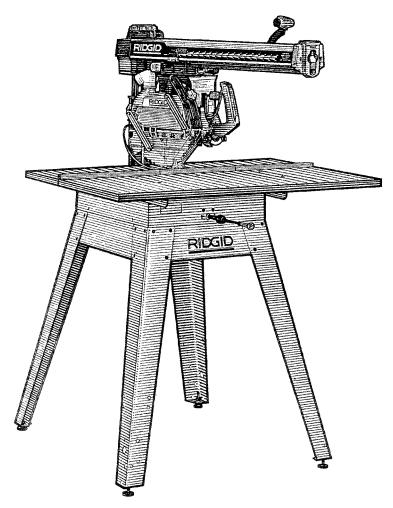


RS1000AR OWNER'S MANUAL



10 INCH RADIAL SAW

- Assembly
- Operation
- Repair Parts

For Your Safety:
Read all instructions carefully

www.ridgidwoodworking.com

Part No. SP6365 Printed in U.S.A.

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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 **may** 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.

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.

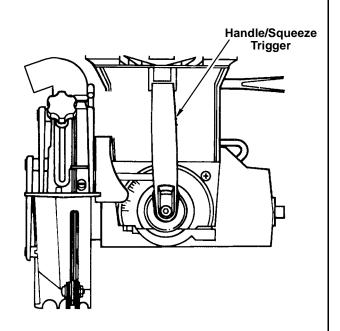


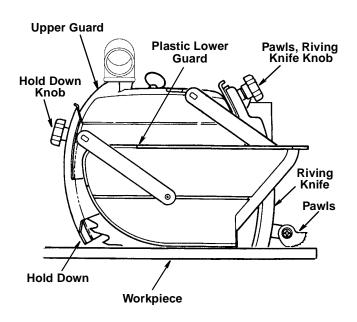
Guard Function and Features

The guard is a very important safety feature, designed to reduce the risk of injury associated with blade contact. Install the guard correctly. Follow the specific instructions in the ripping and crosscutting sections to set and use the guard correctly for each type of cut.

Guard Features Include:

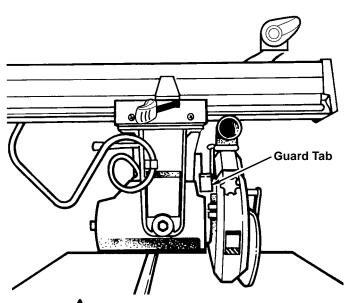
- 1. A non-moveable **metal upper portion**, (Upper Guard) which is fastened to the motor by the guard clamp screw, and which fully covers the upper half of the blade.
- 2. A moveable **clear plastic portion**, (Plastic Lower Guard) which partially covers the lower half of the blade. It protects against contact with the side of the blade during crosscutting when 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. It also protects against contact with the outfeed side of the blade during ripping, and acts as a barrier to prevent wrong way feed.
- 3. A **squeeze trigger** in the saw handle to fully raise the clear plastic guard at the start of a crosscut. **Note:** This is necessary because the guard will not automatically raise to clear the fence.
- 4. A **hold down** to be lowered to just clear the top of the workpiece for ripping. It acts as a barrier to the infeed side of the blade, keeps the workpiece from fluttering, and acts as a sawdust deflector. It is locked/unlocked by the hold down knob.
- 5. A **riving knife** to be lowered to the table for ripping. It keeps the workpiece kerf open, thereby reducing blade pinching and the risk of kickback. It also acts as a barrier to the hazardous outfeed side and prevents wrong way feed. It is locked/unlocked by the riving knife/pawls knob. When lowered for crosscutting, it acts as a barrier to the leading edge of the blade.





Safety

- 6. Set of **pawls** to be lowered to the workpiece surface for ripping. They allow the workpiece to pass freely from infeed to outfeed side, but help stop the kickback motion from outfeed to infeed side by grabbing into the workpiece surface. **Pawls** must be reset each time a different thickness workpiece is cut.
- 7. A **guard tab** to manually raise the plastic guard at the start of ripping unusual work-pieces whose size/shape do not cause the guard to raise automatically.



Hazards Associated with Clear Portion of Guard

The following safety information applies to all blades and accessories.



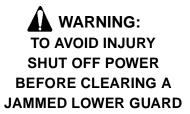
WARNING

Clear plastic portion of guard will not provide any protection during crosscutting 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.



CAUTION

Clear plastic portion of guard can get caught or jam in fence or table kerfs. Read and follow the warning on the guard:





WARNING

Clear plastic guard will increase risk of certain hazards:

- During rip and bevel cuts, narrow cut off pieces can be pinched between guard and blade. Cut-off pieces can kickback.
- In bevel position blade teeth are fully exposed. Fingers or hand can be cut off.
- Cut-off pieces can jam between guard and blade. Turn saw off and wait for blade to stop before freeing jammed guard or blade.
- Workpiece or cut-off pieces can be violently thrown by blade. Wear safety goggles. Stand out of workpiece path.

Safety Instructions

Read and follow all safety instructions.

Personal Safety Instructions

- 1. Wear safety goggles labeled ANSI Z87.1 (or in Canada CSA 294.3-99) on the package. It means the goggles meet impact standards set by the American National Standards Institute. 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.



Safety Goggles

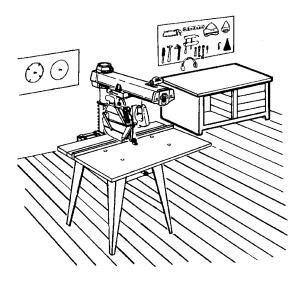


Dust Mask



Ear Protectors





Safety

Saw Safety Instructions

- 1. Use guard, pawls and riving knife 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.

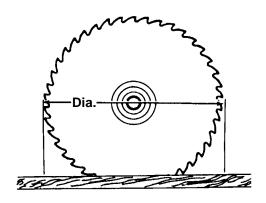
- 6. Before turning on saw, clear table of all objects except workpiece to be cut and necessary fixtures, clamps, or feather-boards.
- 7. If blade jams, turn saw off immediately, remove yellow key, then free blade. Do not try to free blade with saw on.
- 8. Turn saw off if it vibrates too much or makes 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.

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.

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 or afterwards. 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.

Safety

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.

At the **outfeed side**, to the right of the **guard** near the saw handle is this safety label to alert you to **wrong way feed**:

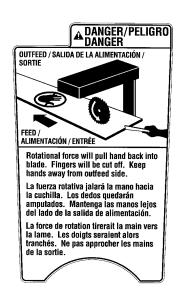
On the infeed side of the guard is this safety label to remind you to lower the hold down to just clear the top of the workpiece for ripping:

On the rear of the yoke, visible from the infeed side when the saw is in a rip position, is this safety label to alert you to outfeed zone 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 clear plastic guard is this warning label:

AWARNING / ADVERTENCIA / AVERTISSEMENT

To avoid injury shut off power before clearing a jammed lower guard

Para evitar lesiones, apague la sierra antes de desatascar un protector inferior atascado

Pour prévenir les blessures, couper l'alimentation avant de libérer toute obstruction du guide inférieur.

On the **bottom surface of the motor**, visible when the cutting tool is horizontal, is this safety label alerting you to use a guard when edge molding, and to position the cutting tool behind the fence:

(see Accessories Section)

ADANGER

BEFORE EDGING

- Know this tool: . Read and Understand all warnings and instructions on saw, in Owner's

- 1. Head and Understand all warnings and instructions on saw, in Owner's Manual and with recommended accessories.

 2. Properly guard the cutting tool.

 3. Provide proper workpiece support.

 4. Position the cutting tool behind the tence or construct an auxilliary fence per Owner's Manual.

 5. With power off and switch key removed, turn cutting tool by hand to make sure it does not strike guard, fence or any other saw parts.

A PELIGRO

ANTES DE CANTEAR

- Conozca esta herramienta:

 1. Lea y entienda todas la advertencias e instrucciones que están en la sierra, en el manual del usuario y con los accesorios recomendados

 2. Proteja adecuadamente la herramienta de corte.
- Proporcione un soporte adecuado para la pleza de trabajo. Posicione la herramienta de corte detrás del tope-guía o construya un tope-guía auxiliar siguiendo el manual del usuario. Con la sierra apagada y la llave del interruptor quitada, gire a mano la
- herramienta de corte para asegurarse de que ésta no golpee el protector, el tope-guía o cualquier otra parte de la sierra.

ADANGER

AVANT DE FACONNER

- Apprinez à connaître cet outil:

 1. Veuillez lire et bien comprende toutes les mises en gardes et les instructions qui se trouvent sir la scie, dans le manuel du propriétaire et avec les accessoires recommandés.

- 2. Protégez adéquatement l'outil de coupe. 8. Supportez adéquatement la pièce. 8. Placez l'outil de cupe derrière le guide, ou fabriquez un guide auxilaire la de distributio dens la mental de repolétoire.
- tel qu'indiqué dans le manuel du propiétaire. 5. Après avoir coupé l'alimentation et retiré la cié de l'interrupteur, tournez l'outil à la main pour vous assurer qu'il ne donne pas contre le protecteur le guide ou toute autre partie de l'outil.

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

On the front of the yoke is this general safety instruction label:

AWARNING / ADVERTENCIA / AVERTISSEMENT

- 1. Read manual before using saw.
- 2. Wear safety goggles that meet ANSI Z87.1 Standards.
- 3. Do not do freehand cuts.
- 4. Push carriage to full rear position after each cross cut.
- 5. Know how to reduce the risk of kickback. See instructions for ripping.
- 6. When ripping, use push stick when blade is set 2 inches or more from fence
- 7. 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. 8. Keep hands out of path of blade.
- 9. Do not reach around saw blade.
- 10. Turn power off and wait for blade to stop before moving workpiece or changing settings.
- 11. Unplug saw before changing the blade or servicing.

SEE TOP OF ARM FOR SPANISH AND FRENCH WARNING TEXT. VEA LA PARTE SUPERIOR DEL BRAZO PARA EL TEXTO DE ADVERTENCIA EN ESPAÑOL Y FRANCÉS.

VOIR LE DESSUS DU BRAS POUR LE TEXTE ESPAGNOL ET Français des avertissements



Introduction

In order to get the most enjoyment out of your radial saw it is important that the machine be properly assembled, adjusted, and aligned. This procedure, although not difficult, takes time; perhaps eight hours or longer for the inexperienced user. However, after this initial set-up a weekly tune-up can be completed in approximately ten minutes by checking the alignment and only adjusting those settings which are incorrect.

Identify Parts

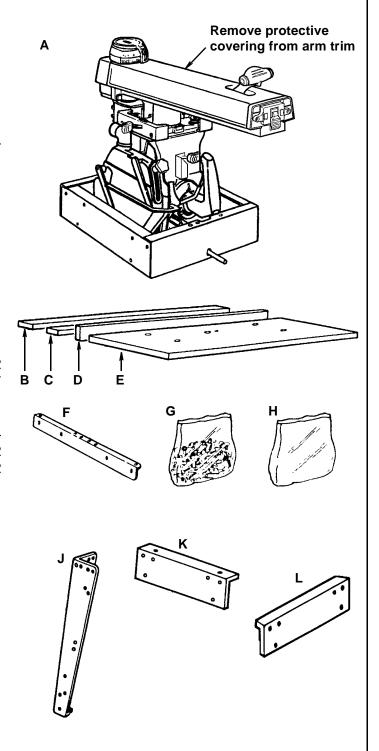
The following parts are included:

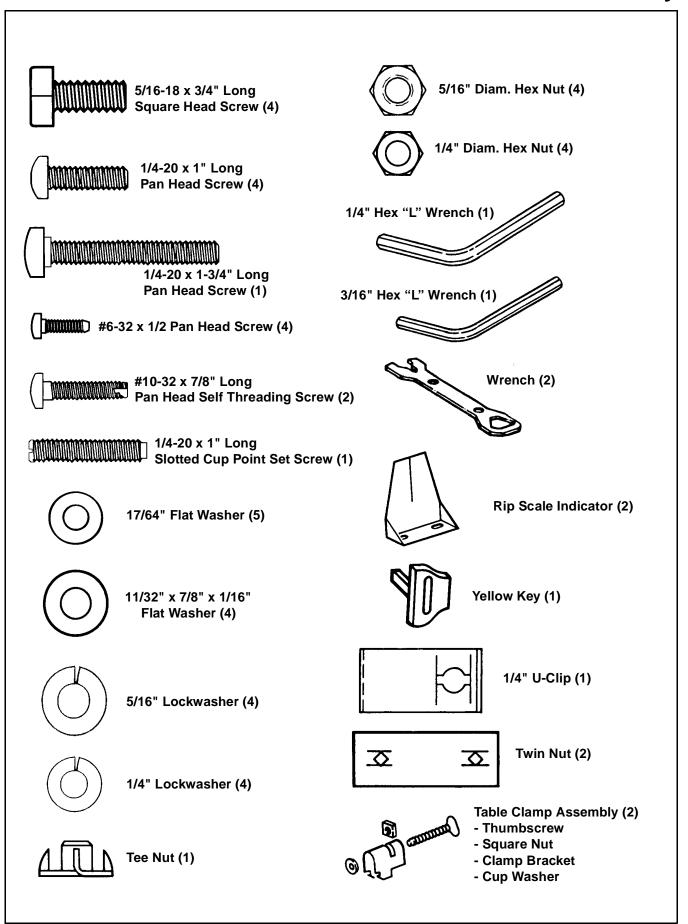
Note: Before beginning assembly, check that all parts are included If you are missing any part, do not assemble the saw. E-mail us at info.@ridgidwoodworking.com to get the missing part. Sometimes small parts can get lost in packaging material. Do not throw away any packaging until saw is put together. Check packaging for missing parts before contacting RIDGID. A complete parts list (Repair Parts) is at the end of the manual. Use the list to identify the number of the missing part.

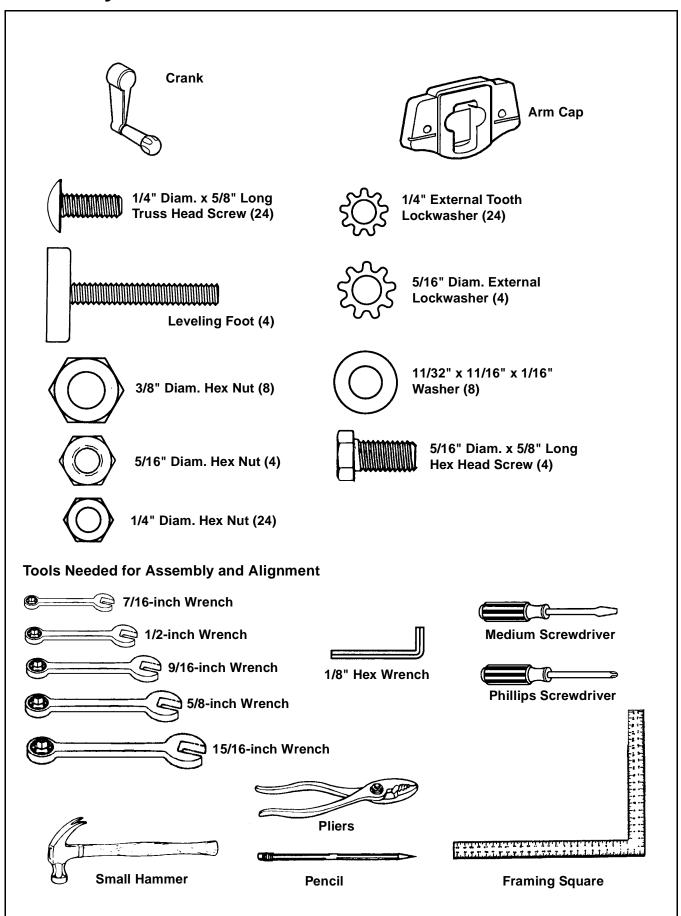
This model includes:

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. Loose Parts Bag(s)	*
H. Bag Containing	
Accessory Guard	1
J. Leg	4
K. Stiffener, Side	
I Stiffener Front/Rear	

^{*} 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.







