

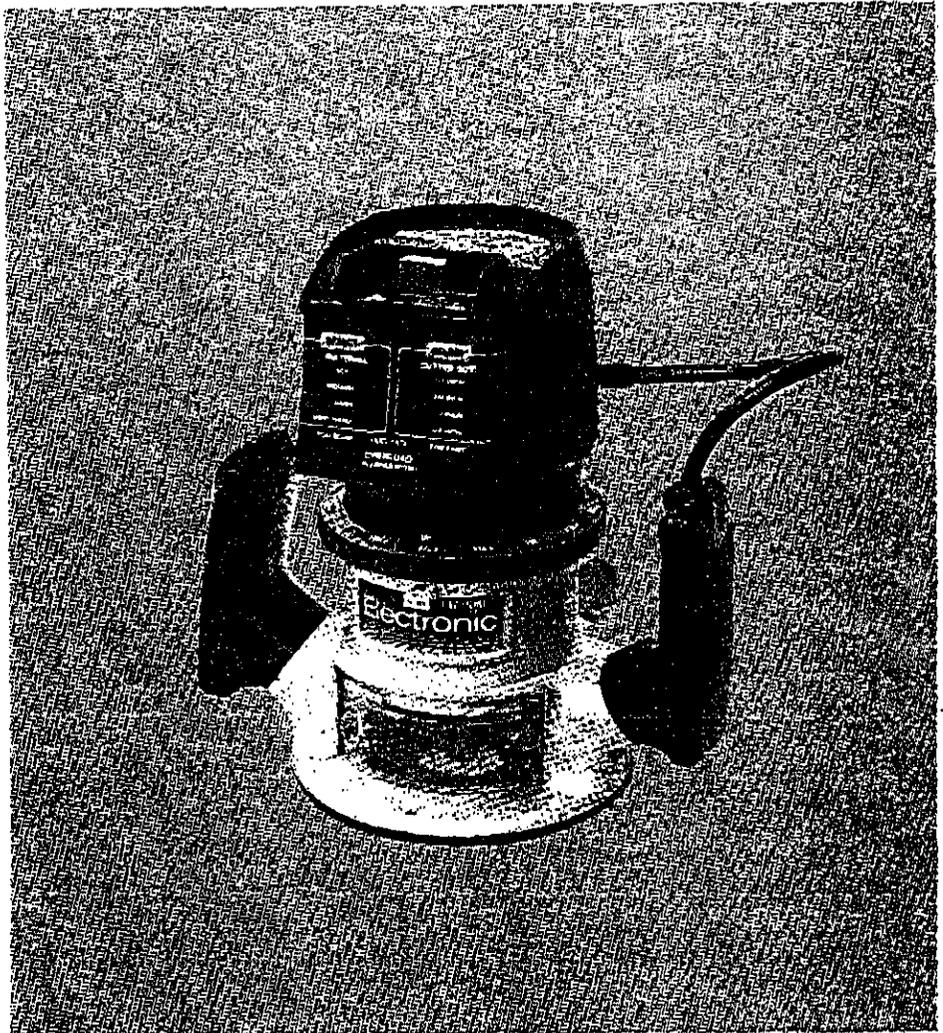
Sears

OWNERS
MANUAL

MODEL NO
315.17500

CAUTION:
Read Rules for
Safe Operation
and Instructions
Carefully

SAVE THIS
MANUAL FOR
FUTURE REFERENCE



CRAFTSMAN[®]
ELECTRONIC
ROUTER
DOUBLE INSULATED

Introduction
Operation
Maintenance
Repair Parts



Designed exclusively for and sold only by
SEARS, ROEBUCK AND CO., Dept. 698/731A, Sears Tower, Chicago, IL 60684

FULL ONE YEAR WARRANTY ON CRAFTSMAN ELECTRONIC ROUTER

If this Craftsman Electronic Router fails to give complete satisfaction within one year from the date of purchase, **RETURN IT TO THE NEAREST SEARS STORE THROUGHOUT THE UNITED STATES** and Sears will repair it, free of charge.

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

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SEARS, ROEBUCK AND CO.
DEPT. 698/731A
SEARS TOWER
CHICAGO, IL 60684

INTRODUCTION

DOUBLE INSULATION is a concept in safety, in electric power tools, which eliminates the need for the usual three wire grounded power cord and grounded supply system. Wherever there is electric current in the tool there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.

GENERAL

Your electronic router is a versatile woodworking tool which will give you years of trouble-free performance. It is engineered with the professional in mind, but its ease of operation allows the amateur to produce work which is beautiful and precise. Your new router has advanced electronic features which are designed to assist you in getting the maximum use from your router. By making the proper selections on the front panel, your router can be adjusted to your specific routing needs. This eliminates much of the guess work previously needed to perform a given job. Both the experienced and inexperienced router users benefit, obtaining professional like results with fewer job errors.

The electronic feature of your router introduces the flexibility of adjusting the motor speed to the required job conditions. The front panel can be set according to the approximate cutter diameter you will be using and to the hardness of the material being cut. Your router will then run smoothly up to the

IMPORTANT — Servicing of a tool with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For service we suggest you return the tool to your nearest Sears Store for repair. Always use original factory replacement parts when servicing.

desired speed and continue to maintain this speed while under various loads.

Also, the best cuts are made when the cutter is fed through the material at the proper rate. Your electronic router has "too slow" and "too fast" indicators that will flash if the cutter is being fed too slow or too fast. When possible, you should make practice cuts on a scrap piece of wood to get a "feel" of how fast to "feed" your router.

If your router should become overloaded or jammed, then both the "too slow" and "too fast" indicator lights will begin flashing. If the overload condition is not corrected, your router will shut off. This helps prevent the possibility of damage to the router. To restart, release the trigger switch to its full "off" position, wait until the indicator lights stop flashing, then turn your router on. **WARNING: DO NOT OVERLOAD YOUR ROUTER REPEATEDLY. ABUSE OF THIS NATURE WILL GREATLY REDUCE THE LIFE OF YOUR ROUTER.**

RULES FOR SAFE OPERATION

WARNING — DO NOT ATTEMPT TO OPERATE UNTIL YOU HAVE READ THOROUGHLY AND UNDERSTAND COMPLETELY ALL INSTRUCTIONS, RULES, ETC. CONTAINED IN THIS MANUAL. FAILURE TO COMPLY CAN RESULT IN ACCIDENTS INVOLVING FIRE, ELECTRIC SHOCK, OR SERIOUS PERSONAL INJURY. SAVE OWNERS MANUAL AND REVIEW FREQUENTLY FOR CONTINUING SAFE OPERATION, AND INSTRUCTING POSSIBLE THIRD-PARTY USER.

READ ALL INSTRUCTIONS

- 1. KNOW YOUR POWER TOOL** — Read owner's manual carefully. Learn its applications and limitations as well as the specific potential hazards peculiar to this tool.
- 2. GUARD AGAINST ELECTRICAL SHOCK BY PREVENTING BODY CONTACT WITH GROUNDED SURFACES.** For example: Pipes, radiators, ranges, refrigerator enclosures.
- 3. KEEP GUARDS IN PLACE** and in working order.
- 4. KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- 5. AVOID DANGEROUS ENVIRONMENT.** Don't use power tool in damp or wet locations or expose to rain. Keep work area well lit.

