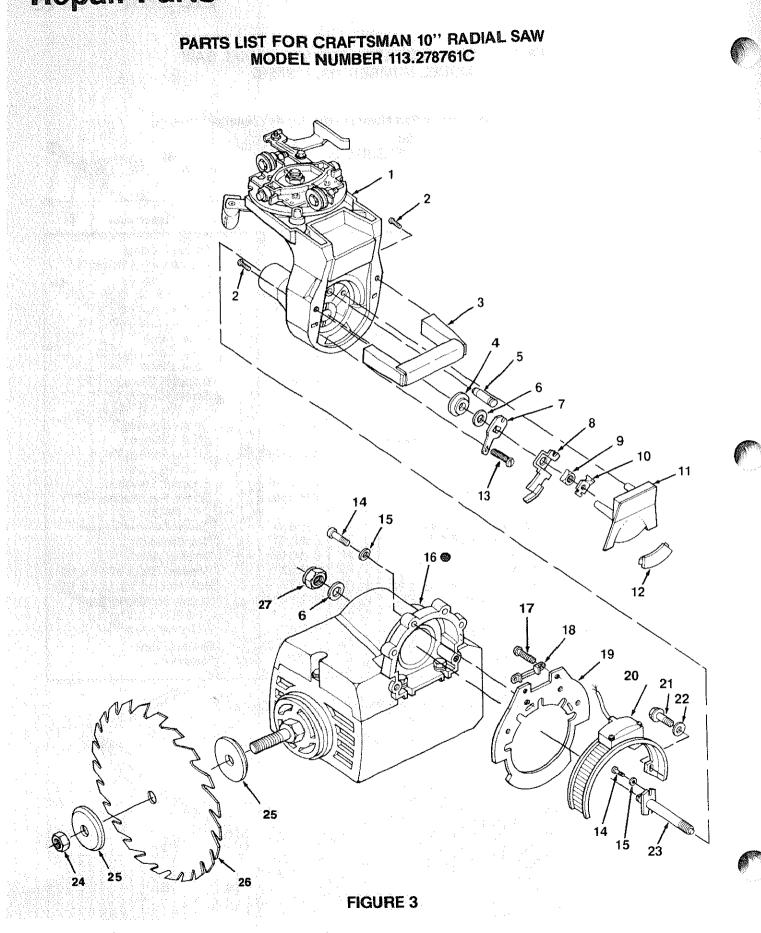
#### PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBER 113.278761C

#### Always order by Part Number - Not by Key Number

#### FIGURE 2

Key No	Part No.	Description	Key No	Part No.	Description
1	815774	Rivet. 1/4 x 1/2	26	818166	Bracket, Clamp
2	818198	Lock Assembly	27	120399	Nut, Square 5 16-18
3	60208	Nut, Push 114	28	818162	Screw, Clamp
4	815763	Latch. Arm	29	STD541450	* Nut. Lock 1 2-13
5	815992-1	Screw, Soc. Hd TY "T"	30	817106	Washer, Keyed
	010002 1	1/4-20 x 3/4	31	63614	Bearing, Lift Shaft
6	818226	Tube	32	818164	Gear. Bevel
7	815770	Gib, Column Tube	33	STD581043	* Ring, Retaining 7.16
8	818212	Support, Column Tube	34	818165	Gear, Pinion
9	817398-1	Screw. Locking Cap	35	815826	Actuator, Elevation
5	0170001	1/4-20 x 5/8	36	STD601103	* Screw, Pan Hd TY "T"
10	STD541037	* Nut, Hex 3/8-16			10-32 x 3 8
11	818177	Shaft, Elevating Crank	37	818167	Shaft, Elevating
12	STD523107	* Screw, Hex Hd 5 16-18 x 3 4	38	817022	Cord, Elevation
13	815772	Bushing, Elevation	39	STD610803	* Screw. Pan Hd TY
14	63500	Washer, Thrust			"AB" #8 x 318
14	00000	.502 x .927 x .031	40	815749-1	Encoder, Elevation
15	STD582050	* Ring, Retaining 1/2	41	815865	Screw, Hex Washer Hd TY
16	STD541031	* Nut. Hex 5/16-18			"T" 1'4-20 x 1/2
17	STD551131	* Lockwasher, External 5/16	42	815864	Cover, Column Support
18	9416187	Screw, Hex Hd TY "T"	43	818224	Nut, Elevation
10	1 3410107	5/16-18 x 3/4	44	815649	Bearing. Arm
19	816499	Handwheel	45	60353	Washer380 x 47/64 x 1 8
20	STD551210	* Lockwasher, External #10	46	60339	Bolt. Hex Hd 3/8-16 x 2-1/8
21	STD511105	* Screw, Pan Hd 10-32 x 1/2	47	817398-2	* Screw, Socket Hd Cap
22	818199	Channel, Table Mtg.			1/4-20 x 1-1/4
23	60013	Washer, 11/32 x 7/8 x 1/16	48	3540	Wrench
24	507654	Base Assembly	49	815754	Bellows, Tube
25	818161	Shoe, Table Clamp	50	330751	Fastener
25	010101	001	L	L	

\* Standard Hardware Item May Be Purchased Locally.