A WARNING

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.

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.**

Assembling steel legs

For easy assembly it is recommended to finger tighten all screws, lockwashers, and hex nuts until the legset is fully assembled. Then go back and tighten all nuts securely.

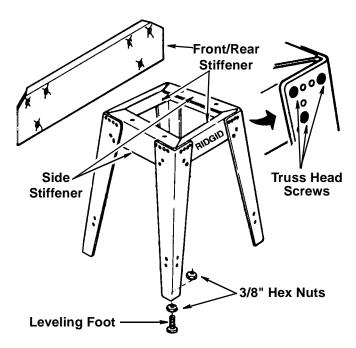
From among the loose parts, find the following Hardware:

- 24 Truss Head Screws, 1/4-20 x 5/8
- 24 Lockwashers, 1/4-External
- 24 Hex Nuts. 1/4-20
- 8 Hex Nuts, 3/8 16
- 4 Leveling Feet
- 1. Insert three truss head screws through the three holes near the top of one Leg. Place the Side Stiffener up to the Leg, as shown, so that the three screws line up with the holes in the Side Stiffeners marked with an "X" in the illustration.
- 2. Place a lockwasher and hex nut on each screw and finger tighten the hex nut.
- 3. Following the same procedure as above, continue to fasten together the remaining Legs, Side Stiffeners, and Front/Rear Stiffeners as illustrated.
- 4. Install one 3/8-16 hex nut completely onto each of the leveling feet. Insert one leveling foot through hole in bottom of each leg and install a 3/8-16 hex nut.

- 5. Set stand upright and securely tighten all nuts.
- 6. To level steel legs, loosen nut on inside of leg and turn nut on outside to raise or lower feet. Adjust all four levelers if necessary, and then tighten nuts on inside of leg.

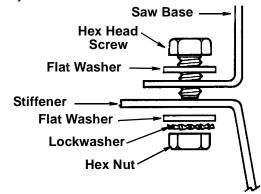
Note: These levelers are not intended for height adjustment.

X = Location of Truss Head Screws



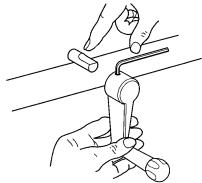
Mounting Saw

- 1. From among the loose parts, find the following hardware:
- 4 Hex Head Screws, 5/16-18 x 5/8
- 4 Lockwasher, 5/16 in. External Type
- 8 Washers, 11/32 ID
- 4 Hex Jam Nuts, 5/16-18
- 2. Place saw on legs so that holes in bottom of saw line up with holes marked X in top of legs and RIDGID logo on leg set is facing front.
- 3. Install screws, washers and nuts as shown.
- 4. If you mount the saw on any other RIDGID base or flat bench, make sure Elevation Crank has proper clearance to rotate. The saw must be bolted down. Position saw to slope slightly rearward, so when the carriage is installed it will not roll forward due to gravity.



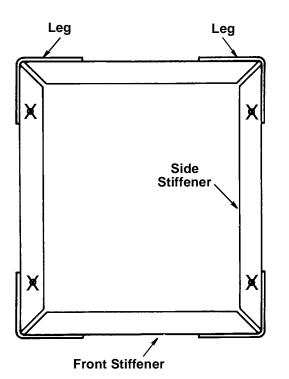
Attach Elevation Crank.

Install crank on elevation shaft. Be sure setscrew is tightened on flat of shaft.



Elevate arm approximately 3 to 4 Inches.

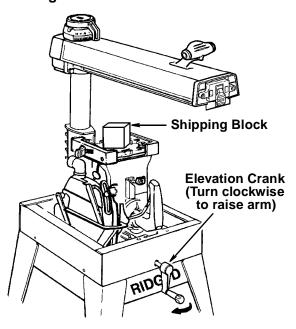
Remove shipping block and discard.





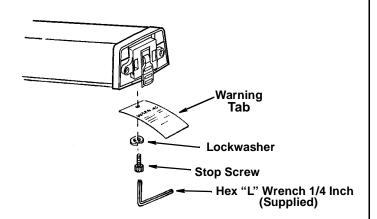
WARNING

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



Attaching Carriage - Motor to Arm

Remove carriage stop screw, lockwasher and tag. Read and understand warning tag before discarding tag.



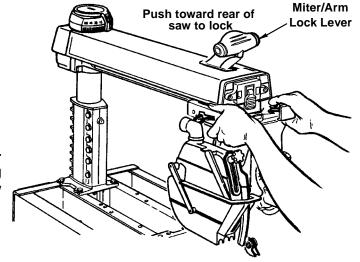
Lock miter/arm lock before proceeding.

Holding carriage assembly with both hands, carefully start and slide the carriage onto the tracks. The assembly must be held parallel with the arm so that all four bearings slide smoothly onto the arm, preventing any excessive strain on bearings and track.

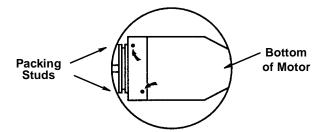


WARNING

Reinstall carriage stop screw and lockwasher to prevent carriage from rolling off arm. Tighten carriage stop screw securely.



Note: Remove two (2) motor packing studs that are threaded into bottom of motor.



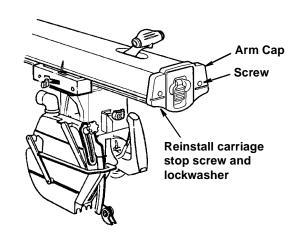
Install arm cap.



WARNING

Make certain power cord is unplugged.

- 1. Insert finger under left end of switch lever and pull out to the "ON" position.
- 2. Place arm cap in position and install with (2) 10-32 x 7/8 self threading screws.
- 3. Push switch to "OFF" position.

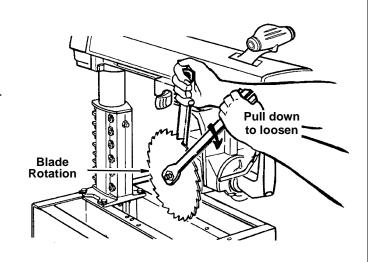


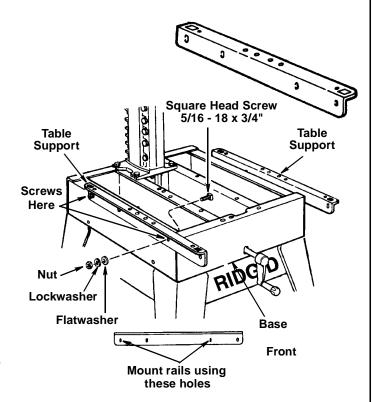
Remove saw blade.

- 1. Tighten carriage lock knob, located on right side of arm.
- 2. Loosen guard clamp screw approximately 4 turns. Rotate dust elbow so opening is facing left.
- 3. Use one hand to lift the clear plastic guard at the front of the saw.
- 4. Use the other hand to grasp the rear of the guard (below the dust elbow).
- 5. Rotate the entire guard assembly forward approximately 45°.
- 6. Remove the guard assembly.
- 7. Motor shaft has left hand threads. Hold shaft wrench and rotate arbor wrench down (clockwise).
- 8. Remove shaft nut, outer collar, saw blade, and inner collar. Set aside and out of the way.

Attach Table Supports

- 1. Set out:
 - two table supports
 - four 5/16" 18 x 3/4" long square head screws
 - four 11/32" x 7/8" x 1/16" flatwashers
 - four 5/16" lockwashers
 - four 5/16" hex nuts
- 2. 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 base and then support); on end of each screw put a flat washer, lockwasher and nut then finger tighten so table supports rest in lowest position.





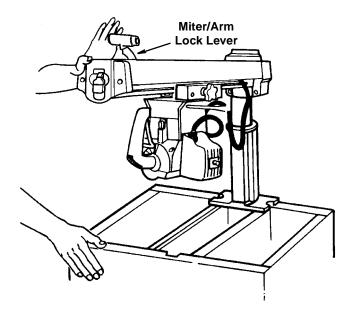
This concludes the assembly section. Except for installing table boards, fence, and table clamps the saw should be completely assembled. The next section deals with adjusting your saw to remove any "looseness" in order to get accurate cuts.

Read "Controls" section and familiarize yourself with control names and location before beginning "Adjustments".

Arm Lock Adjusting Wheel

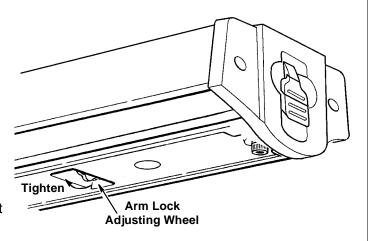
With the arm at an "unindexed" position (other than 90° or 45°) and the miter lock applied, the locking action should feel tight and secure.

Considerable effort should be required to move the arm back towards 0°. It is always possible to force the arm because of the leverage advantage the long arm provides. However, the arm should resist moving when a reasonable amount of force is applied.



To check follow these steps:

- 1. Pull miter/arm lock forward to unlock and rotate arm to approximately 30° left or right.
- 2. Lock miter/arm lock by pushing handle toward rear of saw.
- 3. Apply pressure as shown above.
- 4. If the arm moves easily:
 - a.)Unlock miter lock.
 - b. Locate the adjusting wheel as shown.
 - c. Turn wheel clockwise to tighten, counterclockwise to loosen.
- 5. Repeat steps 1, 2, 3 above and readjust as necessary.



Yoke Clamp Adjustment

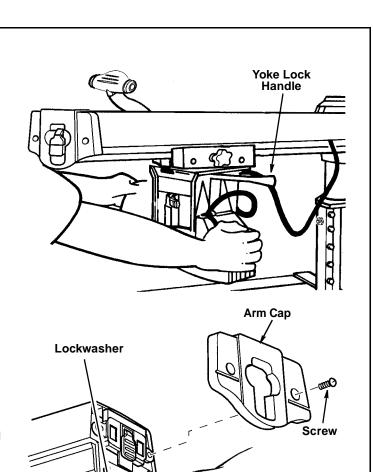
To check the yoke clamp adjustment follow these steps:

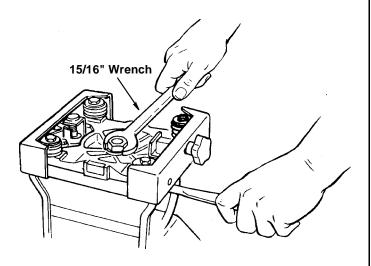
- 1. Pull the yoke lock handle towards the front of saw to unlock yoke. Pull forward on the yoke index lever (on the left side of carriage) to disengage index pin.
- 2. Swivel the motor halfway between the crosscutting and rip position so the index pin is not engaged.
- 3. Lock the yoke lock handle.
- 4. Grasp the motor with both hands and try to swivel it back into the crosscut position. It should not move.
- 5. If it does move follow these steps:
 - a. Remove arm cap.
 - b. Remove carriage stop screw and lockwasher with a 1/4 inch hex-L wrench.
 - c. Grasp the carriage assembly, move it carefully off the end of radial arm, holding it parallel to the radial arm until all carriage bearings are free of their tracks.
 - d. Rest the motor and carriage assembly on saw frame.
 - e. Set yoke lock handle at unlocked position. Tighten nut with 15/16" wrench, until lock handle locks mid-way between the two legs of the yoke.
 - f. Hold the motor and carriage assembly parallel to radial arm and start the rear bearings onto the tracks. Continue to hold the assembly parallel to the tracks until the forward bearings are on the tracks.
 - g. Slide the carriage rearward on the radial arm and install the carriage stop screw and lockwasher.
 - h. Repeat steps 1-4. Readjust if necessary.
 - i. Install arm cap.



WARNING

Reinstall carriage stop screw and lockwasher to prevent carriage from rolling off arm.





Hex "L" Wrench

(1/4-Inch)

Carriage Stop

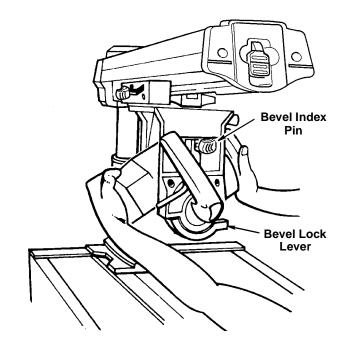
Screw

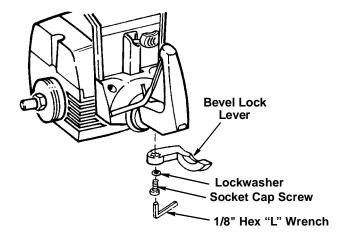
Bevel Lock Lever

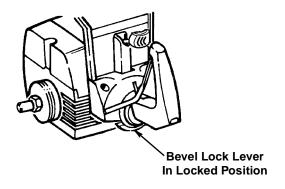
The purpose of the bevel lock lever is to lock the motor at any angle. To check follow these steps:

- 1. Unlock the bevel lock lever. Move the bevel index pin to the left and rotate the saw to approximately 30°. Lock the bevel lock lever.
- 2. Use both hands as shown and try to force the motor out of position. If the motor moves, the bevel lock lever needs to be tightened. On the other hand if it is extremely hard to lock the bevel lock lever it has been over -tightened.
- 3. Follow these steps to adjust:
 - a. Remove the socket cap screw with hex wrench as shown.
 - b. Use the bevel lock lever as a wrench to tighten or loosen the clamp bolt. Do not over tighten.
 - c. Repeat steps 1 and 2. Re-adjust if necessary.
 - d. Replace bevel lock lever in the locked position.
 - e. Tighten the socket cap screw.

Note: The clamp bolt has a left handed thread. Therefore, to increase the clamping effect, rotate the bevel lock lever - when used as a wrench -from right to left, or clockwise when viewed from above. If you accidentally rotate it the wrong way and disengage the bolt from the matching steel nut, it will be necessary to remove the Yoke Handle, and Bevel Scale, in order to reinstall the bolt into the nut.







Arm to Column Adjustment

If you can move the end of the radial arm up and down when the arm is unlocked, adjust as directed below:

- a. Remove two (2) screws from rear cover plate. Tighten evenly top two 3/8-16 bolts until the play is removed and the arm will still move side to side freely. There should be no vertical or horizontal movement in the arm when miter/arm lock is locked and unlocked.
- b. Bottom two nuts should be snugged evenly, but not nearly as tight as top two bolts.
- c. Re-install Rear Cover Plate.

Adjusting Column Tube in Column Support

This adjustment will remove any looseness between the column tube and column support while serving two purposes:

- To insure accurate cuts; and
- To allow the column tube to raise and lower smoothly.

Note: The following adjustment is **very critical**. All future alignment procedures rely on this adjustment being performed correctly. All looseness must be removed.

This section is set up in two sections:

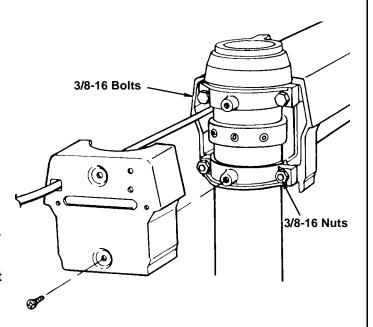
Alignment checks and adjustments. It is very important that the column tube and the inside of the column support are coated with a film of uncontaminated lubricant.

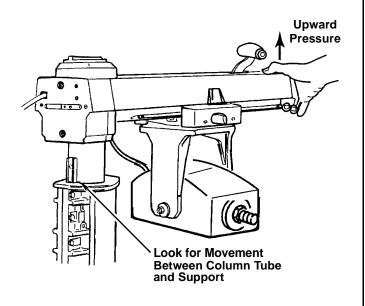
Alignment Checks

Two checks are required, these are adjusted at the factory, but may have shifted during shipment.