RULES FOR SAFE OPERATION (Continued)

6. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from work area. Do not let visitors contact tool or extension cord.
7. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, high or locked-up place — out of reach of children.
8. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
9. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended — for example — Don't use a circular saw for cutting tree limbs or logs.
10. **WEAR PROPER APPAREL.** No loose clothing or jewelry to get caught in moving parts. Rubber gloves and footwear are recommended when working outdoors. Also, wear protective hair covering to contain long hair.
11. **USE SAFETY GLASSES** with all tools. Also face or dust mask if cutting operation is dusty.
12. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
13. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
14. **DON'T OVERREACH.** Keep proper footing and balance at all times.
15. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp at all times, and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **DISCONNECT TOOLS.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, etc., all tools should be disconnected.
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
18. **AVOID ACCIDENTAL STARTING.** Don't carry plugged-in tools with finger on switch. Be sure switch is off when plugging in.
19. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords suitable for use outdoors. Outdoor approved cords are marked with the suffix W-A, for example — SJTW-A or SJOW-A.
20. **KEEP CUTTERS CLEAN AND SHARP.** Sharp cutters minimize stalling and kick-back.
21. **KEEP HANDS AWAY FROM CUTTING AREA.** Keep hands away from cutters. Do not reach underneath work while cutter is rotating. Do not attempt to remove material while cutter is rotating.
22. **NEVER USE IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.
23. **INSPECT TOOL CORDS PERIODICALLY** and if damaged, have repaired at your nearest Sears Repair Center.
24. **INSPECT EXTENSION CORDS PERIODICALLY** and replace if damaged.
25. **KEEP HANDLES DRY, CLEAN, AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluid, gasoline, or any strong solvents to clean your tool.
26. **STAY ALERT.** Watch what you are doing and use common sense. Do not operate tool when you are tired.
27. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless indicated elsewhere in this instruction manual.
28. **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by authorized service center.
29. **Inspect for and remove all nails from lumber before routing**
30. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol, or any medication.

RULES FOR SAFE OPERATION (Continued)

31. **DO NOT USE TOOL UNDER "BROWN-OUT" OR OTHER LOW VOLTAGE CONDITIONS.** Also, do not use with any device that could cause the power supply voltage to change.
32. **SAVE THESE INSTRUCTIONS.**



The operation of any Router can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before commencing power tool operation. We recommend Wide Vision Safety mask for use over spectacles or standard safety glasses, available at Sears Catalog Order or Retail Stores.

OPERATION

WARNING: YOUR ROUTER SHOULD NEVER BE PLUGGED IN WHEN YOU ARE ASSEMBLING PARTS OR MAKING ADJUSTMENTS. FAILURE TO DO SO COULD RESULT IN ACCIDENTAL STARTING OF YOUR ROUTER RESULTING IN POSSIBLE SERIOUS INJURY. ALWAYS WEAR SAFETY GLASSES OR EYESHIELDS BEFORE BEGINNING POWER TOOL OPERATION.

If any parts are missing do not operate your Router until the missing parts are replaced. See Figure 1.

CHIP SHIELD

A clear plastic chip shield is installed on the front of your router for protection against flying dust and chips. The chip shield is designed to fit the front opening of the router base as shown in figure 1. If

necessary to remove, squeeze the tabs on each end and pull outward. To replace, squeeze the tabs at each end, fit into the opening, then release. **DO NOT USE ROUTER WITHOUT CHIP SHIELD PROPERLY IN PLACE.**

SWITCH

The switch of your electronic router is equipped with a "lock on" feature which is convenient when operating for extended periods of time. To lock on, depress the trigger and engage the lock button located on the side of the handle. To release the lock, depress the trigger and release it. **BE SURE TOOL IS NOT IN THE "LOCK ON" POSITION BEFORE CONNECTING TO POWER SUPPLY SOURCE.**

NOTE: If you forget to unlock the trigger, the "soft" and "1/4 Inch" indicator lights will begin flashing the next time you plug your router into a power supply source. These flashing lights serve as a reminder that your trigger is in the "lock on" position and that your router will not start until the trigger is released. The best precaution is to **UNLOCK** the trigger after each use.

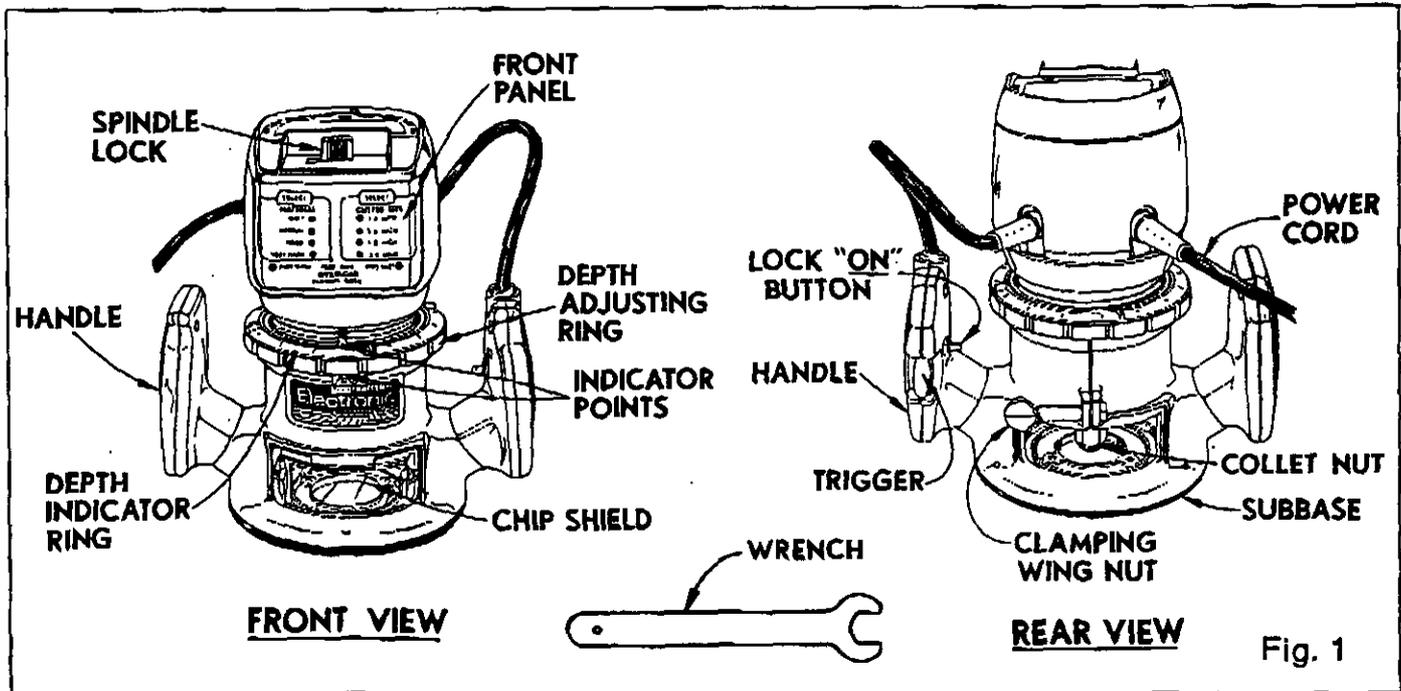


Fig. 1

OPERATION

KNOW YOUR ELECTRONIC ROUTER

Before attempting to use your router, familiarize yourself with all operating features, electronic features, and safety requirements. See Figure 1. **WARNING: DO NOT ALLOW FAMILIARITY WITH YOUR ROUTER TO MAKE YOU CARELESS. REMEMBER THAT A CARELESS FRACTION OF A SECOND IS SUFFICIENT TO INFLICT SEVERE INJURY.**

We suggest that you practice with the electronic features of your router before installing a cutter and making cuts in wood. **CHECK THE FOLLOWING BEFORE CONNECTING YOUR ROUTER TO POWER SUPPLY:**

1. Make sure the spindle lock is in the unlocked position.
2. Make sure the trigger is not in the "lock on" position.
3. Make sure there is not a cutter in the collet.
4. Make sure the collet is inside the subbase.

Next, plug your router into power supply source and note the indicator lights on the front panel. See Figure 2. The "soft" and "1/4 inch" indicator lights should be lit. This tells you that your router will operate best when cutting soft wood with 1/4 inch steel cutters.

Grasp your router firmly with both hands and turn on. Note the smooth acceleration of your router up to the desired speed, with little or no twisting motion in your hands. Once your router reaches the desired speed, the "too slow" indicator light will begin flashing. This tells you that there is no load on your router. If you were actually cutting with the Router then you would know that the rate of feed is too slow. For best cutting results, you should then increase the rate of feed until the indicator light quits flashing.

NOTE: The "Too Slow" indicator is a guide for routing in general. In some specialized cases, such as cutting dovetails, etc., it is necessary to feed your router at a slower rate of feed in order to maintain proper control. In these special situations, the "Too Slow" indicator light will continue to flash and should not be considered to be a problem.