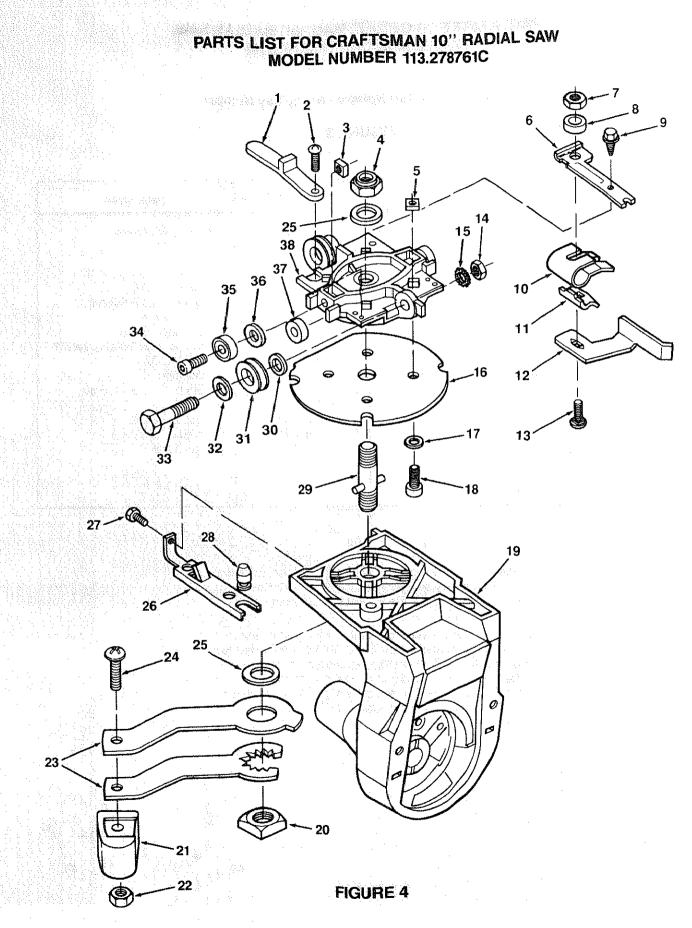
#### PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBER 113.278761C

#### Always order by Part Number - Not by Key Number

#### FIGURE 3

Key No	Part No.	Description	Key No	Part No.	Description
1 2	 818922	Yoke Assembly (See Fig. 4) Screw. Flat Hd Plastite #8 x 1	16	818906	Motor Complete
3 4	818202 815678	Handle. Yoke Washer. Shaft	17	STD510802	* Screw. Pan Hd TY "T" 8-32 x 5/16
5	815679-1	Pin. Index	18	815802	Guide, Bevel Reader
6	STD551043	Washer505 x 7/8 x 1/16	19	818197	Plate. Inde×
7	815791	Spring, Bevel	20	815751	Encoder, Bevel
8	818154	Lever, Bevel Lock	21	STD601105	* Screw, Hex Washer Hd TY
9	815813	Nut, Square 1/2-13			"T" 10-32 × 1/2
10	815836	Wedge, Bevel Spring	22	STD551010	* Washer, 3/16 x 3/8 x 1/32
11	818204	Cover, Yoke	23	508153	Shaft, Support w/Plate
12	815799	Plug. Yoke	24	30495	Nut. Shaft
		5	25	62498	Collar. Blade
13	806828	Screw, Pan Hd TY "T"	26	818078	† Blade. Saw
		1/4-20 x 1/2	27	805839-1	Nut. Lock
14	815992-1	Screw, Soc Hd TY "T" 1/4-20 x 5/8			
15	STD551012	* Washer, 17/64 x 9/16 x 1/16			

- \* Standard Hardware Item may be Purchased Locally.
- † Stock Item may be Secured through the Hardware Department of most Sears Retail or Catalog Order Houses.
- Any attempt to repair this motor may result in unit misalignment and create a HAZARD unless repair is done by a qualified service technician. Do not loosen the three screws holding the motor support to the motor. This assembly is factory aligned. Repair service is available at your nearest Sears Store.



#### PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBER 113.278761C

#### Always order by Part Number - Not by Key Number

#### FIGURE 4

Key No	Part No.	Description	1	Key No	Part No.	Description
-		Actuator, Rip * Screw, Pan Hd TY "T" 8-32 x 3/8 Nut, Square Lock * Nut, Lock 5/8-11 Nut, Square 1/4-20 Bracket, Rip Lock * Nut, Lock 1/4-20 Spacer Screw Hex, Hd TY "T" 1/4-20 x 1/2 Spring, Rip Lock Cam, Rip Lock Lever, Rip Lock * Bolt, Carriage 1/4-20 x 1			1	Wrench, Adjustment W/Actuator * Screw. Pan Hd 1/4-20 x 1-1/2 * Washer630 x 1-1/8 x 3/32 Spring. Swivel Screw. Pan Hd TY "T" 1:4-20 x 1/2 Pin. Index Stud. Yoke Clamp * Washer. 21/64 x 3/4 x 1/16 Bearing. Carriage Washer. No. 2 Carriage Bearing Screw, Eccentric Screw. Low Hd Cap
14 15 16 17 18 19 20 21 22	STD541231 STD551131 815691 STD551012 817398-1 818207 109529 816988 STD541025	<ul> <li>Nut, Hex Jam 5/16-18</li> <li>Lockwasher, External 5/16 Ring, Yoke Index</li> <li>Washer, 17/64 x 7/16 x 1/32 Screw, Cap Locking, 1/4-20 x 5/8 Yoke Nut, Square 5/8-11 Knob, Swivel</li> <li>Nut, Hex 1/4-20</li> </ul>		35 36 37 38	STD315485 STD551031 817181 815689	5/16-18 x 7/8 <sup>•</sup> Bearing, Ball .3150 l.D. <sup>•</sup> Washer, 21/64 x 5/8 x 1/32 Wiper, Track Carriage

\* Standard Hardware Item may be Purchased Locally.

#### PARTS LIST FOR CRAFTSMAN 10'' RADIAL SAW MODEL NUMBER 113.278761C

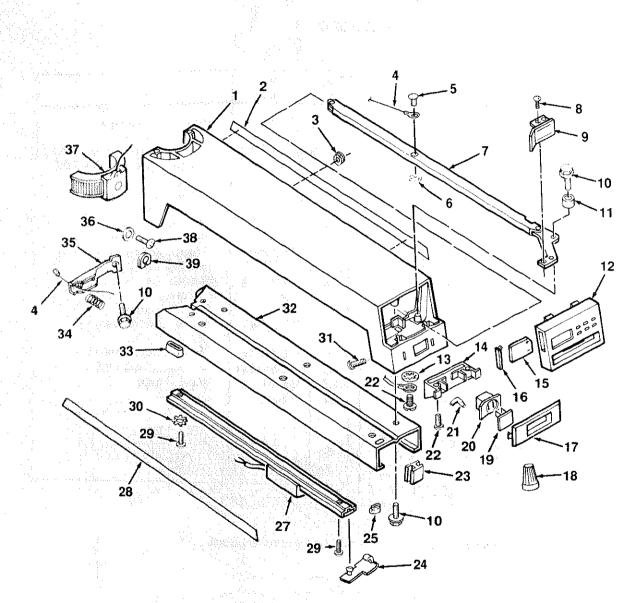


FIGURE 5

#### PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBER 113.278761C

Always order by Part Number - Not by Key Number

#### **FIGURE 5**

Key No	Part No.	Description	Key No	Part No.	Description
1 2	818239 818536	Arm, Radial Label, Trim R.H.	21 22	63467 STD600803	Cap, Flag Terminal * Screw, Pan Hd TY "T" 8-32 x 3/8
3 4 5 6 7	818537 815809 815774 60208 818182	Relief, Strain Cable Rivet, 1/4 x 1/2 Nut, Push 1/4 Actuator Assembly	23 24 25	818521 816492 815789	Bumper, Rubber Clip, Wire Relief, Strain
8 9 10	STD601103 815703 9416187	* Screw Pan Hd TY "T" 10-32 x 3/8 Knob, Mitre Lock Screw, Hex Washer Hd	27 28 29	816490 815786 816333-3	Encoder, Rip (Includes Key #24) Label, Trim L.H. Screw, Pan Hd TY "T"
11 12	815779 815741	5/16-18 x 3/4 Bushing Controls, R.S.	30 31 32	STD551210 STD610805 818088-1	10-32 x 5/8 * Lockwasher, Ext #10 * Screw, Pan Hd 8-10 x 1/2 Track, Arm
13 14 15 16	STD551208 815704 STD363539 815735	* Lockwasher, Internal #8 Housing, Switch ○ * Battery Lid, Battery Access	33 34 35 36	816178 815867 815708 STD551010	Sleeve, Rubber Spring, Compression Spring, Mitre Lock * Washer, 13/64 x 5/8 x 1/32
17 18	815976 STD375006	Bezel, Switch * Connector, Wire	37 38 39	815752 808380-10 815868	Encoder, Mitre Screw, Pan Hd Plasite #10-14 x 3/8 Relief, Strain
19 20	9-22256 816113	† Key, Switch Switch, Locking			