- 1. Index and lock arm at 0° Miter.
- 2. Vertical Alignment Check:

The two piece column support needs to be compressed by tightening the black and silver screws to properly control the movement of the column tube. Precise alignment is done only by tightening or loosening the silver 5/16-18 screws in combination with the brass set screw. Push up slightly on the end of the arm. Look for a noticeable movement between the column tube and the column support.





3. Rotational Alignment Check:

While holding the arm with one hand, hold fingers of other hand as shown, between column tube and column support. Apply gentle side-to-side pressure at end of arm. Any side-to-side or rotational movement can be felt with finger at arrow location.

Alignment Adjustments

Note: If Vertical Alignment was OK and adjustment is **not** needed, proceed to step 6.

1. Loosen (2) 1/4 - 20 Gib socket cap screws on the left side at the rear of the column support slightly (1/2 turn).

2. Vertical Adjustment:

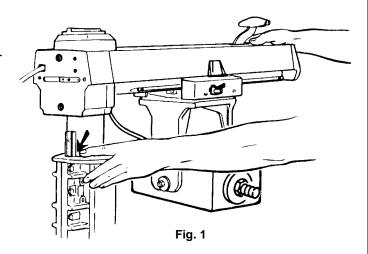
Using the closed end of a box wrench, tighten all of the 5/16-18 black screw heads on the column support casting 1/16th to 1/8th of a turn. Tighten the (2) 5/16-18 silver screw heads slightly more than the black ones to achieve a close fit to the column tube (Fig. 2). (A 1/4" drive ratchet with a six point socket may be needed to get enough torque on bolts.) Loosen nut on brass set screw. Tighten the brass set screw firmly and retighten nut (Fig. 2).

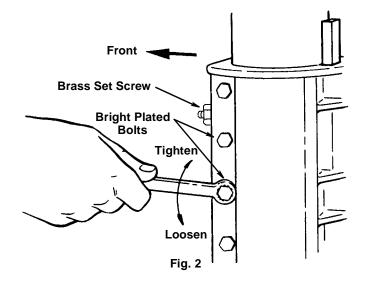
- 3. Elevate and then lower the Arm using the elevation crank.
- 4. If the column tube binds and elevation is difficult, go back to step 2 and loosen the screws until you achieve smooth but firm elevation, recheck step 3.
- 5. Repeat "Vertical Alignment Check".
 - a. If vertical misalignment still exists, repeat steps 2 through 4.
 - b. If vertical misalignment no longer exists, and you have achieved smooth but firm elevation, proceed to step 6.

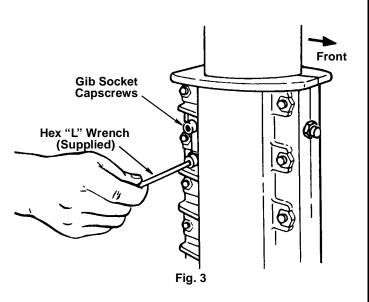
6. Rotational Adjustment:

Tighten the (2) 1/4-20 Gib socket cap screws until no noticeable rotational play exists. (Fig. 3).

- 7. Repeat "Rotational Alignment Check"
 - a. If rotational misalignment still exists, repeat step 6.
 - b. If rotational misalignment no longer exists, and you have achieved smooth but firm elevation, this alignment procedure is complete.







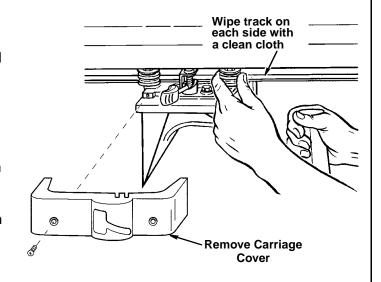
Adjusting Carriage Bearings

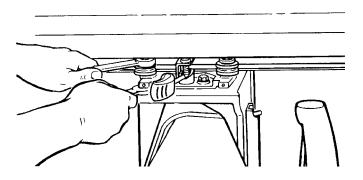
If the carriage bearings are loose it not only allows the saw blade to move up, down, and sideways but also results in inaccurate cuts. Before following these steps make sure the tracks (steel rods) and carriage bearings have been cleaned by wiping them with a clean cloth.

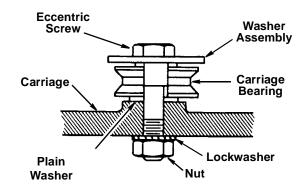
When properly adjusted, the top and bottom face of all four bearing grooves should be in contact with the arm tracks for their entire length and carriage should roll smoothly with some resistance.

To test for looseness between bearings and tracks on radial arm, perform the following steps.

- 1. Remove left-hand carriage cover. (2 screws)
- 2. Push the carriage to its full rearward position.
- 3. Grasp front carriage bearing as shown and hold as tight as possible. At the same time pull carriage forward. If you can stop the bearing from turning, it requires adjusting.
- 4. Check rear bearing in the same manner.
- 5. Adjust as follows:
 - a. Use two 1/2" wrenches to loosen nut just enough to permit the eccentric screw to turn.
 - b. Rotate the eccentric screw a partial turn (left or right) as required to take up looseness.
 - c. Hold the head of eccentric screw in the position established in the preceding step and tighten nut on underside of carriage. Correct adjustment exists when you cannot keep the bearings from turning. However, excessive bearing pressure will cause difficult operation and rapid wear.
 - d. Install carriage cover.







Left Side Carriage Bearings

Positioning Table Supports/installing Front Table/Leveling Front Table

Note: The goal in adjusting the table supports and leveling the front table is to make sure that the table 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.

Positioning Table Supports

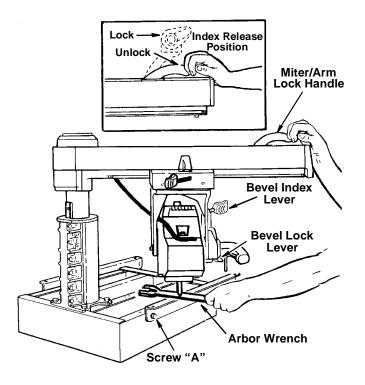
- 1. Release bevel lock lever, move bevel index lever to the left, raise motor with elevation crank and rotate the motor to position arbor shaft down. Tighten bevel lock lever.
- 2. Unlock and hold miter/arm lock lever in index release position as shown. Position arm against left stop (approximately 50° miter). Loosen carriage lock knob and position arbor shaft directly over left hand channel. Lock miter/arm lock lever.

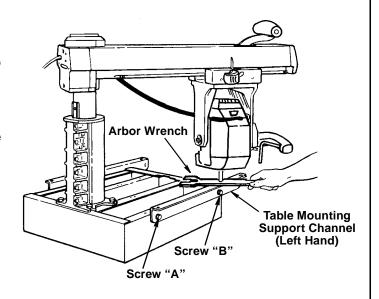
Note: For safety reasons in accordance with the UL standard, miter stops at 50° left and 90° right have been provided to prevent 360° rotation of the radial arm.

3. Slide the arbor wrench handle between end of motor shaft and table support to act as a feeler gauge. Carefully lower the motor with elevation crank until the end of shaft is just touching the arbor wrench. The wrench should slide back and forth with only slight resistance. Tighten screw "A".

Note: Do not change this elevation setting until both left and right hand table support channels have been adjusted.

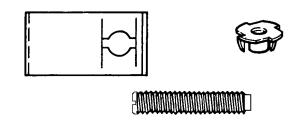
- 4. Unlock miter/arm lock lever. Move arm and carriage to screw "B". Lock miter/arm lock lever. Adjust position of table support so that the arbor wrench just slips between the end of the motor shaft and the support. Tighten screw "B".
- 5. Move arm and carriage to right hand table support and level in the same manner as in step 3 & 4.
- 6. Recheck both support channels to make sure that tightening screws did not affect the accuracy of the adjustment.
- 7. Elevate motor and return motor to horizontal position to provide clearance for installation of front work table.

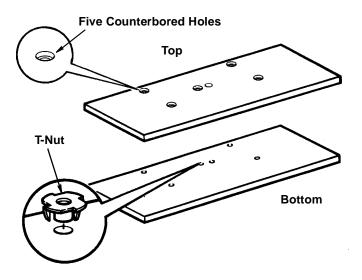




Installing Front Table

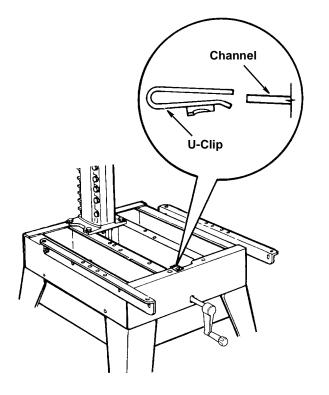
- 1. Set out:
 - front table
 - tee nut
 - 1/4" U-clip
 - 1/4" diam. x 1" long cup point set screw
 - four 1/4" diam x 1" long pan head screws
 - 1/4" diam. x 1-3/4" long pan head screw
 - five 17/64" I.D. x 5/8" O.D. flat washers
 - four 1/4" lock washers
 - four 1/4" diam. hex nuts.
- 2. Identify top and bottom of front table: top has counterbored holes. Place table **bottom side up on** solid surface. Hammer tee nut into leveling hole. (This hole is not counter-bored from the top).



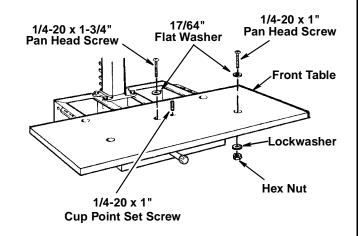


3. Snap U-clip onto front edge of base so hole lines up with hole just to the left of center notch.

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



- 5. Drop a flat washer into each counterbored hole.
- 6. Start 1-3/4" 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 and through matching holes in table supports. Place lockwasher and nut on the end of each screw, and tighten with screwdriver.



Make Front Table Flat

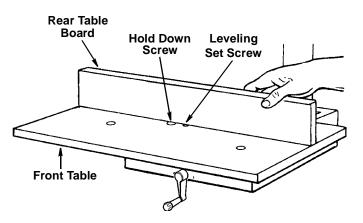
1. Place rear table on its edge, across center of front table. Check for gap between surfaces.

If there is a gap, close gap by raising or lowering center of front table:

to raise center, tighten cup point set screw against frame;

to lower center, tighten center (1-3/4" long) pan head screw.

2. When gap is closed, make sure cup point set screw touches frame (look underneath table), and center (1-3/4" long) pan head screw is tightened.



This concludes adjusting your saw where you have removed all "looseness" or slack between the different parts of the saw. The next section deals with actually aligning the sawblade to get accurate cuts.

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.

Square Crosscut Travel

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

Squaring cross cut travel.

- 1. Index but do not lock arm at 0° miter.
- 2. Install saw blade as shown. Motor shaft has left hand threads.

Note: Do not overtighten arbor nut. Use the arbor wrench to just "snug" it.

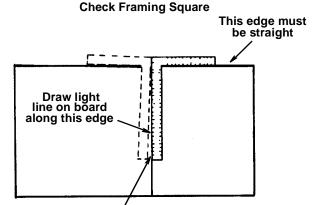
Λ

WARNING

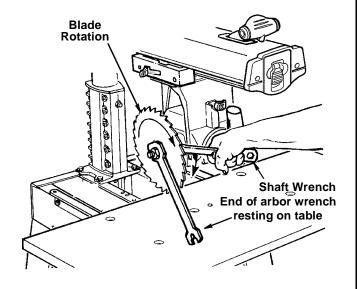
Plugging in saw during alignment could result in accidental start-up and severe cuts from contact with spinning blade.

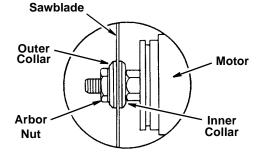
Do not plug in saw at anytime during alignment or adjustment.

Plug in saw only when it is to be used.



Should be no gap or overlap here when square is filipped over to dotted position.

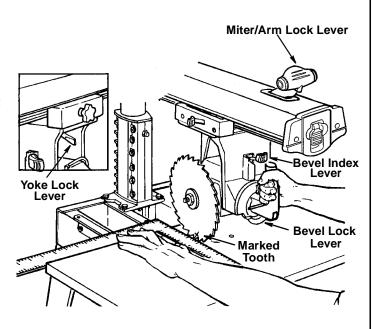


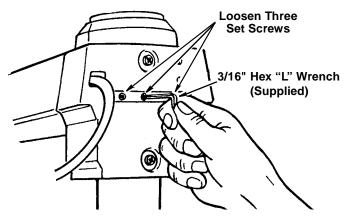


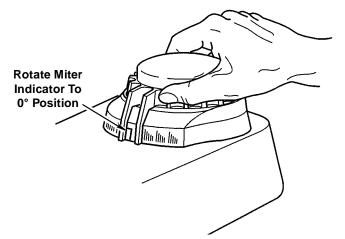
- 3. Lower arm until saw blade just clears the front table. Tighten the yoke lock lever and bevel lock lever.
- 4. Place a framing square on the table, as shown, with one leg of square firmly against rear edge of front table. Position the blade and square until the leg of the square just contacts a tooth of the blade. Mark this tooth.
- 5. When the carriage is moved slowly back and forth on the arm, the marked tooth should just touch the square at all points. If marked tooth moves into or away from square the following adjustments are required:
 - a. Loosen (3) 3/8 16 set screws in arm latch at rear of arm as shown.
 - b. Move the arm in direction to make marked tooth follow edge of square when the saw blade is moved along arm in a "cross cut" manner.
 - c. Lock miter/arm lock lever.
 - d. Retighten (3) setscrews in arm latch as tight as possible and recheck "cross cut" travel.

Note: This squaring of the cross cut travel will simultaneously set both of the 45° miter index positions.

6. Set miter indicator on 0° position as shown.

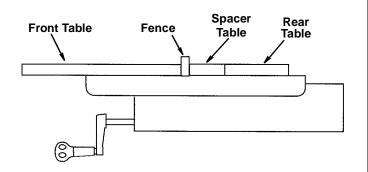




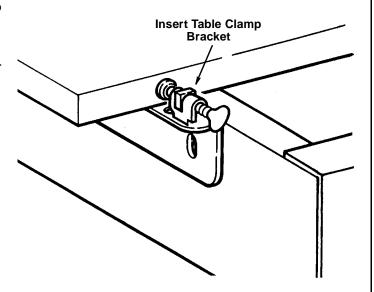


Install Table Clamps

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



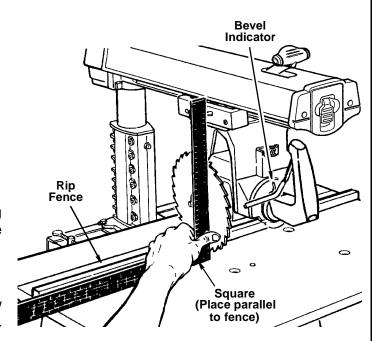
- 2. Tilt table clamp bracket forward and snap into place in opening at rear of left and right table support.
- 3. Tighten thumbscrews to clamp table sections in place.

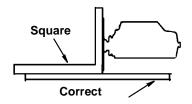


Square Blade to Table for Crosscutting

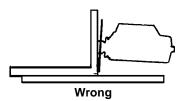
The goal of this adjustment is to make the blade square to the table so that crosscuts will be accurate; otherwise all crosscuts will have a slight bevel angle.