You should also practice making material and cutter size selections on the front panel. Become familiar with the fact that these selections control speed, which is important when changing from one type of wood to another or from one cutter size to another. This controlled speed eliminates much of the sudden "jerk" associated with non-electronic routers, and increases your chances of getting smooth, burn free cuts. The next two paragraphs describe how material and cutter size selections are made.

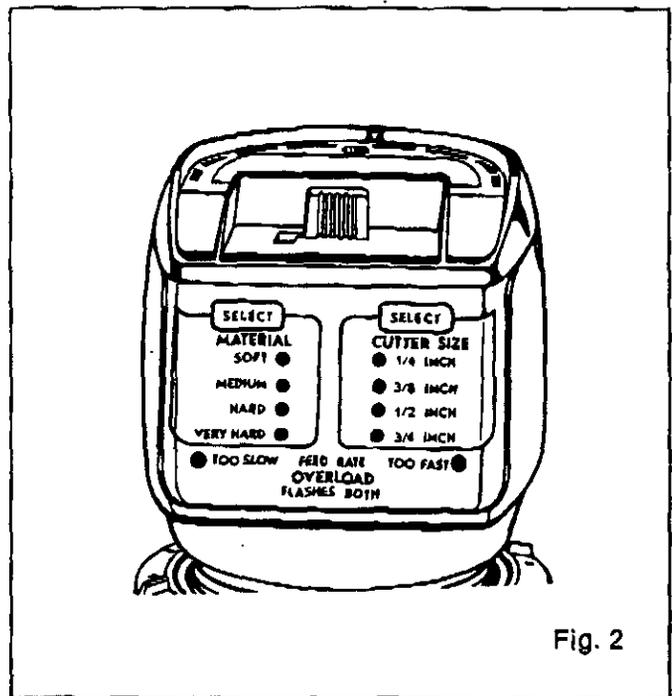


Fig. 2

MATERIAL SELECTIONS

As mentioned in the introduction, the left side of the front panel of your electronic router allows you to make controlled speed selections according to the hardness of the material being cut. Each time you press the "select" region above the material indicator lights, the indicator light will shift one position. See Figure 2. The first push will change the indicator light from "soft" to "medium", a second push will change it from "medium" to "hard", and a third push will change it from "hard" to "very hard." A fourth push will return the light to the "soft" position. **NOTE:** These positions cannot be changed with the router running.

CUTTER SIZE SELECTIONS

The right side of the front panel of your electronic router also allows you to make controlled speed selections according to the size of cutter you are using. Each time you press the "select" region above the cutter size indicator lights, the indicator light will shift one position. See Figure 2. The first push will change the indicator light from "1/4 inch" to "3/8 inch", a second push will change it from "3/8 inch" to "1/2 inch", and a third push will change it from "1/2 inch" to "3/4 inch". A fourth push will return the light to the "1/4 inch" position. **NOTE:** These positions cannot be changed with the router running.

OPERATION

INSTALLING/REMOVING CUTTERS

Disconnect router from power supply.

1. A spindle lock is located on the top of motor housing. See Figure 5. To activate lock, push spindle lock back and slide into lock position. **NEVER ATTEMPT TO ACTIVATE SPINDLE LOCK WHILE ROUTER MOTOR IS RUNNING OR COASTING TO STOP.**
2. Place your router upside down on a table, then turn collet nut with wrench until lock mechanism interlocks. See Fig. 3. NOTE: Spindle lock is spring loaded and will snap into position when lock mechanism interlocks.
WARNING: IF YOU ARE CHANGING A BIT IMMEDIATELY AFTER USE, BE CAREFUL NOT TO TOUCH THE BIT OR COLLET WITH YOUR HANDS OR FINGERS. THEY WILL GET BURNED BECAUSE OF THE HEAT BUILDUP FROM CUTTING. ALWAYS USE THE WRENCH PROVIDED.
3. Remove cutters by turning collet nut counter clockwise enough to allow cutter to slip easily from collet. See Figure 4. The collet is machined to precision tolerances to fit cutters with 1/4" diameter shank size.
4. With your router still upside down on table, insert shank of cutter into collet. The shank of your cutter should be close to but not touching bottom of collet.
5. Tighten the collet nut securely by turning clockwise with the wrench provided. See Fig. 4. Put spindle lock back in unlock position. Otherwise the interlocking mechanism of the spindle lock will not let your router turn on.

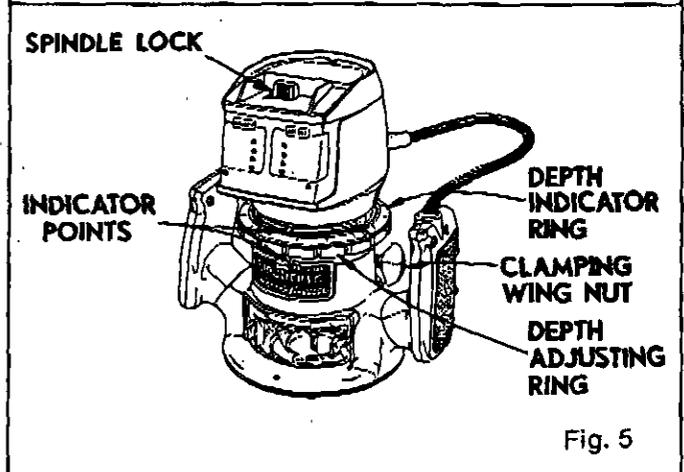
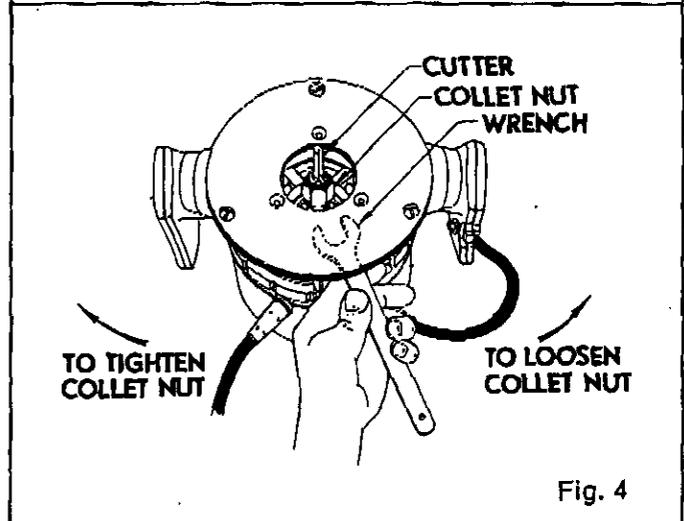
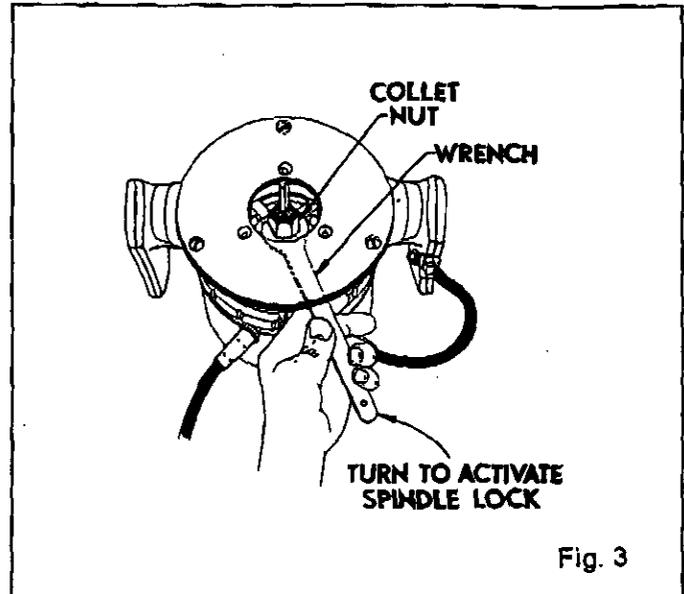
WARNING: DO NOT USE CUTTERS WITH UNDERSIZED SHANKS. UNDERSIZED SHANKS WILL NOT TIGHTEN PROPERLY AND COULD BE THROWN FROM TOOL CAUSING INJURY.