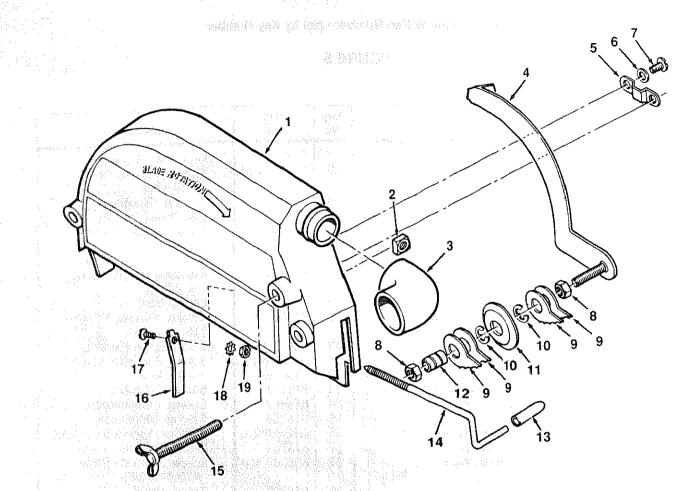
\* Standard Hardware Item may be Purchased Locally.

 Can also use these Battery Numbers: Eveready #539, Rayovac #867, Duracel #7K67

† Stock Item may be Secured through the Hardware Department of most Sears Retail or Catalog Order Houses.



### PARTS LIST FOR CRAFTSMAN 10'' RADIAL SAW MODEL NUMBER 113.278761C



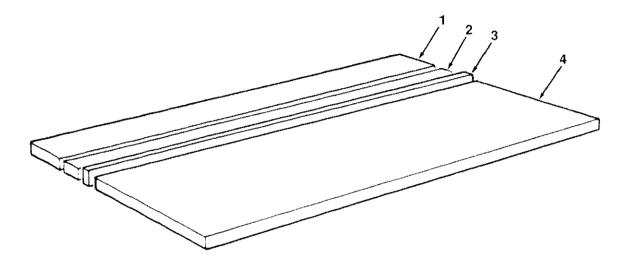
### FIGURE 7 - GUARD ASSEMBLY

Always order by Part Number - Not by Key Number

Key No	Part No.	Description	Key No	Part No.	Description
1 2 3 4 5 6 7 8 9	816264-1 120399 63258 63541 815816 STD551010 STD601103 STD541231 815815		10 11 12 13 14 15 16 17 18 19	STD581050 63270 816341 60435 816070 166785-3 63538 STD510805 STD551208 STD551208 STD541008	* Ring, Retaining Spreader Bearing (Includes Key #10) Grip Screw, Guard Clamp Screw, Wing 5/16-18 x 2-3/4 Clamp, Guard * Screw, Pan Hd 8-32 x 1/2 * Lockwasher, External No. 8 * Nut, Hex 8-32

\* Standard Hardware Item may be Purchased Locally.

#### PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBER 113.278761C

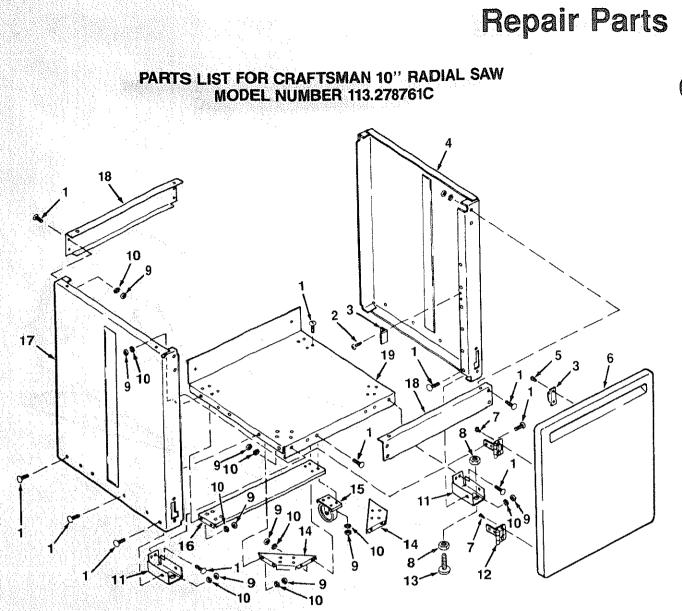


Always order by Part Number - Not by Key Number

#### FIGURE 8 - TABLE ASSEMBLY

Key No	Part No.	Description			
1	818169	Table, Rear			
2	818168	Table Spacer			
3	815758	Fence, Rip			
4	818191	Table, Front			

\* Standard Hardware Item may be Purchased Locally.



Key No	Part No.	Description	Key No	Part No.	Description
1	60314 STD600603	Screw, Truss Hd 1/4-20 x 1/2 * Screw, Pan Hd	9 10 11	STD541025 STD551225 817108	* Nut, Hex 1/4-20 * Lockwasher, Ext. 1/4 Spacer
3	815933	Type "T" 6-32 x 3/8 Catch, Magnetic	12 13	815934 803835-1	Hinge, Door Foot, Leveling
4 5	817151 816274	Panel, Side R.H. Screw, Pan Hd Plastite 6-10 x 1/2	14 15 16	815993 816004 816063	Bracket, Corner Caster, Stationary Stiffener, Shelf
6 7	815882 816274-1	Door, Cabinet Screw, Pan Hd	17 18	817150 815900	Panel, Side L.H. Skirt 23"
8	STD541237	Plastite 10-10 x 1/2 Nut, Hex Jam 3/8-16	19	815887	Shelf, Lower 23"

\* Standard Hardware Item may be Purchased Locally.

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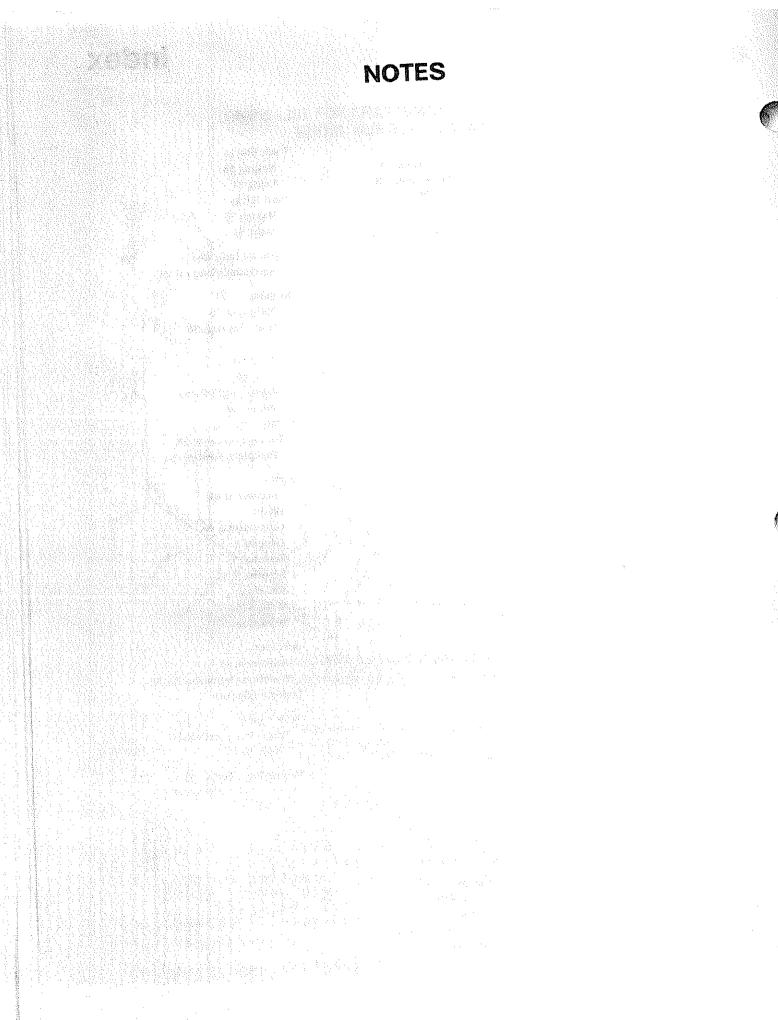
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### NOTES

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