- 1. Lower blade until it just clears front table. Lock miter arm lock lever in the 0° miter position. Tighten yoke lock handle, carriage lock knob and bevel lock lever.
- 2. Place a framing square on the table with the short leg against the saw blade and long leg parallel to fence. Do not allow the square to rest against a "set-out" tooth; it must rest flat against the blade side.
- 3. If the saw blade is square with the table top (no visible gap appears between the saw blade and square) no adjustment is required. Set bevel indicator to 0° reading. If the square does not touch the saw blade as shown (with square leg held firmly against the table top), perform the following adjustments:

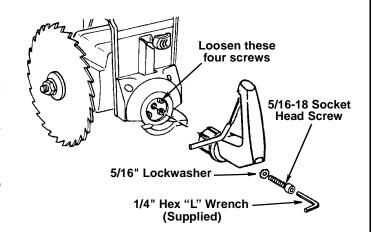








- a. Remove handle by removing 5/16-18 socket head screw and lockwasher.
- b. Slightly loosen the four socket head screws with 1/4" Hex "L" Wrench. Rotate motor while holding square firmly against saw blade and table top.
- c. Slightly tighten each of the four screws and recheck ... Now tighten each screw tight.
- d. Reinstall handle and adjust indicator to 0° reading.
- e. Loosen carriage lock knob.

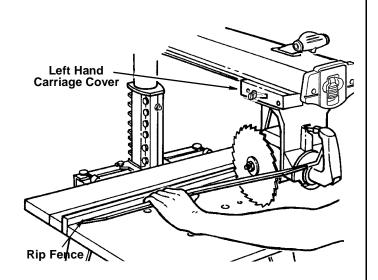


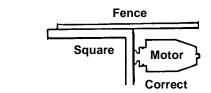
Square Blade to Fence

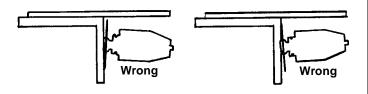
The goal in setting the blade square to the fence is to reduce the risk of kickback when ripping. This adjustment will also reduce splintering of the workpiece and burning of the kerf during ripping and crosscutting.

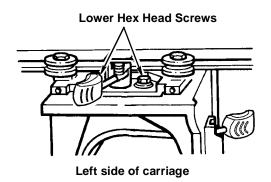
- 1. Lower blade until it just clears table.
- 2. Unlock carriage lock knob. Pull blade forward to front of arm. Tighten carriage lock knob.
- 3. Place square so short edge is against fence and long edge is against flat surface of blade (not on a tooth), just below blade collar.
- 4. There should be no gap between blade and square. **Note:** Not all blades are Perfectly flat. Check different points along blade surface by making quarter turns and looking for gap each time. Consider overall fit of blade. If there is no gap, no adjustment is needed.
- 5. If there is a visible gap between the saw blade and square adjust as follows:
 - a. Remove left hand carriage cover.
 - b. Loosen the yoke lock handle. (on right side of carriage).
 - c. Loosen slightly the two hex-head screws holding yoke index pin.
 - d. Rotate the yoke assembly until gap between the saw blade and square is eliminated.
 - e. Tighten yoke lock handle. Retighten the two hex-head screws.
 - f. Recheck blade squareness.
 - g. Install carriage cover.
 - h. Loosen carriage lock knob and return blade to rear of arm.

Note: This alignment procedure will simultaneously set both yoke indexing positions for blade in and out rip.





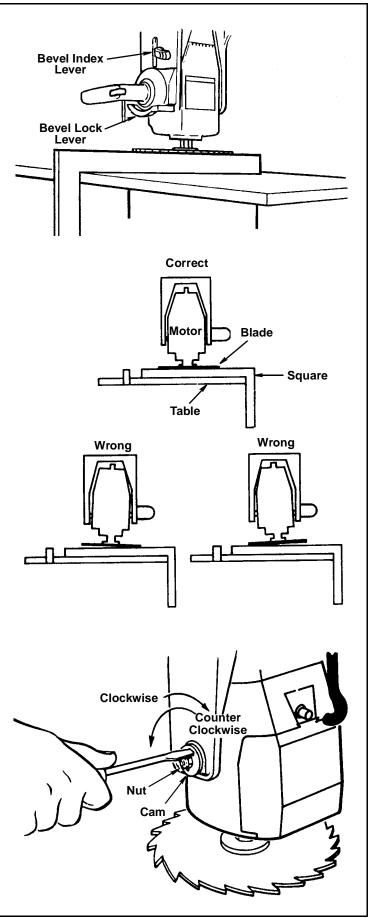




Make Blade Parallel to Table

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 arm in 0°miter crosscut position.
- 2. Pull blade forward and tighten carriage lock knob.
- 3. Raise blade at least 2" above table. Release bevel lock lever and release bevel index lever and rotate motor 90°.
- 4. Lock motor at 90° bevel (blade horizontal) with bevel lock lever.
- 5. Place square with long side on table under right side of blade, and short side hanging down vertically at front of saw.
- 6. Lower radial arm until blade surface, not a tooth, just rests on square.
- 7. There should be no gap between blade and square. **Note:** Not all blades are perfectly flat. Check different points along blade surface by making quarter turns and looking for gap each time. Consider overall fit of blade. If there is no gap, no adjustment is needed.
- 8. If there is a visible gap between saw blade and square, a bevel heel condition exists and adjustment is required.
 - a. To correct, unlock bevel lock lever. Loosen the rear motor mount nut until you can rotate Cam. Rotate Cam as shown until gap between saw blade and square is eliminated.
 - b. Tighten nut.
 - c. Tighten bevel lock lever and recheck blade to square.
 - d. Reposition motor to crosscut position with blade at rear of arm.

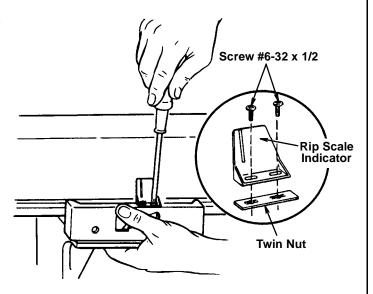


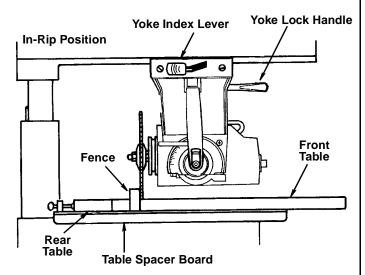
Installing and Adjusting Rip Scale Indicators.

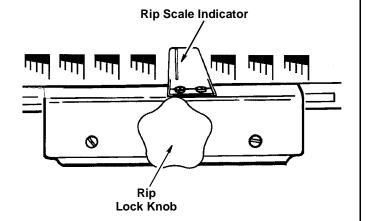
Note: The rip scales and pointers are intended to be used for quick settings. For greater accuracy, take direct measurement between blade and fence.

- 1. Pre-assemble indicator and twin nut. Loosen but do not remove two screws which attach left hand carriage cover.
- 2. Tilt carriage cover and install rip indicator with twin nut on inside of cover. Tighten carriage cover attaching screws.
- 3. Loosen two cover screws. Loosen but do not remove carriage lock knob in right hand carriage cover. Install rip indicator. Tighten carriage cover attaching screws.
- 4. With fence in its normal position (next to front table), loosen yoke lock handle, pull yoke index lever forward and rotate yoke to the left to index yoke 90° from the cross cut position. This will locate saw blade between motor and fence ("In Rip" position). Lock yoke lock handle.
- 5. Position carriage until edge of blade, when spun by hand, just touches front face of fence. The "In-Rip" scale indicator (on the right hand side of radial arm) should now read "0" inches on upper portion of the blade "In-Rip" scale. If not, loosen screws and shift the indicator until it is aligned with the "0" mark, then tighten the screws.

Note: With saw blade and fence in the position shown, the upper portion of blade "In-Rip" scale is used. If fence is moved to extreme rear position, the lower portion of blade "In-Rip" scale would be used.







6. The blade "Out-Rip" scale indicator on left hand side of the radial arm is adjusted in essentially the same manner as blade "In-Rip" indicator, except position blade with 2 inches between fence and face of saw blade. The rip-scale indicator should be positioned to read 2 inches on upper portion of the blade "Out-Rip" scale.

Note: With saw blade and fence in the position shown, the upper portion of the blade "Out-Rip" scale is used. If fence is moved to extreme rear position the lower portion of blade "Out-Rip" scale is used.

7. Loosen the yoke lock handle, pull the yoke index lever forward and return the blade to the crosscut position.

Note: Blade is now aligned. It is important that you periodically check alignment and adjustment to insure accurate cuts and maintain safety of cutting procedures.

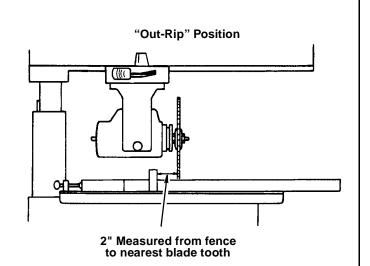
Install Guard

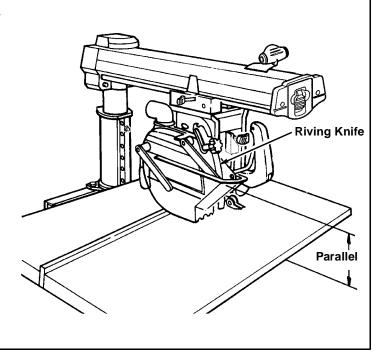
The guard is a very important safety feature. It covers a large part of the blade and helps protect against severe cuts. Always use the guard.

- 1. Lock motor at 0° bevel (blade vertical).
- 2. Rotate dust elbow 90° so that the opening is facing to left.
- 3. Use one hand to lift clear plastic guard; use other hand to grasp rear of guard (below dust elbow). Position guard so riving knife faces front of saw.
- 4. Tilt front of guard down about 45°. Place over blade; rotate guard to level position.

Note: Make sure notch in guard fits onto tab on motor. This will prevent movement of guard about motor. Squeeze handle trigger to make sure it fully raises clear plastic guard. If it does not, remove and re-install guard, making sure that trigger mechanism engages pull link on guard.

5. Tighten guard clamp screw.



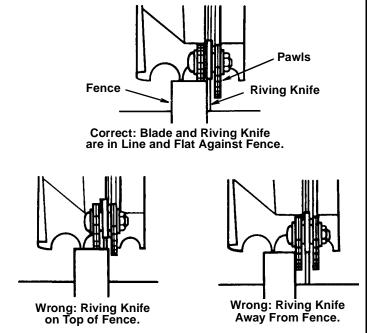


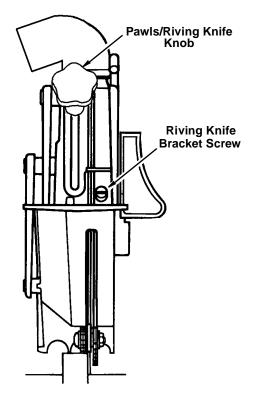
Align Riving Knife to Blade

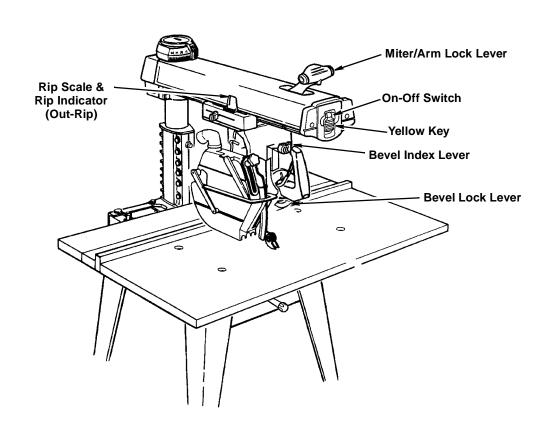
1. The goal of this adjustment is to position the riving knife directly in line with the blade.

Riving knife alignment is an important safety factor. The riving knife rides in the kerf of the cut during ripping to keep the two sides of the workpiece from pinching on the blade. Blade pinching is a cause of kickback.

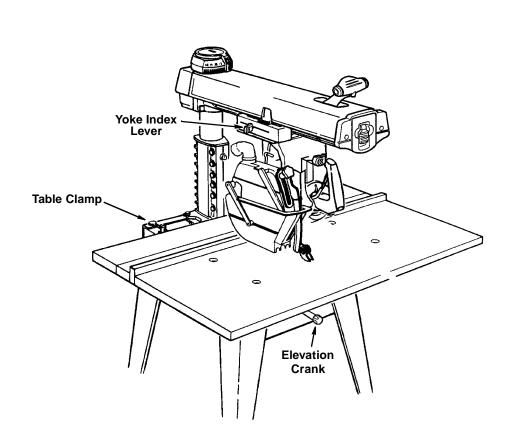
- 1. Lock yoke in in-rip position (blade towards column, motor towards front of arm).
- 2. Lower arm until blade just clears table.
- 3. Unlock carriage lock knob while holding up lower plastic guard, move yoke back until blade touches fence. Tighten carriage lock knob.
- 4. Loosen pawls/riving knife knob. Lower riving knife to the table and tighten knob. The riving knife should rest flat against fence.
- 5. If adjustment is needed:
 - a) loosen riving knife bracket screw.
 - b) slide riving knife so it rests against fence.
 - c) secure riving knife bracket screw.
- 6. Raise riving knife and tighten pawls/riving knife knob.



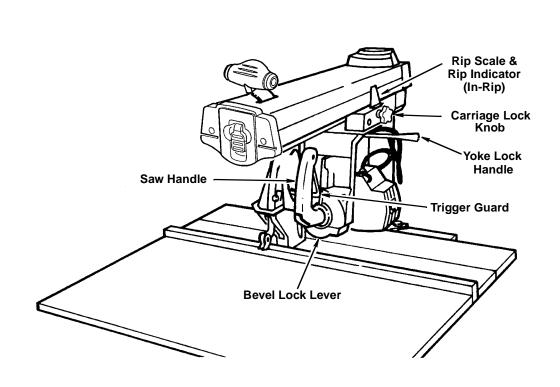




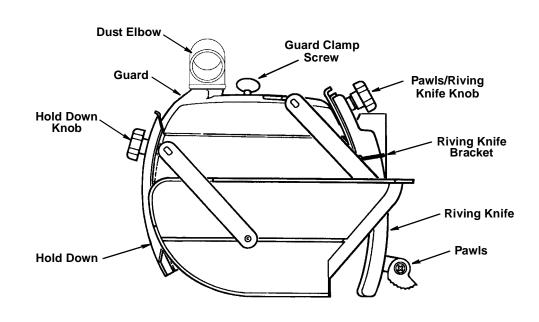
<u>Control</u>	<u>Function</u>	Operation/Comments	
Bevel Lock Lever	Frees motor to rotate; locks in any desired position	Pull lever to release and push to lock Support motor before unlocking because it can swing down quickly Bevel index lever must be unindexed before moving motor	
Miter/Arm Lock Lever	Frees radial arm to move; locks in any desired position; pre-set indexed positions at 0°, 45°L, 45°R	Pull lever forward to release index then swing arm left or right <i>Hold in</i> unlocked position while moving arm Push lever to rear to lock arm	
On-Off Switch	Turns motor on/off	Pull on, push off Requires yellow key	
Yellow Key	Allows saw to be switched on	Insert into on-off switch Remove after turning saw off	
Bevel Index Lever	Indexes the saw blade to 0°, 45°, or 90° pre-set index positions then release it	Move bevel index lever to the left while positioning the blade, then release it	
Rip Scale & Rip Indicators	Tells approximate distance between blade and fence when saw is in in-rip or out-rip position	Move blade carriage along arm to align line on indicator with desired number on scale	



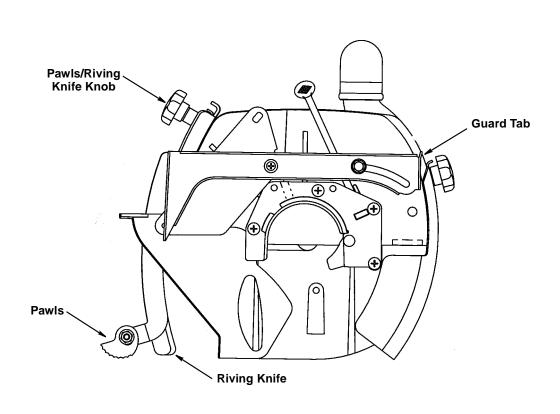
Control	<u>Function</u>	<u>OperationlComments</u>
Elevation Crank	Raises/lowers radial arm	Turn clockwise to raise, counter- clockwise to lower
Table Clamp	Frees table sections to allow changing fence position	Turn clockwise to tighten, counter- clockwise to loosen
Yoke Index Lever	Frees yoke to rotate between rip and crosscut positions	Pull the spring loaded yoke pivot latch forward to release this pin (Yoke lock handle must be released)