DEPTH OF CUT ADJUSTMENTS

We recommend that cuts be made at a depth not exceeding 1/8" and that several passes be made to reach depths of cut greater than 1/8".

Disconnect router from power supply before adjusting for depth of cut.

1. Place the router on a flat surface, loosen clamping Wing Nut, and turn depth adjusting ring until cutter is inside subbase. See figure 5.
2. Turn the depth adjusting ring until tip of cutter touches flat surface. Turn the depth indicator ring until the zero lines up with the indicator point on the base. See figure 5.
3. Position the router so that the bit can extend below the subbase for desired depth setting.
4. Turn the depth adjusting ring to obtain the desired depth of cut. The distance the cutter moves can be read on the depth indicator ring. Each notch on the depth adjusting ring indicates 1/64 inch change in depth setting.
5. Tighten clamping wing nut securely before operating router.
6. Plug your router into power supply source. Then make the desired material and cutter size selections on the front panel.



WARNING: BE ABSOLUTELY CERTAIN CLAMPING WING NUT IS FIRMLY TIGHTENED. FAILURE TO DO THIS WILL RESULT IN THE MOTOR MOVING INSIDE THE BASE, CAUSING AN UNEVEN CUT. THIS COULD CAUSE LOSS OF CONTROL RESULTING IN POSSIBLE SERIOUS INJURY.

OPERATION

WARNING: ALWAYS WEAR SAFETY GLASSES OR EYESHIELDS WHEN USING YOUR ROUTER. FAILURE TO DO SO COULD RESULT IN DUST OR CHIPS BEING THROWN IN YOUR EYES RESULTING IN POSSIBLE SERIOUS INJURY. IF THE CUTTING OPERATION IS DUSTY, ALSO WEAR A FACE OR DUST MASK.

ROUTING

See Figure 6.

For ease of operation and maintaining proper control, your router has two handles, one on each side of the router base. After carefully making material and cutter size selections, grasp your router and hold it firmly with both hands as shown in Fig. 6. Turn router on and let motor build to its full speed, then gradually feed cutter into workpiece. Remain alert and watch what you are doing. **DO NOT** operate router when fatigued.

SPEED SELECTIONS

In general, as you move the material and cutter size indicators to lower positions, the router will run at slower speeds. The slowest speed at which your router will run is when the material indicator setting is at the "hard" position and the cutter size setting is at the "3/4 inch" position. The fastest speed at which your router will run is when the material indicator setting is at the "soft" position and the cutter size setting is at the "1/4 inch" position.

A change from the "hard" to "very hard" material indicator position will cause an increase in the speed of your router. This is because carbide cutters, which cut at higher speeds than steel cutters, should be used when cutting very hard materials. See *Helpful Hints, page 11.*

RATE-OF-FEED

IMPORTANT: In addition to selecting the proper speed for your router, the "secret" to professional routing and edge shaping lies in making a careful set-up for the cut to be made and in selecting the proper rate of feed.

FORCE FEEDING

Clean, smooth routing and edge shaping can be done only when the bit is revolving at or near its proper speed and is taking very small bites to produce tiny, cleanly severed chips. If the router is forced to move forward too fast, the "too fast" indicator light will begin flashing. This tells you that the RPM of the bit is slower than normal in relation to its forward movement - and that the bit must take bigger bites as it revolves. "Bigger bites" means bigger chips, and a rougher finish. Bigger chips also require more

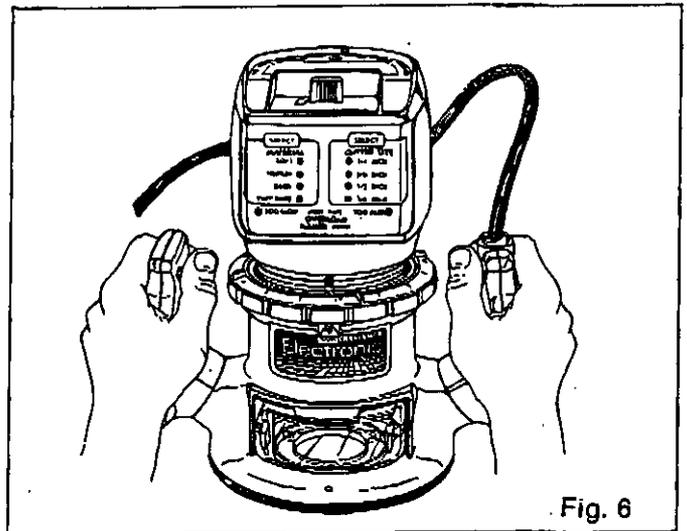


Fig. 6

power - and the router motor can become overloaded so that it slows down and possibly even shuts itself off. Under extreme forcefeeding conditions the relative RPM of the bit can become so slow - and the bites it has to take so large - that chips will be partially knocked off (rather than fully cut off), with resulting splintering and gouging of the workpiece. See Fig. 7.

YOU SHOULD ALWAYS TRY FOR A MEDIUM RATE-OF-FEED, MAKING SURE THE "TOO SLOW" INDICATOR LIGHT HAS GONE OUT AND THE "TOO FAST" INDICATOR DOES NOT COME ON.

Your Craftsman Electronic Router is an extremely high-speed tool (up to 25,000 rpm no-load speed), and will make clean, smooth cuts if allowed to run freely without the overload of a forced (too fast) feed. What constitutes "force-feeding" depends upon three things: Bit size, depth-of-cut, and workpiece characteristics. The larger the bit and/or the deeper the cut, the more slowly the router can be moved forward. And, if the wood is very hard, knotty, gummy or damp, the operation must be slowed still more.

TOO SLOW FEEDING

It is also possible to spoil a cut by moving the router forward too slowly. When it is advanced into the work too slowly a revolving bit doesn't dig into new wood fast enough to take a bite; instead, it simply scrapes away sawdust-like particles. Scraping produces heat, which can glaze or burn and mar the cut - in extreme cases, can even overheat the bit so as to destroy its hardness.

In addition, it is more difficult to control a router when the bit is scraping instead of cutting. With practically no load on the motor the bit will be revolving close to top rpm for the selected speed, and will have a much greater than normal tendency to bounce off the sides of the cut (especially, if the wood has a pronounced grain with hard and soft areas). As a result, the cut produced may have rippled, instead of straight, sides. See figure 7.

You can detect "too-slow feeding" by the flashing light, the no-load sound of the motor, or by feeling the "wobble" of the bit in the cut.

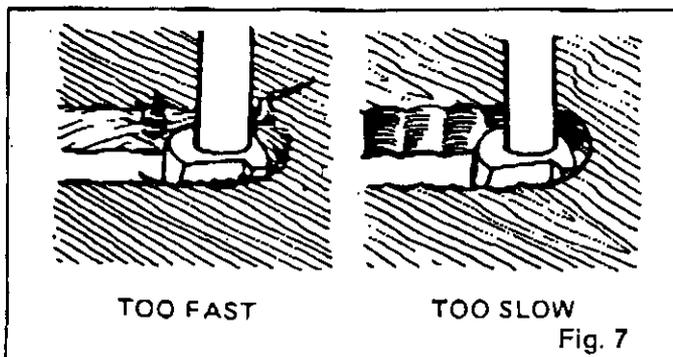


Fig. 7

OPERATION

PROPER FEEDING

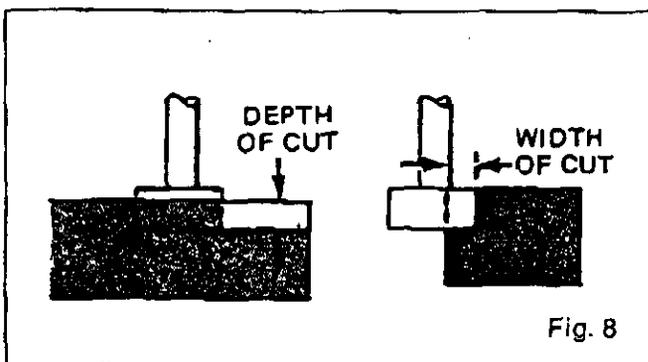
The right feed is neither too fast nor too slow. It is the rate at which the bit is being advanced firmly and surely to produce uniform chips — without hogging into the wood to make large individual chips or, on the other hand, to create only sawdust. If you are making a small diameter, shallow groove in soft, dry wood, the proper feed may be about as fast as you can travel your router along your guide line. If the bit is a large one, the cut is deep, and/or the wood is hard to cut, the proper feed may be a very slow one. Then, again, a cross-grain cut may require a slower pace than an identical with grain cut in the same workpiece.

Good judgement with the proper use of the Electronic feature will give best results. You will learn by experience. . . . by listening to the tool motor and by feeling the progress of each cut. If at all possible, always test cut on a scrap of the workpiece wood, beforehand.

DEPTH OF CUT

As previously mentioned, the depth of cut is important because it affects the rate of feed which, in turn, affects the quality of a cut (and, also, the possibility of damage to your router motor and bit). A deep cut requires a slower feed than a shallow one. A too deep cut will cause you to slow the feed so much that the bit will begin scraping instead of cutting.

Making a deep cut is never advisable. The smaller bits — especially those only 1/16 inch in diameter — are easily broken off when subjected to too much side thrust. A large enough bit may not be broken off, but if the cut is too deep a rough cut will result — and it may be very difficult to guide the bit as desired. For these reasons, we recommend that you do not exceed 1/8 inch depth of cut in a single pass, regardless of the bit size or the softness or condition of the workpiece. See Fig. 8.



To make deeper cuts it is therefore necessary to make as many successive passes as required, lowering the bit 1/8 inch for each new pass. In order to save time, do all the cutting necessary at one depth setting, before lowering the bit for the next pass. This will also assure a uniform depth when the final pass is completed. See Fig. 9.

DIRECTION OF FEED AND THRUST

The router motor and bit revolve in a clockwise direction. This gives the tool a slight tendency to twist (in your hands) in a counterclockwise direction.

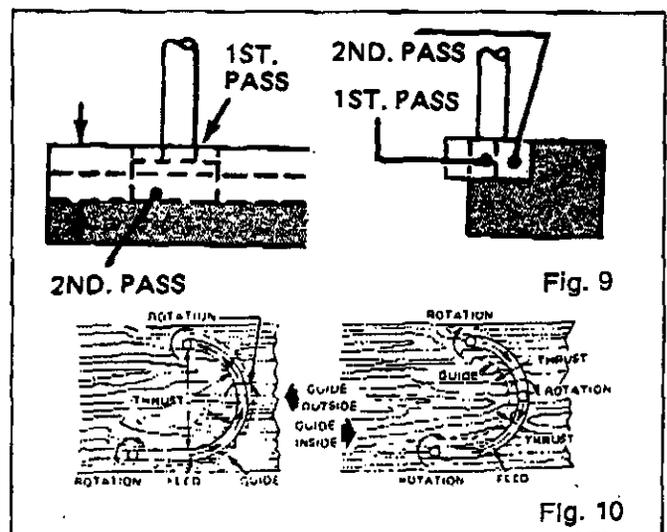
Because of the extremely high speed of bit rotation during a "proper feeding" operation, there is very little kickback to contend with under normal conditions. However, should the bit strike a knot, hard grain, etc. that would affect the normal progress of the cutting action, there will be a slight kickback — sufficient to spoil the trueness of your cut if you are not prepared. Such a kickback is always in the direction opposite to the direction of bit rotation.

To guard against such a kickback, plan your set-up and direction of feed so that you will always be thrusting the tool — to hold it against whatever you are using to guide the cut — in the same direction that the leading edge of the bit is moving. In short, the thrust should be in a direction that keeps the sharp edges of the bit continuously biting straight into new (uncut) wood.

ROUTING

See Figure 10.

Whenever you are routing a groove, your tool travel should be in a direction that places whatever guide you are using at the right-hand side. When the guide is positioned as shown in the first part of Fig. 10, tool travel should be left to right and counterclockwise around curves. When the guide is positioned as shown in the second part of Fig. 10, tool travel should be right to left and clockwise around curves. If there is a choice, the first set-up is generally the easiest to use. In either case, the sideways thrust you see is against the guide.



OPERATION

Whenever you are shaping an edge, the feed should always be clockwise when working on an outside (convex) edge; but should be counterclockwise when working on an inside (concave) edge. See Fig. 11. The reason for this is that, when traveling the tool as instructed, the bit will have a "chopping action" — but will have a "gouging action" if you reverse the travel direction. "Chopping" is much preferable to "gouging" as there is less danger of ripping out chips by tearing the wood grain.

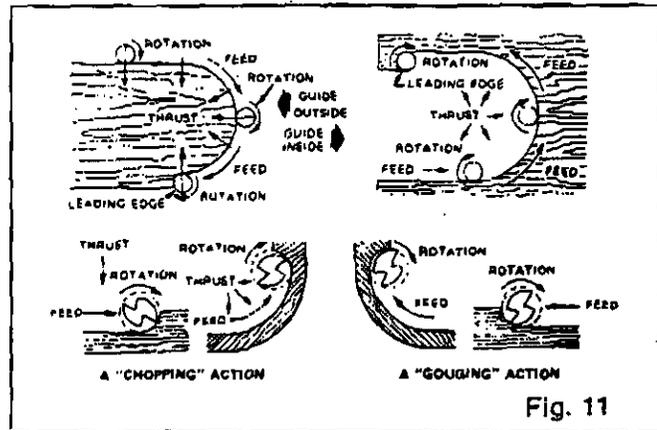


Fig. 11

STARTING AND ENDING A CUT

INTERNAL ROUTING

Tilt Router and place on workpiece, letting edge of subbase contact workpiece first. Be careful not to let Router bit contact workpiece. Turn Router on and let motor build to its full speed. Gradually feed cutter into workpiece until subbase is level with workpiece. **WARNING: KEEP A FIRM GRIP ON ROUTER WITH BOTH HANDS AT ALL TIMES. FAILURE TO DO SO COULD RESULT IN LOSS OF CONTROL LEADING TO POSSIBLE SERIOUS INJURY.** Upon completion of cut, turn motor off and let it come to a complete stop before removing Router from work surface. **WARNING: NEVER PULL ROUTER OUT OF WORK AND PLACE UPSIDE DOWN ON WORK SURFACE BEFORE THE MOTOR STOPS.**

EDGE ROUTING

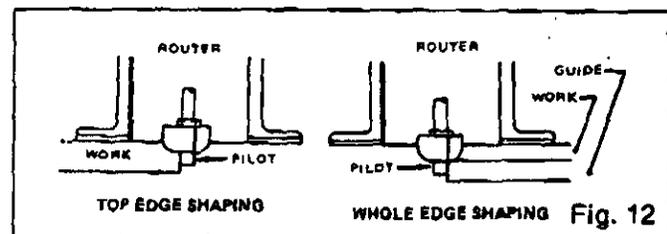
Place Router on workpiece, making sure the Router bit does not contact workpiece. Turn Router on and let motor build to its full speed. Begin your cut, gradually feeding cutter into workpiece. **WARNING: KEEP A FIRM GRIP ON ROUTER WITH BOTH HANDS AT ALL TIMES. FAILURE TO DO SO COULD RESULT IN LOSS OF CONTROL LEADING TO POSSIBLE SERIOUS INJURY.** Upon completion of cut, turn motor off and let it come to a complete stop before removing Router from work surface. **WARNING: NEVER PULL ROUTER OUT OF WORK AND PLACE UPSIDE DOWN ON WORK SURFACE BEFORE THE MOTOR STOPS.**

EDGING WITH THE PILOT BITS

The arbor-type bits with pilots are excellent for quick, easy edge shaping of any workpiece edge that is either straight or curved at a curvature as great or greater than the radius of the bit to be used. The pilot prevents the bit from making too deep a cut; and holding the pilot firmly in contact with the workpiece edge throughout prevents the cut from becoming too shallow.