Control	<u>Function</u>	Operation/Comments
Yoke Lock Handle	Locks yoke in rip or crosscut position	Pull handle forward to release; push handle reward to tighten Yoke index lever must be unindexed before rotating yoke
Carriage Lock Knob	Locks carriage to radial arm for ripping	Rotate counterclockwise to release carriage; turn clockwise to lock carriage in position Always Lock before ripping
Saw Handle	Provides grasping surface so carriage can be moved. Contains trigger mechanism to raise clear plastic guard when making a crosscut	Grasp to move blade carriage Squeeze trigger to fully raise clear plastic guard. Clear guard must be raised over fence to crosscut



Control	<u>Function</u>	Operation/Comments
Guard Clamp Screw	Secures guard to motor; frees guard for removal	Turn counterclockwise to loosen, clockwise to tighten
Guard	Protects against contact with upper blade; partially protects against contact with lower blade; acts as sawdust deflector	Upper part remains fixed in level position. <i>Notch</i> in guard fits securely into <i>matching tab on motor</i> Clear guard is moveable: fully raise over fence to crosscut; <i>See Saw Handle</i> ; most workpieces will automatically raise clear guard during ripping; <i>See Guard Tab</i>
Hold Down Knob	Frees hold down to move up and down; locks hold down in place	Turn counterclockwise to loosen, clockwise to tighten
Hold Down	During ripping, acts as partial bar- rier to infeed side of blade; keeps infeed side of workpiece from flut- tering; acts as sawdust deflector	For ripping, lower hold down to top of workpiece surface, then raise slightly and lock in place. For crosscutting lock in fully raised position
Riving Knife Bracket	Prevents side to side movement of riving knife and provides means for adjusting alignment	Loosen to align riving knife, then tighten
Dust Elbow	Directs sawdust rearward when crosscutting and ripping	Rotate dust elbow to rear when ripping with saw



<u>Control</u>	<u>Function</u>	Operation/Comments
Guard Tab	Provides manual way to raise clear plastic guard during ripping when workpiece fails to raise it	Push and hold until workpiece clears guard, then release
Pawls/Riving Knife Knob	Frees pawls and riving knife to independently move up and down	Turn counterclockwise to loosen, clockwise to tighten
Pawls	During ripping, slow or stop kick- back by digging into workpiece; when lowered during crosscut- ting, provide partial barrier to lead- ing edge of blade	For ripping, set pawl level on work- piece surface. For safety reasons set pawls before ripping; See Ripping Set-Up for details and illustrations
Riving Knife	Reduces kickback by keeping kerf open; when lowered during crosscutting, provides partial barrier to leading edge of blade	For ripping, lower to table For safety reasons riving knife must be in line with blade. See Alignment: Riving Knife to Blade

Electrical Connections

Motor Specifications

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

Specification:	Model
	RS1000AR0
Rated H.P.	1.5
Max Developed H.P.	3.0
Voltage	220
Amperes	6.0
Hertz (cycles)	50
Phase	single
RPM	2900
Arbor Shaft Rotation	Clockwise
Run Capacitor	Yes

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



WARNING

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



WARNING

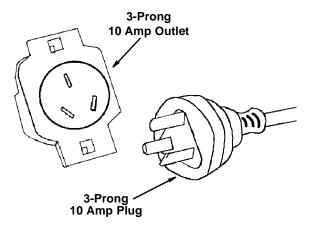
If electrical shock occurs, your reaction to shock could bring hands into contact with blade.



WARNING

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

The unit is wired for 220V and has a plug that looks like this:



Power Supply



WARNING

Saw is factory wired for 220V operation. Connect to 220V, 10-AMP branch circuit and use 10-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.

The power tool is equipped with an Australian standard grounded plug. The ground conductor has a yellow with green striped 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 has a different plug pattern type, it is recommended that you have a qualified electrician replace it with a properly grounded 3-prong outlet.

Electrical Connections

Extension Cords

Note: Make sure the proper extension cord is used and is in good condition.

The use of any extension cord will cause some loss of power. Determine the minimum wire size extension cord per table. Use only 3-wire extension cords with 3-prong grounding type plug and 3-pole receptacles which accept the tool's plug.

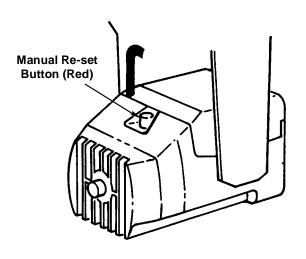
Motor	Protection 8	Reset	Button

The motor protector opens the 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. (It may take over one hour for the motor to cool sufficiently for protector to reset.)

Extension Cord Length	Wire Sizes Required for 220V
220V	
0-15 M (0-50 Ft.)	1.0 MM ² (12 American Wire Gage)

Note: For circuits farther away from the electrical circuit box, wire size must be increased proportionately to deliver ample voltage to the motor



Crosscutting

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, miter, 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.

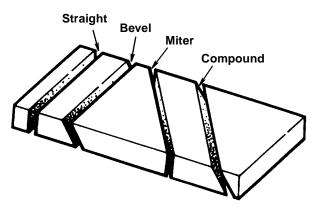
Exposed Blade Teeth



WARNING

During crosscutting, blade teeth can be exposed. To reduce risk of having fingers, hand or arm cut off:

- ✓ Correctly install and use guard.
- ✓ Lower pawls or riving knife to clear fence or workpiece, whichever is higher, by 1/4". Lowered pawls or riving knife 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 miter position. Use right miter 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.



Rolling Carriage



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



CAUTION

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

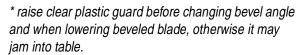
- ✓ Make sure installed fence is at least half as high as the workpiece, and never less than 3/4".
- ✓ Start and finish cut with blade in rearmost position, behind fence.
- √Firmly hold workpiece flat on table and up against fence. Cut only one workpiece at a time.
- ✓ Pull blade through workpiece only far enough to complete cut, and never more than half the 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

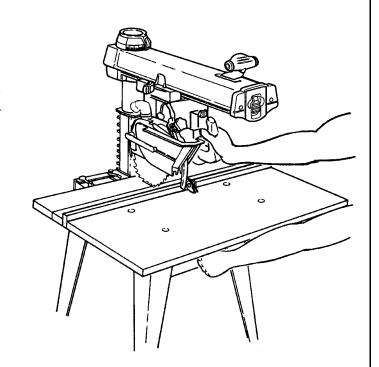
A kerf or shallow cut is needed in the table and fence to serve as a path for the blade and to ensure that the blade cuts all the way through the workpiece. A kerf is needed for each different cutting path.

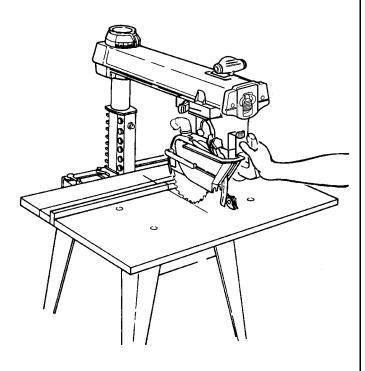
To make an approximately 1/16" deep kerf:

- 1. Prepare table:
 - put fence in front position
 - tighten table clamps
- 2. Prepare blade:
 - lock motor in crosscut position
 - lock radial arm at desired miter angle
 - lock motor at desired bevel angle*
 - unlock carriage lock and push blade to rearmost position, behind fence
 - lower blade* to just clear table
 - lower pawls or riving knife 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 one more full turn of crank.
- 5. Squeeze handle trigger to fully raise clear plastic guard so it will clear fence. Pull blade through fence and across table as far as it will go.
- 6. Push blade to rearmost position, behind fence, and turn saw off. Keep hand on saw handle until blade stops spinning.





Crosscutting

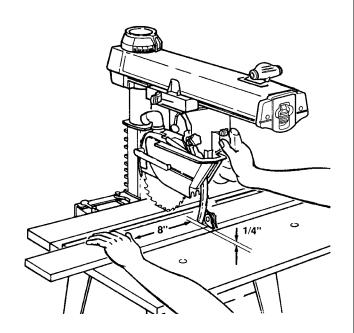
Making Crosscuts

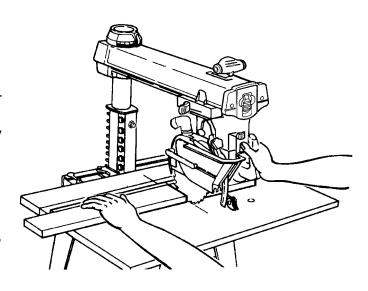
Follow these steps to make crosscuts.

- 1. Prepare table:
 - put fence in front position
 - tighten table clamps
- 2. Prepare blade:
 - lock motor in crosscut position
 - lock radial arm at desired miter angle
 - lock motor at desired bevel angle*
 - unlock carriage lock and push blade to rearmost position, behind fence
 - lower blade into kerf* but not touching kerf bottom (blade should move freely).
- * raise clear plastic guard before changing bevel angle and when lowering beveled blade, otherwise it may jam into table.
- 3. Position workpiece against fence, and lower pawls or riving knife to clear fence or workpiece, whichever is higher, by 1/4".

(Note: Lowering the pawls or riving knife provides a partial barrier to the leading edge of the blade.)

- 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. Squeeze handle trigger to fully raise clear plastic guard so it will clear fence and workpiece. Pull blade through workpiece but only far enough to complete cut, and never more than half the 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.





Crosscutting

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.

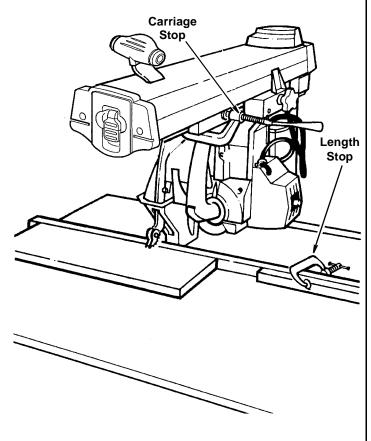
A carriage stop defines the distance needed to pull the blade through to complete each cut. This will prevent pulling the blade through more than the recommended distance.

To make a carriage stop use 1x2 lumber:

- a) cut two pieces, each 2" long
- b) clamp a piece on each side of radial arm, so blade carriage stops at distance needed to complete cut
- c) 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.

Keep hand holding down workpiece at least 8" from blade.



Crosscutting Hints

- 1. To extend life of table top, make auxiliary table cover 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 will weaken a fence.
- 3. Keep table clean of chips and sawdust.
- 4. Use sharp blades, and use the right blade for each job.
- 5. When making miter or bevel cuts, use extra force to hold workpiece down because

it tends to move during these types of cuts.

- 6. Do not miter on the left side of the table in a manner that allows the blade to come off of the table.
- 7. When cutting hard woods, like oak, or making compound cuts, keep arm holding saw handle rigid and pull blade through slowly.
- 8. To keep cut line accurate, periodically check blade alignment.
- 9. Do not cut severely warped, bowed or twisted workpieces.

Ripping

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 and 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, or in the rear position 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. In-rip 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.

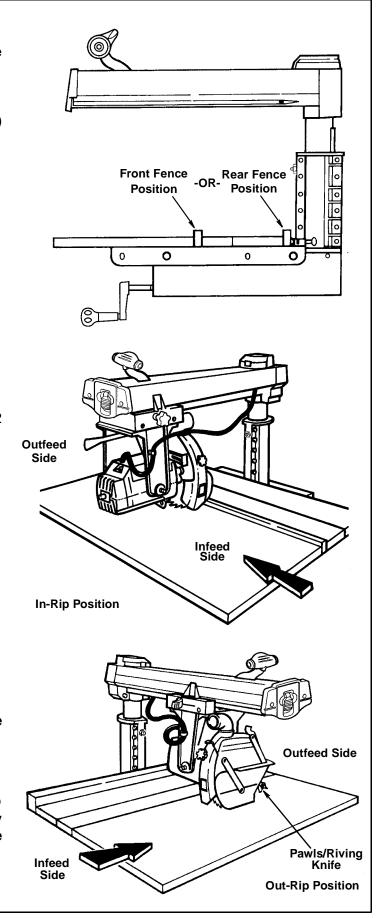
Out-rip: the blade is toward the table front, and the motor is toward the column. Use out-rip only when you set the blade 16" or more from the fence.

Infeed and Outfeed Directions

Infeed and outfeed refer to sides of the blade.

Infeed: the side of the blade where the guard hold down 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 riving knife 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 wider 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.

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).

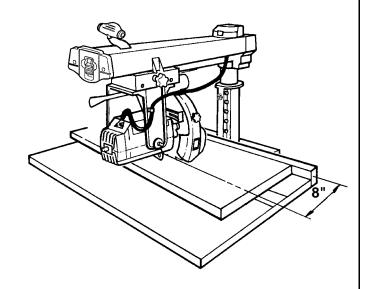
Use a push block and auxiliary fence when the blade is set 1/2 to 2" from the fence.

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

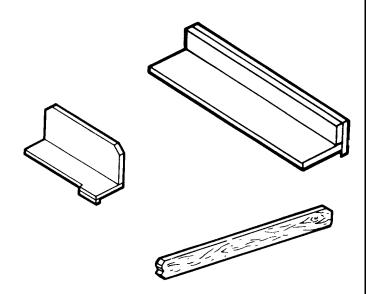
Do not set the blade closer than 1/2 " to the fence. The radial saw is the wrong tool for such a narrow cut. A band saw would be more appropriate for this type of cut.

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.



Example: To rip 2" off a 10" wide board, set blade in in-rip position 8" from rear fence.



Ripping

Outfeed Zone Hazard



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 riving knife; they act as partial barrier to outfeed side.
- ✓ Start and finish cut from infeed side.
- √ 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

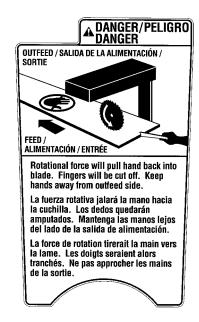
Kickback is the uncontrolled propelling of the workpiece back toward the user.



WARNING

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

- · pawls and riving knife are not used or not set correctly
- · riving knife 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
- user touches or tries to pull workpiece through outfeed side before blade has stopped spinning.





To reduce risk of kickback:

- ✓ Set pawls and riving knife according to ripping set-up procedure. Correctly set riving knife 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 riving knife is in line with blade (see Alignment: Riving Knife 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.
- √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.



WARNING

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 riving knife; they act as partial barrier to outfeed side.



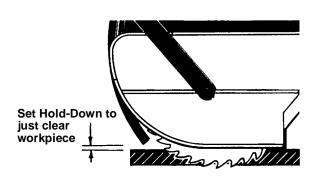
Ripping

Hold Down Function

The hold down must be set correctly during ripping to act as 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 hold down must be re-set each time a different thickness workpiece is cut.

Follow the Ripping Set-Up Procedure to correctly set the hold down.



Pawls and Riving Knife Function

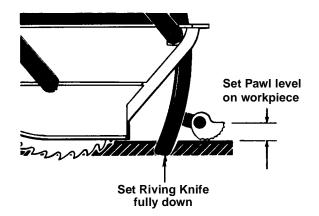
The pawls and riving knife must be set correctly during ripping to reduce the risk of kickback, to prevent wrong way feed, and to act as a barrier to the hazardous outfeed side of the blade.

The riving knife rests on the table. It keeps the workpiece kerf 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 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 riving knife.