Whenever the workpiece thickness together with the desired depth of cut (as adjusted by router depth setting) are such that only the top part of the edge is to be shaped (leaving at least a 1/16 in. thick uncut portion at bottom), the pilot can ride against the uncut portion, which will serve to guide it. See Fig. 12. However, if the workpiece is too thin and/or the bit set too low so that there will be no uncut edge to ride the pilot against, any extra board to act as a guide must be placed under the workpiece. This "guide" board must have exactly the same contour — straight or curved — as the workpiece edge. If it is positioned so that its edge is flush with the workpiece edge, the bit will make a full cut (in as far

as the bit radius). On the other hand, if the guide is positioned as shown in Fig. 12 (out from the workpiece edge), the bit will make less than a full cut — which will alter the shape of the finished edge.



NOTE: Any of the piloted bits can be used without a pilot for edge shaping with guides, as preceding. The size (diameter) of the pilot that is used determines the maximum cut width that can be made with the pilot against the workpiece edge (the small pilot exposes all of the bit; the large one reduces this amount by 1/16 inch).

ROUTING WITH GUIDE BUSHINGS

When using Template Guide Bushings Cat. No. 9-25079 with your Electronic Router you must visually center the bit with the bushing before beginning your cut. The Router subbase may be adjusted by loosening the screws holding the subbase to the Router. Be sure clamping wing nut is securely tightened before centering bit in bushing. After centering bit with bushing tighten screws firmly. **WARNING: FAILURE TO CENTER BIT WITH BUSHING OR TO FIRMLY TIGHTEN SCREWS AFTER CENTERING COULD CAUSE BIT TO COME IN CONTACT WITH BUSHING RESULTING IN SERIOUS INJURY.**

EXTENSION CORDS

The use of any extension cord will cause some loss of power. To keep the loss to a minimum and to prevent tool overheating, follow the recommended cord sizes on the chart at right. When tool is used outdoors, use only extension cords suitable for outdoor use and so marked. Extension cords are available at Sears Catalog Order or Retail Stores.

Extension Cord Length	Wire Size A.W.G.
25-50 Feet	18
50-75 Feet	16
75-100 Feet	14

WARNING: CHECK EXTENSION CORDS BEFORE EACH USE. IF DAMAGED, REPLACE IMMEDIATELY. NEVER USE TOOL WITH DAMAGED CORD SINCE TOUCHING THE DAMAGED AREA COULD CAUSE ELECTRICAL SHOCK RESULTING IN SERIOUS INJURY.

THE FOLLOWING RECOMMENDED ACCESSORIES WERE AVAILABLE AT THE TIME THIS MANUAL WAS PRINTED.

Dovetail Template (9 2579)
 Box Joint Template (9 2580)
 Butt Hinge Template (9 2575)
 Butt Hinge Template (9 2564C)
 Router-Crafter (9 2525C)
 Multi-Purpose Router Guide (9 25179)

Template Guide Bushings (9 25079)
 Rout-A-Form Pantograph (9 25183)
 Template Set (9 25182)
 Sharpening Kit (9 66501)
 Carrying Case (9 1470)
 Full View Router Base (9 25086)

COMBI-NATION PANEL CUTTER	VEINING BITS	CORE BOX BIT	STRAIGHT FACE BITS	COMBI-NATION STRAIGHT BEVEL CUTTER	HINGE MORTISING BIT	DOVETAIL CUTTER BITS	RABBET BIT	OQEE	COVE BIT	BEAD QUARTER-ROUND BITS	ARBORS
											
2584-1/4" 25841-1/4"	25588-1/16" 2588-1/8" 25892-3/16" 25593-7/32" 25884-3/4" DOUBLE END 25545 45°, 60° V-GROOVE	25596-1/2" V-GROOVE CHAMFER  2557-1/2" *25678-1/2"	2582-1/8" 25821-1/4" 25523-3/8" 25623-1/2" 25628-3/4" *25824-1/4" *25825-5/16" *25826-3/8" *25827-1/2"	FOR FORMICA *2541 VENEER CUTTER STRAIGHT *25412 BEVEL *25412	1/2" 2556	2553-1/4" 25531-1/2"	1/4, 5/16, 3/8" 25581 *25682	2/16" 25585 ROMAN O 25587-5/32" 25588-1/4"	25872-3/8" 25871-1/2" *25876-3/8" *25875-1/2" 45° CHAMFER BIT 25889	25863-1/4" 25582-3/8" 25581-1/2" *25586-3/8" *25585-1/2"	2588 WITH 2 BALL BEARINGS (1/2 & 5/8") 25886
*CARBIDE TIPPED BITS											

CAUTION: The use of attachments or accessories not listed above might be hazardous.

TYPICAL OPERATIONS

HELPFUL HINTS - MAKING CUTTER SIZE SELECTIONS

As you can see listed in the accessories, a wide variety of cutters is available. Therefore, there is a variety of sizes, grooves, curves and angles involved. This often creates the need to estimate the **AVERAGE CUTTING DIAMETER** when making cutter size selections on the front panel. The following examples illustrate how to estimate the average cutting diameter. **REMEMBER:** We recommend that cuts be made at a depth not exceeding $1/8"$ and that several passes be made to reach depths of cut greater than $1/8"$

See *Figure 13*. In this illustration a V-groove cutter is being used to make a $5/16"$ deep cut. To find the average cutting diameter, add the maximum diameter ($5/8"$) to the minimum diameter (0), then multiply by $1/2$. The average diameter of the cut equals $5/16"$. Since $5/16"$ lies between the " $1/4$ inch" and " $3/8$ inch" position on the front panel, either could be used. Difficulty in controlling, difficulty in cutting, material hardness, etc. are factors which can be used in determining which position to select. For example, if the material was difficult to cut, then the " $3/8$ inch" position would probably be best since the cutting speed will be slower.

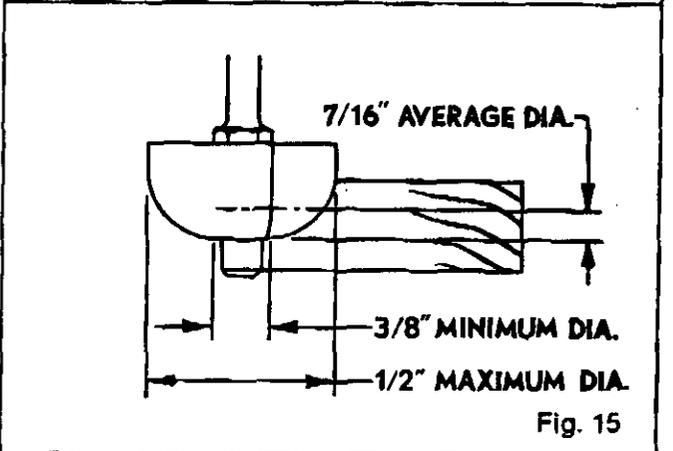
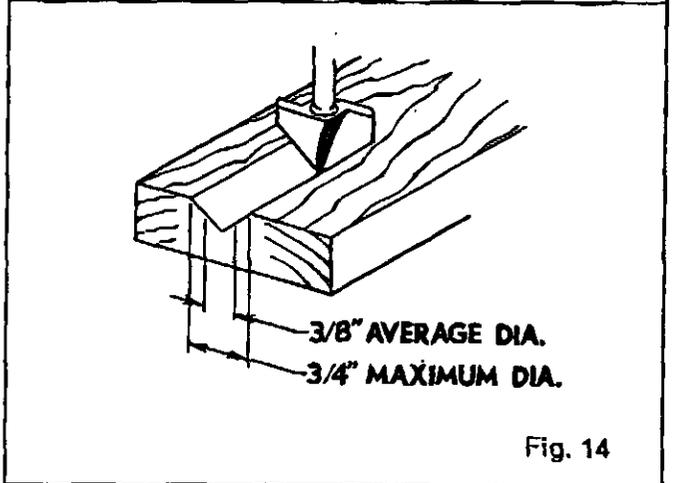
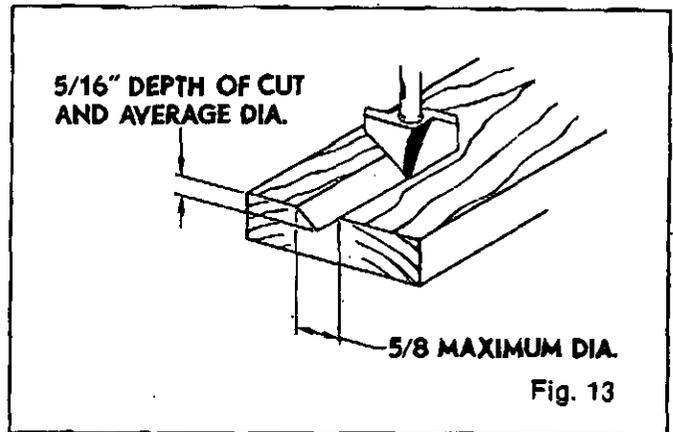
See *Figure 14*. In this illustration the V-groove cutter is being used to make a cut with a $3/4"$ maximum diameter. The maximum diameter is $3/4"$, the minimum diameter is still 0", and the average diameter is now $3/8"$. In this case, the " $3/8$ inch" position would be the best cutter size selection. **NOTE:** Your depth of cut would also be $3/8"$.