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. Also see the special notes for bevel set-up that follow this section.

1. Prepare table:

- insert solid (no kerfs) fence (**Note**: *Use* auxiliary fence when blade is set 1/2 to 2" from fence (See Cutting Aides)
- tighten table clamps.

2. Prepare blade:

- lock radial arm at 0° miter lock blade in in-rip position*
- lower blade to just clear table
- lock blade carriage desired distance from fence. Note: Make sure wider part of workpiece will be between blade and fence.

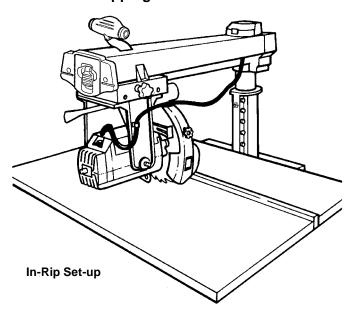
3. Make kerf:

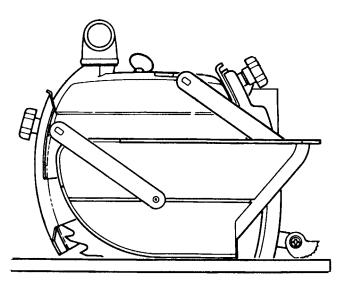
- a) turn saw on
- b) lower blade about 1/16" into table
- c) turn saw off and remove yellow key.
- 4. Place workpiece parallel to and up against blade.** **Note:** Workpiece will be between blade and table front.
- 5. Lower hold down** to workpiece, then raise slightly so it just clears top surface of workpiece. Lock in place.
- 6. Lower riving knife to table. **Lower** pawls to workpiece surface.** **Move** workpiece toward outfeed side until one set of pawls rests level on workpiece surface. Lock in place.



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.





Setting Guard For Rip Cut

^{*} use out-rip position for rips 16" or wider

^{**} bevel set-up: see special notes, next page

Ripping

- 7. Remove workpiece from table.
- 8. Ready push stick or push block.
- 9. 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.

Special Notes for Bevel Set-Up



CAUTION

Bevel ripping creates unique problems of visibility and feeding. Before cutting, check the set-up using both in-rip and out-rip. Use the position that gives the best combination of workpiece visibility and push stick clearance.



WARNING

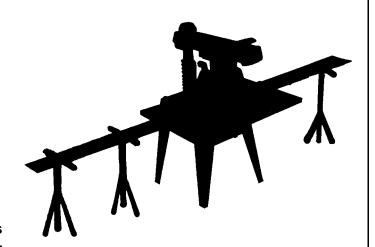
Bevel the edge that is not against the fence.

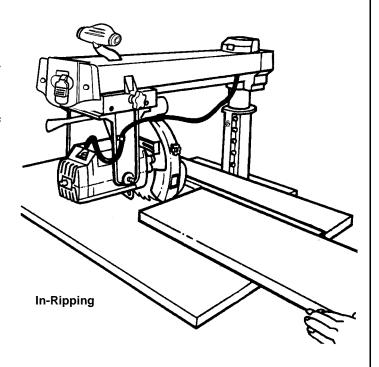
- 1. When setting bevel angle, raise radial arm to allow sufficient clearance for blade and guard to not jam in table.
- 2. When blade is beveled manually raise clear plastic guard before lowering blade to table or kerf, otherwise it may jam in the table.
- 3. To set hold down, place workpiece directly under guard nose, rather than parallel to blade.
- 4. To set pawls, place workpiece directly under set of pawls closer to table. This set of pawls will keep contact with workpiece surface.

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



CAUTION

For large workpieces use a feather board in place of your hand on the table. It gives better support. (See cutting aides)

- 5. With right hand, push workpiece under hold down 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 hold down.

 Note: Most workpieces will automatically raise clear plastic guard as they pass from infeed to outfeed side. Unusually tall and narrow workpieces may not raise clear guard. When this happens, push guard tab to raise guard, then release tab when guard rests on top of workpiece surface.

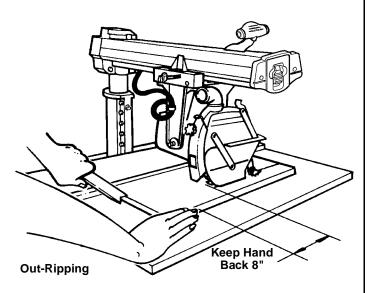


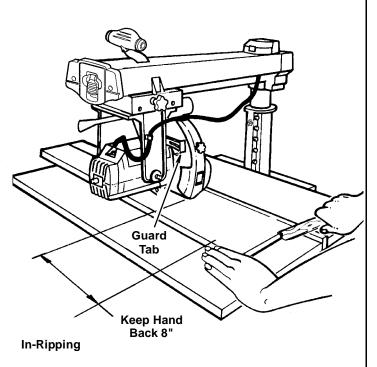
CAUTION

Pushing guard tab means using only one hand to control workpiece. While pushing tab, use extra care to guide workpiece and to keep hand at least 8" in front of hold down.

Release tab as soon as clear guard rests on workpiece.

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





Ripping

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.

Ripping Hints

- 1. To extend life of table top, make auxiliary table cover 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 comers 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).

A DANGER

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.

Cutting Aides

Before cutting any wood on your saw, study all of the Crosscutting and Ripping Instructions found on pages 45 through 57. As you learn new radial arm saw woodworking techniques, you'll see that many types of cuts need different support and feeding devices, known as jigs or fixtures. They can help you make cuts more accurately. By helping to steady the workpiece and keep you away from the blade, they can help you safely use your saw for certain cuts. Many people custom build their own jigs and fixtures. Jigs and fixtures are often designed for a particular cut. You can use your radial saw to easily make many jigs and fixtures. To get you started, we've included instructions for some simple ones. After you have made a few practice cuts, make up these jigs before starting any projects. Make the push stick first.

Push Sticks

Make the push stick using a piece of 1 x 2. (see drawing top right for dimensions and shapes)

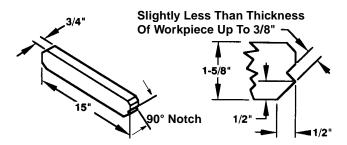
Push Block

There are any number of ways to properly cut your work pieces to make a push block. The following steps describe one way you can proceed.

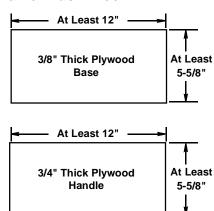
Making the base:

- Start with a piece of 3/8" plywood at least 5-5/8" wide or wider and 12" long or longer.
- Make two ripcuts. Perform the first ripcut along the long side of the 3/8" plywood to create a 3/8" wide strip. Next ripcut the 3/8" plywood to a width of 5-1/8".
- Crosscut the 3/8" plywood to 12" long.
- Crosscut a 2-1/2" piece off of the 3/8" wide by 3/8" thick strip and save this short piece for later.
- The next cuts will create the 3/8" by 9-1/2" notch in the base. Mark the long edge of the board 2-1/2" from one end. Make a crosscut into the edge, stopping about 3/4" into the board. Set the saw to the in-rip position and rip the width to 4-3/4" along the same edge as the stopped crosscut. Stop the ripcut where the two cuts intersect. Turn off the saw and remove the base piece. The base should now measure as shown.

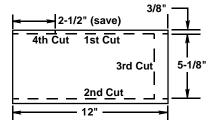
Push Stick



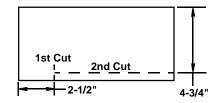
Material for Push Block



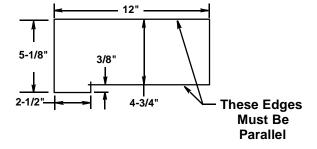
Cutting Out the Base



Creating the Notch



Finished Base



Cutting Aides

Making the Handle:

Miter crosscut a piece of 3/4" thick plywood to the shape and size shown. The mitered corners can be any size that looks like the drawing (about 1-1/2" by 1-1/2").

Putting it together:

- Using good quality wood working glue, glue the 2-1/2" strip saved earlier to the base as shown. **Important:** Do not use nails or screws. This is to prevent dulling of the saw blade in the event you cut in to the push block.
- Position the handle at the edge of the plywood base as shown. Fasten them together with glue and wood screws.
 Important: Make sure the screw heads do not stick out from the bottom of the base.
 The bottom must be flat and smooth enough to slide along the auxiliary fence you are now ready to make.

Auxiliary Fence:

Making the base:

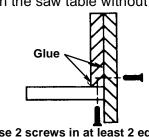
- Start with a piece of 3/8" thick plywood at least 5-1/2" wide and at least 30" long.
- Cut the piece to 5-1/2" wide and 30" long.

Making the side pieces:

- Using 3/4" plywood at least 30" long, ripout one piece 2-1/4" wide and one piece 3-5/8" wide.
- Separately, crosscut both pieces to 30" long.

Putting it together:

 Glue and then fasten with screws the side pieces to the base as shown. Make sure the edge of the base and the face of the side piece are parallel as indicated in the note next to the drawing. Important: Make sure the screw or nail heads do not stick out from the bottom of the base. The bottom must be flat and smooth enough to rest on the saw table without rocking.

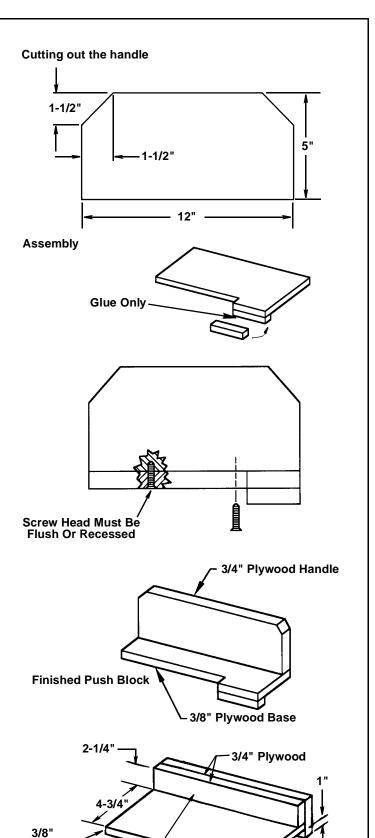


Use 2 screws in at least 2 equally spaced locations along fence (for a total of 4 screws)

Plywood

This Face and

This Edge Must Be Parallel





WARNING

To reduce the risk of shock, burns or lacerations form accidental start up of saw, turn power switch off and unplug saw before taking off blade, adding or changing accessories and before doing any maintenance or servicing saw.

Molding/Sanding

Instructions for operating the molding head are contained in a booklet furnished with the molding head.

For use of molding head cutter or drum sander with saw arbor vertical, the rear table required an opening (next to rear face of fence) for clearance. Cut this opening as shown.

Note: Spacer table is too narrow for this opening. Be sure opening is cut in the rear table.

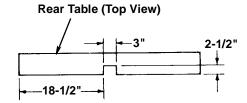
For top-side rabbeting or molding in the inrip position, relieve the fence by positioning the cutting tool at the desired location on the arm, locking the carriage lock knob, and lowering the cutting tool slowly into the fence remove only as much material from the fence as necessary.

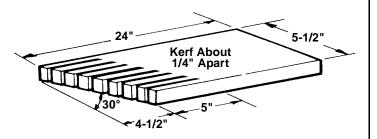
Note: When using drum sander, vacuum motor often to prevent sawdust/powder build-up, because powder interferes with motor ventilation and can clog starter switch.

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 3/4" lumber 5-1/2" wide. Miter crosscut lumber at a 30° angle to 24". Rip to make 5" long cuts about 1/4" apart.





Cutting Aids

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 (out-feed 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.





WARNING

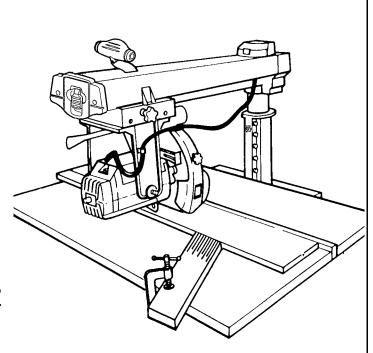
If you try to rip an irregular workpiece, it could bind blade and cause kickback.

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

- a) place irregular side of workpiece against fence
- b) put straight-edged board on top of workpiece and against fence
- c) tack straight edged board to work piece.

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.



Accessories Safety

- 1. Use only accessories recommended for radial saws. 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.



DANGER

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 grind wheels, abrasive or cut off wheels, or wire wheels.



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 (see Accessories List)

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.



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.



WARNING

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

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

Maintenance

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.



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.



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.

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

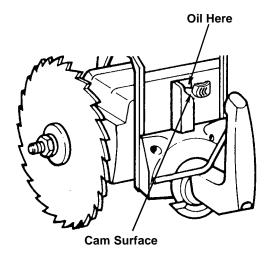


Do not lubricate motor bearings, carriage bearings, or the area between the miter lock and the column tube. Motor and carriage bearings are sealed and do not need added lubrication.

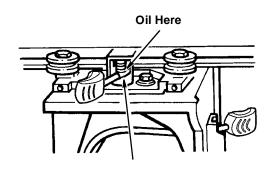
Areas that should be lubricated periodically are the bevel index pin, swivel index pin, and column tube.

You can lubricate other points if necessary, but only when sticking or binding occurs. Use a small amount of SAE No. 10W30 automotive engine oil. Excess oil attracts airborn dust and sawdust.

Apply a few drops of oil to top of pin and allow to flow down sides of pin. Move pin up and down in its housing to work the oil over side of pin.

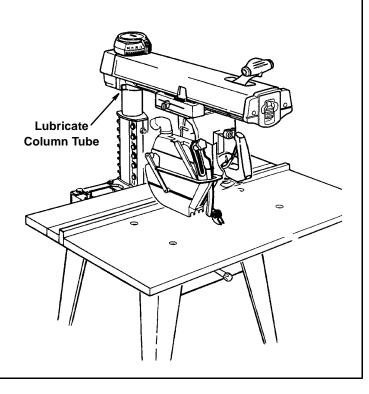


Bevel Index Pin



Cam Surface

Swivel Index Pin



Replacing Pawls

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

- 1. Use 7/16" wrench to remove hex nut. Remove old pawls.
- 2. Install new pawls. Place spacers exactly as shown.
- 3. Re-install hex nut.
- 4. Check that pawls work freely.

Blade Changing

To change the saw blade:

- 1. Turn switch off, remove yellow key, and unplug saw.
- 2. Remove guard.
- 3. Use both blade wrenches in scissor action to loosen blade nut. Note: Arbor shaft has left-hand threads. Turn nut clockwise to loosen.
- 4. Remove nut, blade collar, and blade. Install new blade, making sure that teeth point down towards the front of the table.
- 5. 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.
- 6. Re-install guard.

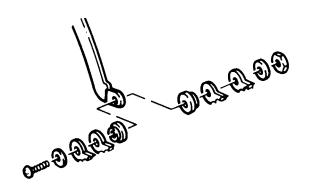
Lubricating Blade Guard Assembly

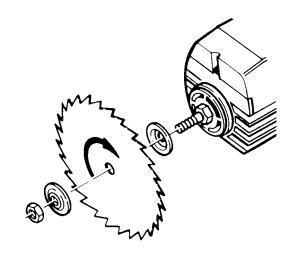
If guard becomes difficult to raise:

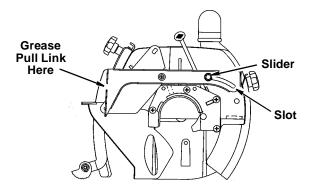
- 1. Clean sawdust from the slot and slider.
- 2. Regrease with a small amount of light grease applied to the slot and slider. Also add a thin coat of grease between the Trigger and the Pull Link.