See *Figure 15*. This illustration shows a cove cutter with a non-zero minimum diameter. The average diameter is still computed by adding the maximum diameter to the minimum diameter, then multiplying by $1/2$. For example, if the maximum diameter equals $1/2"$ and the minimum diameter equals $3/8"$, then the average diameter equals $7/16"$ ($1/2$ is the same as $4/8$, therefore, $4/8 + 3/8 = 7/8$, $7/8 \times 1/2 = 7/16$). Either the " $3/8$ inch" or " $1/2$ inch" position could be selected on the front panel.

As mentioned earlier, it is best to make a trial cut on a scrap piece of wood where possible. The average diameter of the cutter can also be determined by measuring the maximum and minimum diameter from the widths of a trial cut. If necessary, then a change or correction in the cutter size can be made before making the finished cut.

HELPFUL HINTS - USING CARBIDE TIPPED CUTTERS

Since carbide cutters cut at higher speeds than steel cutters, it often becomes necessary for the front panel settings to be different while using carbide cutters. As mentioned earlier, the "very hard" position under the material indicator setting was designed for using carbide cutters when cutting materials that are too hard for steel cutters. However, carbide cutters can also be used for cutting the same materials that steel cutters cut.



When using carbide cutters to cut these softer materials, a good rule to remember is to set either the "material" or "cutter size" indicator one position above that recommended for steel cutters. For example, a $1/2"$ carbide cutter should have the " $3/8$ inch" selection on the front panel. If a $1/4"$ carbide cutter is being used then the material indicator should be moved up one position. For example, from "hard" to "medium", or "medium" to "soft".

The fastest speed at which your electronic router will run is with the "soft" and " $1/4$ inch" selections on the front panel. This will be the fastest speed for both carbide cutters and steel cutters (25,000 RPM, no-load speed).

MAINTENANCE

WHEN SERVICING USE ONLY IDENTICAL REPLACEMENT PARTS

PROPER CARE OF CUTTERS

Get faster more accurate cutting results by keeping cutters clean and sharp. Remove all accumulated pitch and gum from cutters after each use.

When sharpening cutter, sharpen only the inside of the cutting edge. Never grind the outside diameter. Be sure when sharpening the end of a cutter to grind the clearance angle the same as originally ground.

A cutter sharpening kit (cat. #66501) is available from Sears Catalog Order or Retail Store. **NOTE: WHEN SHARPENING CUTTERS WITH YOUR ELECTRONIC ROUTER, MAKE THE "SOFT" AND "1/4 INCH" SELECTIONS ON THE FRONT PANEL.**

PROPER CARE OF COLLET

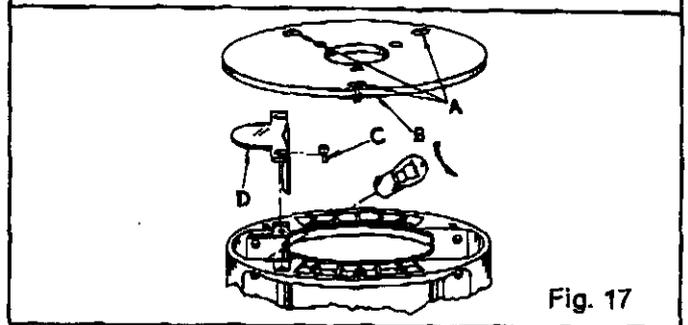
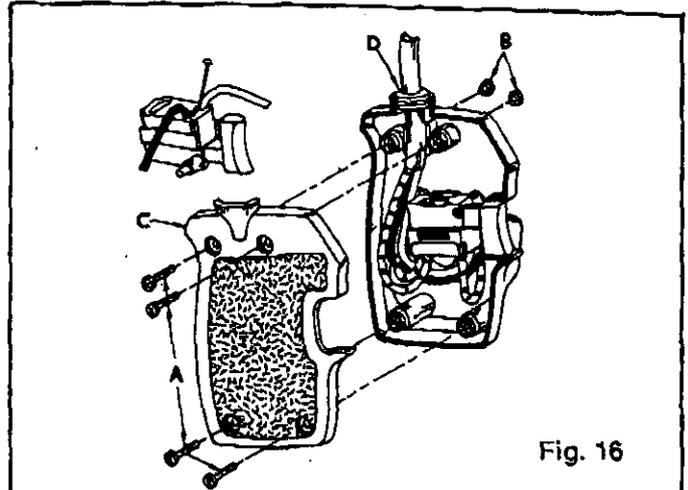
From time to time, it also becomes necessary to clean your collet and collet nut. To do so, simply remove collet nut from collet and clean the dust and chips that have collected. Then return collet nut to its original position.

SWITCH REPLACEMENT

Disconnect router from power supply.

SWITCH REPLACEMENT IS AS FOLLOWS:

1. Remove screws (A) nuts (B) and handle covers (C). See Figure 16.
2. Note location of grommet (D) in handle and how each lead is connected to switch.
3. Remove leads from switch by inserting a 1/32" diameter pin or nail into switch lead receptacle as shown in figure 16 and pulling on the lead. Remove nail or pin with a twisting, pulling motion.
4. Make sure grommet (D) is on cord and push each lead as far as possible into proper receptacle in switch.
5. Locate switch in handle and place leads so they won't be pinched when handle cover is replaced.
6. Make sure grommet (D) is in place and replace handle cover, screws and nuts.



LIGHT BULB REPLACEMENT

Disconnect router from power supply.

1. Remove cutter from router. Adjust router to maximum height.
2. Remove screws (A) and subbase (B). See Figure 17.
3. Remove screws (C) and work light lens (D).
4. With bulb pointing toward you, push bulb in and turn to the left to remove.
5. Reassemble all parts.

GENERAL

WARNING: ONLY THE PARTS SHOWN ON PARTS LIST, PAGE FIFTEEN, ARE INTENDED TO BE REPAIRED OR REPLACED BY THE CUSTOMER. ALL OTHER PARTS REPRESENT AN IMPORTANT PART OF THE DOUBLE INSULATION SYSTEM AND SHOULD BE SERVICED ONLY BY A QUALIFIED SEARS SERVICE TECHNICIAN.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc. **WARNING: DO NOT AT ANY TIME LET BRAKE FLUIDS, GASOLINE, PENETRATING OILS, ETC. COME IN CONTACT WITH PLASTIC PARTS. THEY CONTAIN CHEMICALS THAT CAN DAMAGE AND/OR DESTROY PLASTIC.**

When electric tools are used on fiberglass boats, sports cars, etc., it has been found that they are subject to accelerated wear and possible premature failure, as the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutators, etc. Consequently it is not recommended that this tool be used for extended work on any fiberglass material. During any use on fiberglass it is extremely important that the tool is cleaned frequently by blowing with an air jet. **ALWAYS WEAR SAFETY GLASSES OR EYESHIELDS BEFORE BEGINNING THIS OPERATION.**