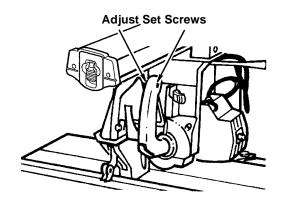
Adjusting the Trigger

If the Trigger becomes loose side-to-side, adjust the setscrews at the top of the Yoke Handle. Use a 1/8" hex wrench to tighten setscrews tight. Then back off one setscrew until the Trigger moves freely.







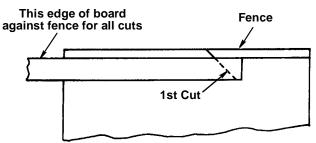


HAVE YOU FOLLOWED ALL STEPS OF THE ALIGNMENT PROCEDURE? IF YOU HAVE NOT FOLLOWED THEM IN THEIR PROPER SEQUENCE, YOU CANNOT EXPECT ACCURATE CUTTING RESULTS.

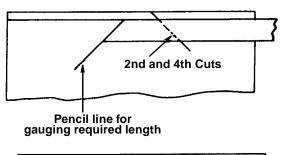
In addition to the proper alignment of your saw, you must also become familiar with the following practices in order to expect the best results.

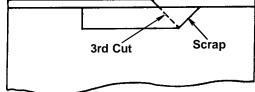
- 1. Edge of workpiece which is placed against fence must be as straight as the long side of your framing square.
- 2. Workpiece must be as flat as the front table board on your saw.
- 3. There must be no sawdust or other wood chips between the fence and the front table board.
- 4. There must be no sawdust or other wood chips underneath workpiece or betweenworkpiece and fence.
- 5. Workpiece must be held tightly against fence and down against the table...this is especially important when making angle cuts because the workpiece has a tendency to move.
- 6. Always use the correct sawblade for the job. Always keep it sharp.
- 7. When making a four sided frame:
 - a. The two side pieces must be exactly the same length.
 - b. The top and bottom pieces must be exactly the same length.
 - c. Always place the same edge of the workpiece against, the fence ... turn the workpiece end for end for the successive cuts and mark a pencil line on the table for gauging the required length.

Deviation from any of the above practices will have an effect on the accuracy of the cuts that you make.



Turn workpiece over end for end...keep same edge against fence when making successive cuts.

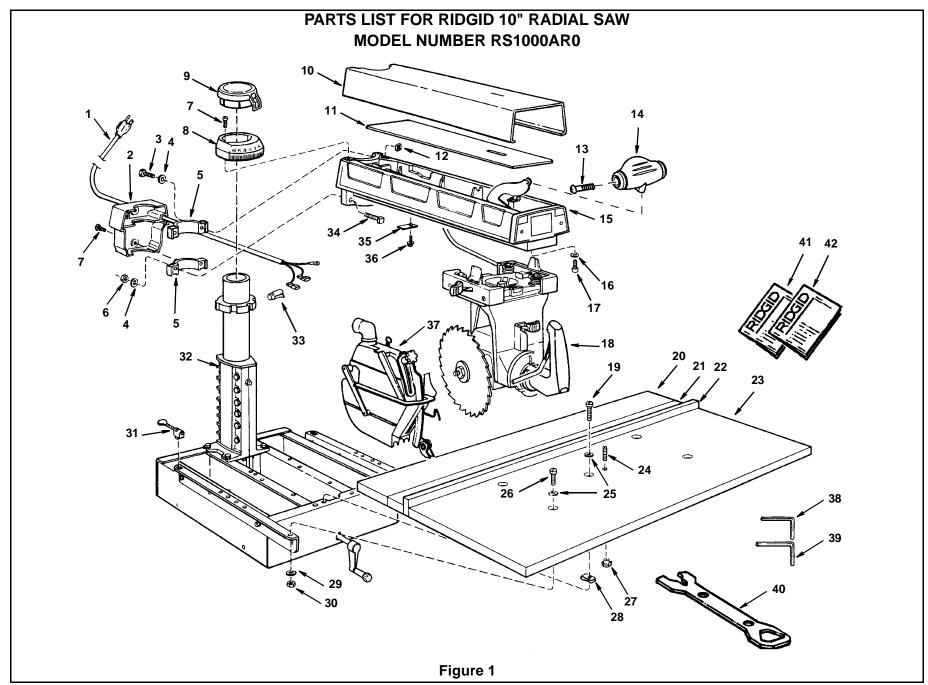




Motor Problem	Possible Cause(s)	What to Do
Motor overheats or stalls	Overloaded power line Feeding rate too fast Improper motor cooling Saw blade has heel Saw blade is dull	Reduce line load by removing other lights, appliances Slow down rate of feed Vacuum sawdust from motor to allow normal air circulation Check alignment Sharpen or replace blade
While motor is running, fuses blow	Motor Overloaded Need 10 amp circuit Need 10 amp slow-blow fuse Low voltage	Slow down rate of feed 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 name- plate
Motor starts slowly or fails to come to full power	Incorrect gauge extension cord Overloaded power line Undersize wires or circuit too long	Refer to table in Electrical Con- nections Reduce line load by removing other lights, appliances Increase wire size or shorten length of wiring
Motor will not run	Protector circuit open Low voltage Sawdust build-up Bent or bound-up arbor shaft	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, contact RIDGID
Fuses blow when motor is turned on	Internal damage	Take saw to RIDGID service center

Cutting Problem	Possible Cause(s)	What to Do
Inaccurate cut	Loose locks	Check miter, rip, bevel, and swivel locks. See Adjustments section
	Saw out of alignment	Check alignment
Crosscuts not accurate at indexed miter positions	Sawdust between workpiece and fence	Keep front table clean
	Fence not straight Swivel lock loose or not locked	Replace fence Adjust swivel lock for wear
	Crosscut travel not square with fence	Square blade crosscut travel
	Carriage assembly loose on arm	Adjust carriage bearings, then realign saw
	Arm not indexing properly Looseness between column tube and column support	Adjust miter lock for wear Adjust column support
Depth of crosscut varies from one side of workpiece to other	Table not parallel with radial arm	Adjust table supports
Saw cuts at slight bevel	Blade not square to table Table not parallel to radial arm Bevel lock loose Work table not flat Carriage bearings loose	Square blade to table for crosscutting and ripping Adjust table supports Adjust bevel lock Adjust or replace table Adjust carriage bearings, then realign saw
Workpiece kerf rough with tooth marks from blade	Blade not square to fence Using improper blade for desired finish cut	Square blade to fence Use proper smooth-cutting blade
Blade tends to advance through workpiece too fast during crosscutting	Blade dull User pulls blade through workpiece too fast Incorrect blade	Sharpen or replace blade Pull blade slowly and steadily through workpiece Replace blade with one designed for radial arm saws.

Cutting Problem	Possible Cause(s)	What to Do
Workpiece strikes riving knife during ripping	Riving knife not in line with blade	Align riving knife to blade
Workpiece binds, smokes, and motor slows or stops when ripping	Saw blade out of alignment Warped workpiece	Re-align Do not cut severely warped pieces
when hipping	Feed rate too fast Carriage assembly loose	Slow feed rate Adjust carriage bearings, then realign saw
	Fence not straight Dull or incorrect blade	Replace fence Sharpen or replace blade
Board pulls away from fence during ripping	Saw blade out of alignment May occur as normal result of applying feed pressure	Re-align Use featherboard on infeed side
Saw Problem	Possible Cause(s)	What to Do
Radial arm moves when locked in a non-indexed miter position	Miter not locked firmly	Adjust miter lock for wear
Motor moves when bevel lock is locked	Bevel not locked firmly	Adjust bevel lock for wear
Yoke moves when rip lock is locked	Rip lock not locked firmly	Adjust rip lock for wear
Blade carriage does not travel smoothly on arm	Dirty track Carriage bearings set too tight	Clean and lubricate track Adjust carriage bearings, ther realign saw
	Rip lock rubbing track Worn steel track Bad carriage bearing	Loosen Rip Lock Replace track Replace carriage bearing
Blade does not stop spinning within 15 seconds after saw is turned off	Blade nut loose Internal damage	Tighten blade nut Contact RIDGID service center



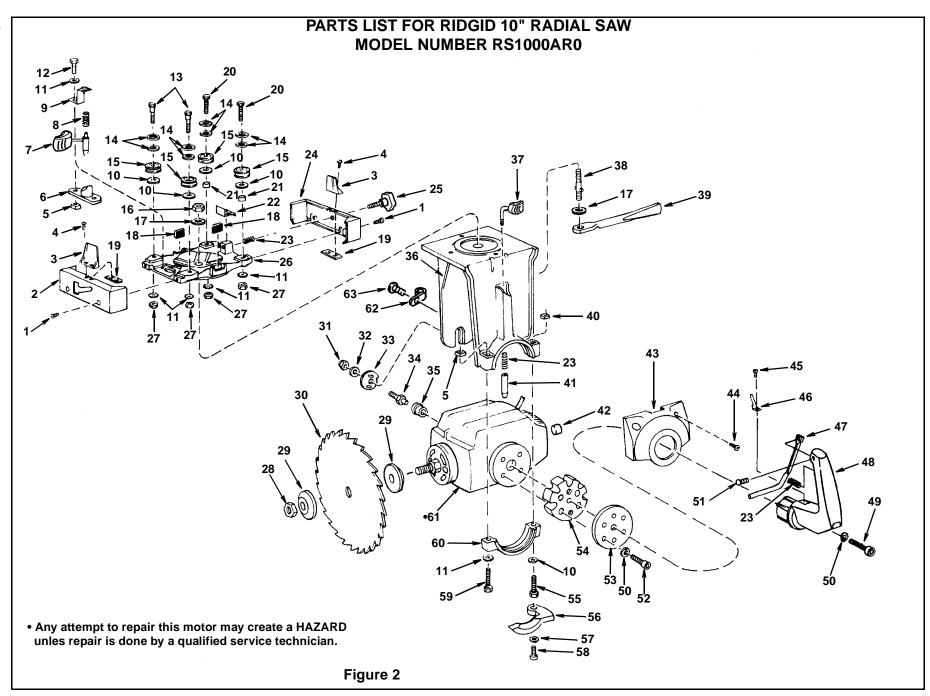
PARTS LIST FOR RIDGID 10" RADIAL SAW MODEL NUMBER RS1000AR0

Always order by Part Number - Not by Key Number Figure 1

Key No	Part No.	Description
1	828553	Cord, with Plug
2	75090	Cover, Rear Arm
3	60342	Bolt Square Head 3/8-16 x 2-1/4 High Strength
4	60353	Washer, .380 x 47/64 x 1/8
5	815649	Bearing, Arm
6	60249	Nut, Lock 3/8-16
7	13848	Screw, Pan Rec. Hd 10-32 Ty T x 1/2
8	827922	Scale, Miter
9	827923	Indicator, Miter
10	827905	Trim Arm
11	63686	Pad, Trim
12	805494	Nut, Square 3/8-16
13	60391	Screw, Pan Rec. Ty AB 10 x 3/4
14	827924	Knob, Lever Arm
15	_	Arm Assembly, See Fig. 5
16	131201	Lockwasher, 5/16
17	9421620	Screw, Soc. Hd Cap 5/16-18 x 1/2
18	_	Yoke Assembly, See Fig. 2
19	809491-6	Screw, Pan Hd 1/4-20 x 1-3/4
20	822079	Table, Rear
21	822080	Table, Spacer

Key No.	Part No.	Description		
22	63432	Fence, Rip		
23	822078	Table, Front		
24	141667-33	Screw, Set SL. Cup 1/4-20 x 1		
25	805552-7	Washer, 17/64 x 5/8 x 1/32		
26	809491-1	Screw, Pan Hd 1/4-20 x 1		
27	145544	Nut, Tee		
28	37530	Nut, "U" Clip		
29	115109	Lockwasher, 1/4		
30	115120	Nut, Hex 1/4-20		
31	826284	Clamp Assembly		
32	_	Base Assembly, See Fig. 3		
33	63467	Cap, Flag Terminal		
34	60339	Bolt, Sq. Hd 3/8-16 x 2-1/4 Gr 5		
35	63881	Clamp, Cord		
36	9420417	Screw, Type "T" Hex Washer Hd 1/4-20 x 5/8		
37	_	Guard Assembly, See Fig. 4		
38	63683	Wrench, Hex "U" 3/16		
39	63682	Wrench, Hex "U" 1/4		
40	822384-1	Wrench		
41	SP6365	Owners Manual - English		
42	SP6365S	Owners Manual - Spanish		

^{*} Standard Hardware Item - May Be Purchased Locally



PARTS LIST FOR RIDGID 10" RADIAL SAW **MODEL NUMBER RS1000AR0**

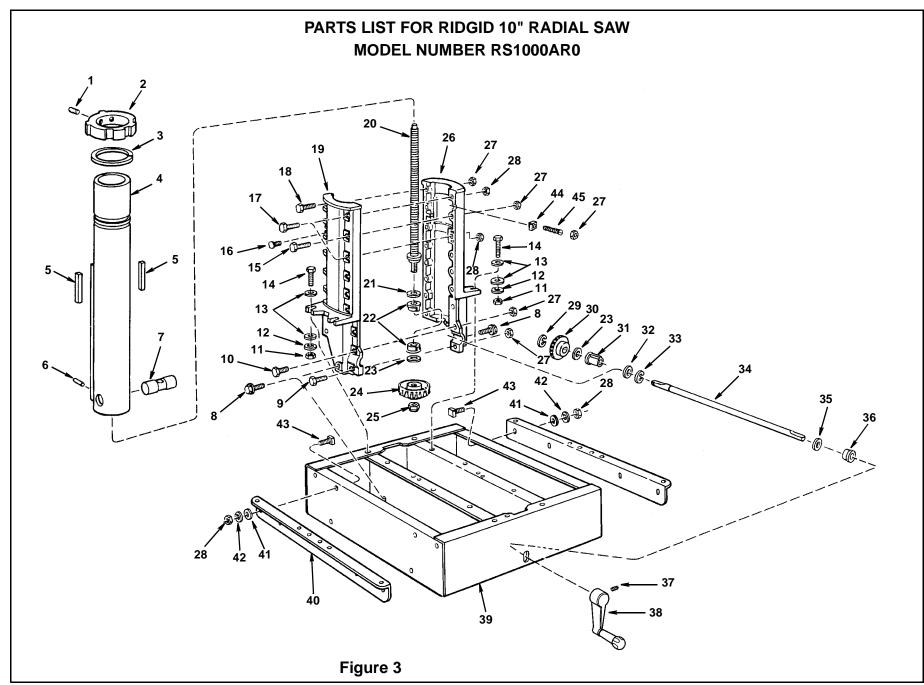
Always order by Part Number - Not by Key Number Figure 2 - Yoke Assembly

Key No.	Part No. Description	
1	13848	* Screw, Type "T" Pan Rec. Hd10-32 x 1/2
2	827884	Cover, L.H. Carriage
3	827880	Indicator, Rip
4	809813-1	* Screw, Pan Rec. Hd 6-32 x 1/2
5	120399	Nut, Square 5/16-18
6	63657	Housing, Index Pin
7	827903	Pin Assembly, Index
8	63658	Spring, Index
9	63656	Bracket, Spring
10	60040	* Washer, 21/64 x 3/4 x 1/16
11	131201	* Lockwasher, 5/16, Ext. Tooth
12	805467-4	* Screw, Hex Hd 5/16-18 x 3/4
13	815807-1	Screw, Eccentric
14	63782	Washer Assembly, Carriage Bearing
15	819039	Bearing, Carriage
16	161255-7	* Nut, Lock 5/8-11
17	37816	* Washer, .630 x 1. 125 x .093
18	30567	Bumper
19	30530	Nut, Speed
20	60336	Bolt, Hex Hd 5/16-18 x 1-1/2 High Strength
21	63779	Bearing, Sleeve
22	63528	Shoe, Rip Lock
23	30521	Spring, Swivel Latch
24	827885	Cover, R.H. Carriage
25	827904	Knob, Carriage Lock
26	63641	Carriage
27	805482	* Nut Hex Jam 5/16-18
28	128880	Nut, Shaft
29	804667-1	Collar Blade
30	826184	Blade, Saw
31	60249	* Nut, Lock 3/8-16
32	60039	* Washer, .380 x 47/64 x 1/16

Key No.	Part No.	Description
33	63652	Cam, Motor
34	63651	Stud, Motor
35	63469	Bushing, Rubber
36	821356-1	Yoke
37	827901	Knob, Bevel Index
38	63643	Stud, Yoke Clamp
39	805874-1	Handle, Yoke Lock
40	822180	Nut, Square L.H. 5/16-18
41	63645	Pin, Index
42	129530	Cap, Shaft
43	63620	Trim, Yoke
44	60337	* Screw, Type "T" Pan Rec. Hd 10-32 x 7/8
45	809492	* Screw, Type "T" Pan Rec. Hd 8/32 x 5/16
46	806179-1	Indicator, Bevel
47	821354	Trigger
48	821342	Handle, Yoke
49	9421628	Screw, Soc. Cap 5/16-18 x 2
50	131201	* Lockwasher, 5/16
51	60288	Screw, Locking Set 1/4 - 20 x 3/8
52	9421626	Screw, Soc. Cap 5/16-18 x 1-1/2
53	805802	Plate, Retainer
54	63649	Ring, Index
55	60335	Screw, Hex Hd L.H. 5/16-18 x 2
56	63647	Lever, Bevel Lock
57	114603	* Lockwasher, Ext. Tooth No. 10
58	806214	Screw, Hex Soc. Button Hd Cap 10-32 x 5/8
59	451188	* Screw, Hex Hd 5/16-18 x 2
60	810362-1	Cap, Yoke
61	828485	Motor
62	810659	Clamp, Cord
63	809492-2	Screw, Pan TY "T" 8-32 x 1/2

^{*} Standard Hardware Item - May be purchased locally

[†] Stock Item - May be secured through the hardware departments of many retail stores
• Any attempt to repair this motor may create a HAZARD unless repair is done by a qualified service technician.



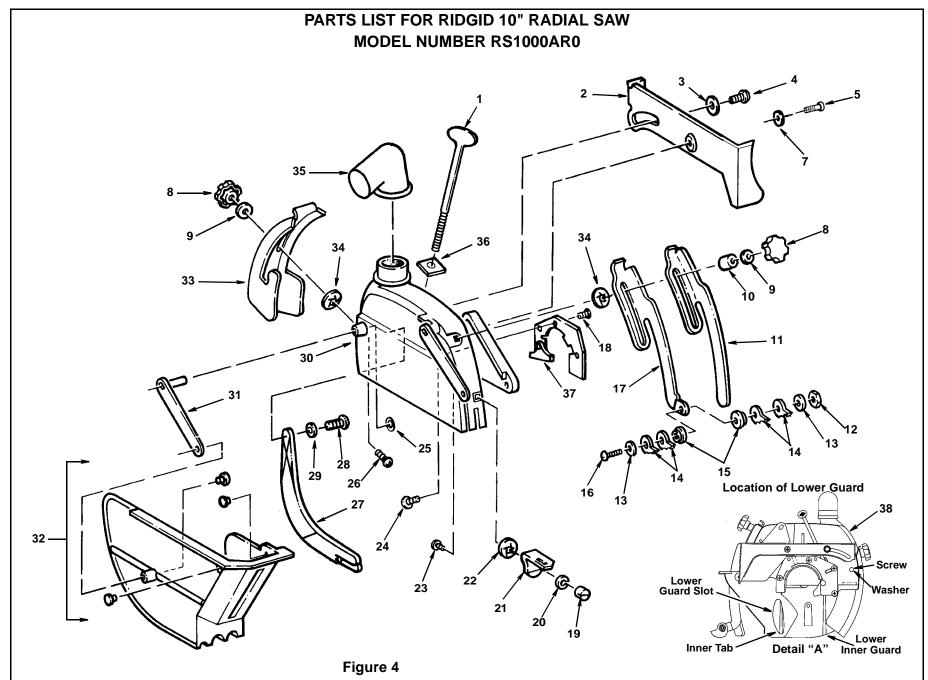
PARTS LIST FOR RIDGID 10" RADIAL SAW MODEL NUMBER RS1000AR0

Always order by Part Number - Not by Key Number Figure 3 - Base Assembly

Key No.	Part No.	Description	
1	102593	* Screw, Soc. Set 3/8-16 x 1/2	
2	63623	Latch, Arm	
3	60330	Ring, Retaining 3"	
4	805793	Tube Column	
5	63610	Gib, Column Tube	
6	456299	* Pin, Roll 1/4 x 1	
7	821346	Nut, Elevation	
8	9416187	* Screw, Type "T" Hex Washer Hd. 5/16-18 x 3/4	
9	805467-6	* Screw, Hex Hd. 5/16-18 x 1	
10	60078	* Screw, Hex Hd. 5/16-18 x 1/2	
11	118615	* Nut, Hex 3/8-16	
12	187077	* Lockwasher, 3/8	
13	60340	* Washer, .380 x 7/8 x 1/8	
14	9415743	* Screw, Hex Hd. 3/8-16 x 1-1/4	
15	186648	* Screw, Hex Hd. 5/16-18 x 1-7/8	
16	817398-1	Screw, Locking Cap 1/4-20 x 5/8	
17	60367	Bolt, Hex Hd. 5/16-18 x 1-7/8 High Strength	
18	60336	Bolt, Hex Hd. 5/16-18 x 1-1/2 High Strength	
19	828581	Support, L.H.	
20	828329	Shaft, Elevating	
21	63500	Washer, Thrust .502 x.927 x .031	
22	63614	Bearing	
23	60300	Washer, 1/2 x 7/8 x.01 0 (as required)	

Key No.	Part No.	Description
24	828332	Gear, Bevel
25	805839-1	* Nut, Lock 1/2-13
26	828580	Support, R.H.
27	805482	* Nut, Hex 5/16-18
28	802352	* Nut, Lock 5/16-18
29	805642	* Ring, Retaining 1/2
30	828333	Gear, Pinion
31	63617	Bearing, Elevating Shaft
32	60080	* Washer, .515 x .875 x .032
33	805641-4	* Ring, Retaining 1/2
34	828331	Shaft, Elevating Crank
35	30442	Ring Retaining
36	63435	Bushing
37	102570	* Screw, Soc. Set 1/4-20 x 3/8
38	827918	Crank, Elevating
39	828233	Base Asm.
40	818199	Channel, Table Mounting
41	805553-24	* Washer, 11 /32 x 7/8 x 1/16
42	131201	* Lockwasher, 5/16
43	109163	* Bolt, Square Hd 5/16-18 x 3/4
44	120399	Nut Sq. 5/16-18
45	828819	Screw Set Oval 5/16-18 x 1-1/4

^{*} Standard Hardware Item - May Be Purchased Locally



PARTS LIST FOR RIDGID 10" RADIAL SAW MODEL NUMBER RS1000AR0

Always order by Part Number - Not by Key Number Figure 4 - Guard

Key No	Part No.	Description		
1	821217	Screw, Guard Clamp		
2	827948	Link, Pull		
3	805552	* Washer, 17/64 x 5/8 x 1/16		
4	815865	Screw, Hex Washer Hd Type "TT" 1/4 - 20 x 1/2		
5	828695	* Screw, Pan Hd Shoulder Type "TT" 10-32		
6				
7	808447-6	Washer, Spring		
8	827919	Knob, 5/16-18		
9	274865	* Washer 21/64 x 5/8 x 1/16		
10	820521	Spacer		
11	820515	Knife, Riving		
12	161255-6	* Nut, Lock 1/4-20		
13	805552	* Washer 17/64 x 5/8 x 1/16		
14	815815	Pawl, AKB		
15	820517	Bushing		
16	809491-1	* Screw, Pan Hd. 1/4-20 x 1		
17	820512	Holder, AKB		
18	824159	Screw, Flat Hd Type "TT" 1/4 - 20 x 9/16		
19	820519	Nut, Slotted 1/4 - 20		

Key No.	Part No.	Description	
20	114604	* Lockwasher 1/4	
21	820530	Support, Knife	
22	808822-1	Nut, Push 1/4	
23	820532	Bolt	
24	809019-4	Bolt, Rd Hd Short Neck 5/16 - 18 x 1-3/4	
25	820632-3	* Ring, Retaining	
26	809019-5	* Bolt, R.H. Short Neck 5/16 - 18 x 5/8	
27	820985	Lower, Inner Guard	
28	808380	Screw Plastite #8-16 x 1/2	
29	805548-10	Washer 3/16	
30	824161-1	Guard	
31	820524-1	Link	
32	820531	Guard, Lower	
33	821218-1	Hold Down	
34	60413	Nut, Push 5/16	
35	828139	Elbow, Dust	
36	821449	Nut, Square 5/16 - 18 Double	
37	827916	Strap-Retainer	
38	828651	Complete Guard Assembly	

^{*} Standard Hardware Item - May Be Purchased Locally

PARTS LIST FOR RIDGID 10" RADIAL SAW MODEL NUMBER RS1000AR0

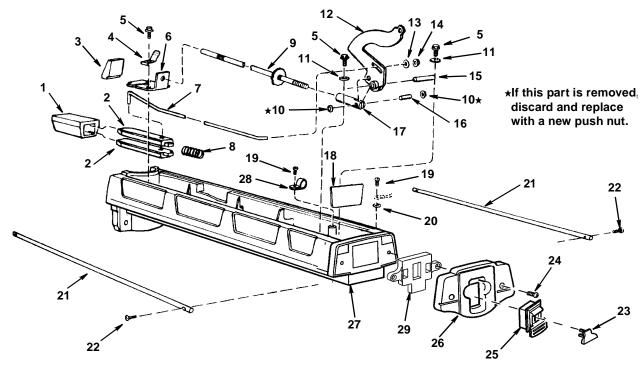


Figure 5 - Arm Assembly
Always order by Part Number - Not by Key Number

Key No.	Part No.	Description		
1	63626	Housing, Pin		
2	63629	Pin, Arm Lock		
3	63631	Pawl, Arm Lock		
4	63628	Spring, Tension		
5	9420417	* Screw, Type "T" Hex		
		Washer Hd 1/4-20 x 5/8		
6	63883	Guide		
7	63632	Rod, Index		
8	63630	Spring, Arm Lock		
9	805814	Rod, Arm Lock		
10	802612-8	* Nut, Push 3/8		
11	60332	* Washer, 21/64 x 1 x 1/8		
12	827881	Lever, Arm Lock		
13	805552-7	* Washer, 17/64 x 5/8 x 1/32		
14	802612-6	* Nut, Push 1/4		
15	63638	Pin, Lever		
16	63637	Pin		

^{*} Standard Hardware Item - May Be Purchased Locally

Key No.	Part No.	Description		
17	63636	Pin, Clevis		
18	63773	Insulation		
19	13848	* Screw, Type 'T' Pan Hd 10-32 x 1/2		
20	114603	* Lockwasher, Ext. Tooth N10		
21	805840	Track		
22	448337	Screw, Type 'T' Rd. Hd 10-32 x 5/8		
23	826122	Key Switch		
24	60337	* Screw, Type 'T' Pan Hd 10-32 x 7/8		
25	826123	Switch, Locking (Includes Key No. 23)		
26	827882	Cap, Arm		
27	827637	Arm, Radial		
28	810659	Clamp, Cord		
29	827883	Retainer Switch		

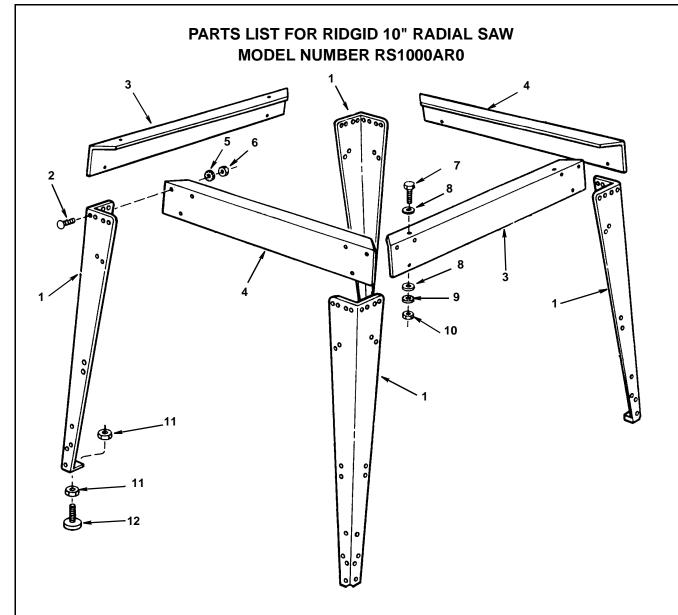


Figure 6 - Leg Set
Always order by Part Number - Not by Key Number

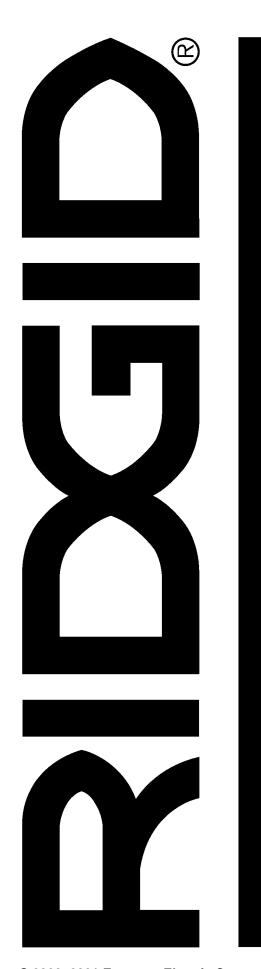
Key No.	Part No Description		
1	821343-1	Leg	
2	805589-5	Screw, Truss Hd. 1/4-20 X 1/2	
3	821779-1	Stiffener, Side	
4	821780-1	Stiffener, Front/Rear	
5	114604	* Lockwasher, External 1/4	
6	115120	* Nut, Hex 1/4-20	
7	805467-3	Screw, Hex Hd 5/16-18 x 5/8	

^{*} Standard Hardware Item - May Be Purchased Locally

Key No	Part No.	Description
8	118774	* Washer,
		11 /32 x 11 /16 x 1/16
9	131201	* Lockwasher,
		External 5/16
10	805482	* Nut, Hex Jam 5/16-18
11	118645	* Nut, Hex 3/8-16
12	803835-3	Foot, Leveling

<u></u>	Notes			

	notes



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What is covered

RIDGID® tools are warranted to be free of defects in workman-ship and material.

How long coverage lasts

This warranty lasts for the lifetime of the RIDGID® tool. Warranty coverage ends when the product becomes unusable for reasons other than defects in workmanship or material.

How can you get service

To obtain the benefit of this warranty, return the product to the Home Depot store.

What we will do to correct problems

Warranted products will be repaired or replaced, at RIDGE TOOL'S option, and returned at no charge; or, if after three attempts to repair or replace during the warranty period the product is still defective, you can elect to receive a full refund of your purchase price.

What is not covered

Failures due to misuse, abuse or normal wear and tear are not covered by this warranty. RIDGE TOOL shall not be responsible for any incidental or consequential damages.

How local law relates to the warranty

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary, from state to state, province to province, or country to country.

No other express warranty applies

This FULL LIFETIME WARRANTY is the sole and exclusive warranty for RIDGID® products. No employee, agent, dealer, or other person is authorized to alter this warranty or make any other warranty on behalf of the RIDGE TOOL COMPANY.

Stock No. RS1000AR	
Model No. RS1000AR0	Serial No

The model and serial number of your Radial Saw may be found at the front of the base.

You should record both model and serial number in a safe place for future use.

QUESTIONS OR COMMENTS? www.ridgidwoodworking.com

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