TROUBLESHOOTING

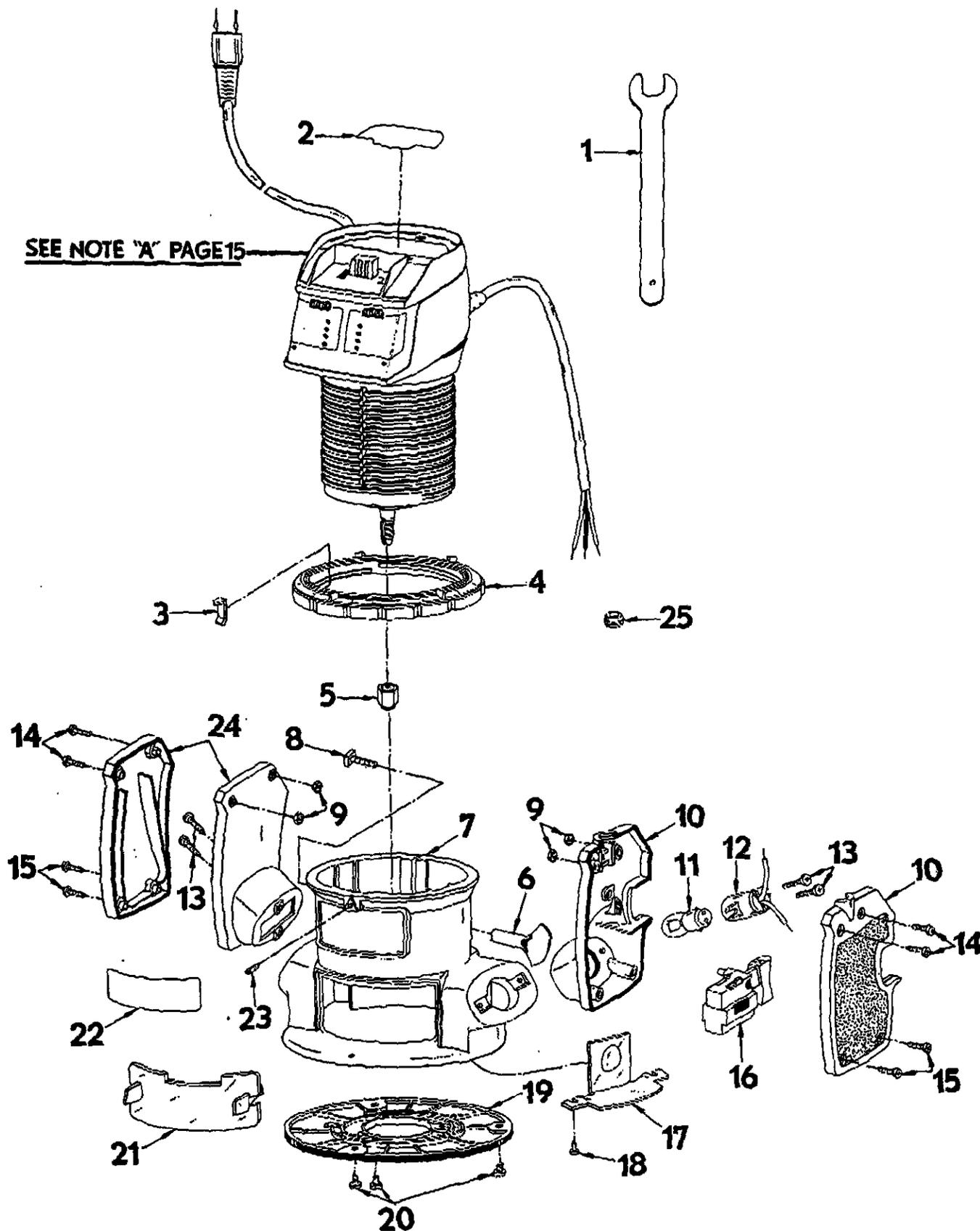
PROBLEM	SOLUTION
1. Router will not start — indicator lights do not flash.	1. (a) Make sure your router is properly plugged into power supply. (b) Make sure spindle lock is in unlocked position.
2. Router will not start — top two indicator lights flash.	2. The switch of your router is not in the "off" position. NOTE: Any time your router is disconnected from power supply and the switch is locked in the "lock on" position, this condition will exist.
3. Any unusual router condition, or abnormal flashing of lights.	3. Disconnect your router from power supply, then plug it in again.
4. Your router becomes overloaded and shuts off. The "too slow" and "too fast" indicator lights begin flashing.	4. Turn the trigger switch to its full "off" position, wait a few seconds, then restart your router and continue routing at a slower rate of feed.
5. The "too slow" indicator light does not flash or flashes inconsistently.	5. This condition exists because of low voltage conditions in the power supply. Continue to use your router as normal.
6. The indicator lights do not shift when you push the "select" region.	6. Firmly press the "select" region to clean away sawdust, etc. that has collected on the contacts.

HELPFUL HINTS

- Always clamp workpiece securely before routing.
- A safe operator is one who thinks ahead.
- Always wear eye protection when routing.
- Make set-up adjustments carefully. Then double check. Measure twice and cut once.
- Keep cutters clean and properly sharpened.
- Don't let familiarity make you careless.
- Study all safety rules and do the job safely.
- **NEVER** place your hands in jeopardy.
- Make certain clamps can't loosen while in use.
- Test difficult set-ups on scrap — Don't waste lumber.
- Plan each operation before you begin.
- **THINK SAFETY BY THINKING AHEAD.**

CRAFTSMAN ROUTER — MODEL NUMBER 315.17500

SEE NOTE "A" PAGE 15



CRAFTSMAN ROUTER — MODEL NUMBER 315.17500

The Model Number will be found on a plate attached to the End Cap. Always mention the Model Number in all correspondence regarding your ROUTER or when ordering repair parts.

SEE BACK PAGE FOR PARTS ORDERING INSTRUCTIONS

PARTS LIST

Key No.	Part Number	Description	Quantity
1	989935-003	Wrench	1
2	990379-001	Data Plate	1
3	990376-001	Pointer	1
4	989652-002	Depth Adjust Ring and Indicator Assembly	1
5	989985-003	Collet Nut	1
6	623815-002	Clamping Wing Nut	1
7	612442-434	Base	1
8	623166-002	Square Head Bolt **STD522507	1
9	706404-007	Hex Nut (#8-32) **STD541008	4
10	611457-000	Power Handle Assembly	1
11	610951-002	Light Bulb (Standard Automotive Bulb #1004)	1
12	610930-001	Light Housing	1
13	606066-002	*Screw (#10-32 x 11/16 Pan Head)	4
14	614658-006	*Screw (#8-32 x 5/8 Pan Head)	4
15	616081-014	*Screw (#8-18 x 11/16 Pan Head Thread Cutting) **STD610807	4
16	623814-005	Switch	1
17	610946-001	Work Light Lens	1
18	989684-001	*Screw (#6-32 x 1/4 Thread Forming)	1
19	612191-004	Subbase	1
20	623863-001	*Screw (#10-32 x 1/4 Pan Head)	3
21	606688-001	Chip Shield	1
22	990374-001	Logo Plate	1
23	726676-002	Set Screw (#8-32 x 7/16 Hex Socket, Self Locking)	1
24	611456-000	Handle Assembly	1
25	623782-001	Grommet	1
	612547-213	Owner's Manual	

NOTE "A" — The assembly shown represents an important part of the Double Insulated System. To avoid the possibility of alteration or damage to the System, service should be performed by your nearest Sears Repair Center. Contact your nearest Catalog Order or Retail Store.

*Standard Hardware Item — May Be Purchased Locally
 **Available From Div. 98 — Source 980.00

Sears

OWNERS
MANUAL

SERVICE

MODEL NO.
315.17500

HOW TO ORDER
REPAIR PARTS

CRAFTSMAN®

**ELECTRONIC
ROUTER**

DOUBLE INSULATED

Now that you have purchased your Router, should a need ever exist for repair parts or service, simply contact any Sears Service Center and most Sears, Roebuck and Co. stores. Be sure to provide all pertinent facts when you call or visit.

The model number of your Router will be found on the plate attached to the motor housing.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- PART NUMBER
- PART DESCRIPTION
- MODEL NUMBER
315.17500
- NAME OF ITEM
Router

All parts listed may be ordered from any Sears Service Center and most Sears stores.

If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for handling.