

Sears

*owners
manual*

**MODEL NO.
113.251890**

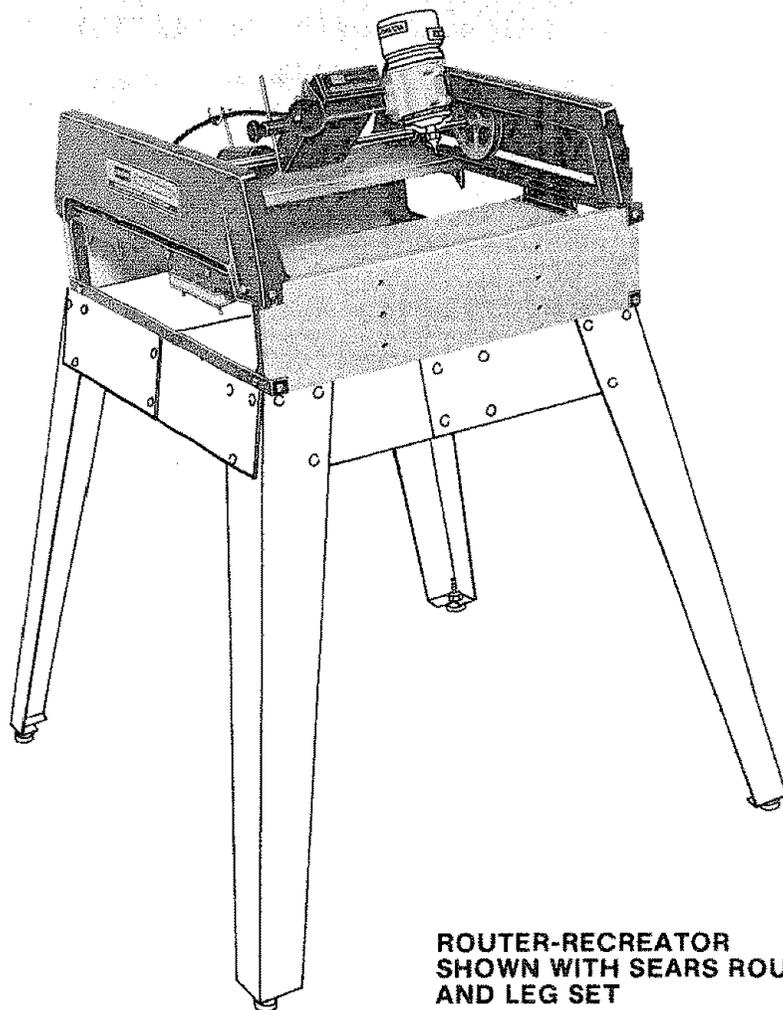
Serial
Number

Model and serial
number may be found
on a plate attached
to the yoke assembly.

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

CAUTION:

Read **GENERAL**
and **ADDITIONAL**
SAFETY
INSTRUCTIONS
carefully



**ROUTER-RECREATOR
SHOWN WITH SEARS ROUTER
AND LEG SET**

Sears

CRAFTSMAN.

ROUTER-RECREATOR

- *assembly*
- *operating*
- *repair parts*

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.

FULL ONE YEAR WARRANTY ON CRAFTSMAN ROUTER RECREATOR

If within one year from the date of purchase, this Craftsman Recreator fails due to a defect in material or workmanship, Sears will repair it, free of charge.

WARRANTY SERVICE IS AVAILABLE BY SIMPLY CONTACTING THE NEAREST SEARS STORE OR SERVICE CENTER THROUGHOUT THE UNITED STATES.

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

Before operating the Recreator read and understand your Router and Router Recreator owner's manuals and affixed warnings.

The General Safety Instructions which follow apply to your Router and Router Recreator combination as a "power tool."

general safety instructions for power tools

1. KNOW YOUR POWER TOOL

Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

2. GROUND ALL TOOLS UNLESS DOUBLE INSULATED

If tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE and in working order.

4. REMOVE ADJUSTING KEYS AND WRENCHES

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents. Floor must not be slippery due to wax or sawdust.

6. AVOID DANGEROUS ENVIRONMENT

Don't use power tools in damp or wet location. Keep work area well lit. Provide adequate surrounding work space.

7. KEEP CHILDREN AWAY

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP KID-PROOF

— with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL

It will do the job better and safer at the rate for which it was designed.

10. USE RIGHT TOOL

Don't force tool or attachment to do a job it was not designed for.

11. WEAR PROPER APPAREL

No loose clothing, gloves, neckties or jewelry to get caught in moving parts. Rubber-soled footwear is recommended for best footing.

12. USE SAFETY GOGGLES

Safety goggles must comply with ANSI Z87.1-1968. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

13. SECURE WORK

Use clamps or a vise to hold work when practical. It's safer than using your hand, 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 and clean for best and safest performance. Follow instructions for lubrication and changing accessories.

16. DISCONNECT TOOLS

before servicing; when changing accessories such as blades, bits, cutters, etc.

17. AVOID ACCIDENTAL STARTING

Make sure switch is in "OFF" position before plugging in.

18. USE RECOMMENDED ACCESSORIES

Consult the owner's manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

19. NEVER STAND ON TOOL

Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted. Do not store materials above or near the tool such that it is necessary to stand on the tool to reach them.

20. CHECK DAMAGED PARTS

Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure 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.

additional safety instructions for router-recreator

1. ALWAYS USE EYE PROTECTION.

The operation of any cutting tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with ANSI Z87.1 before commencing cutting tool operation. We recommend Wide Vision Safety Mask for use over goggles . . . available at Sears retail or catalog stores.

2. DON'T FORCE TOOL

The Recreator was designed for smooth operation, therefore, parts should never be forced to operate.

3. KEEP HANDS CLEAR OF BITS AND WORKING AREA.

4. KEEP ROUTER RECREATOR AND ROUTER CLEAN

After every use, clean saw dust off the Recreator and Router.

NOTE: Motors used on wood-working tools are particularly susceptible to the accumulation of sawdust and wood chips and should be blown out or "vacuumed" frequently to prevent interference with normal motor ventilation.

Note and follow the instructions found on the WARNING label which appears on the yoke assembly.

WARNING

FOR YOUR OWN SAFETY

1. READ AND UNDERSTAND OWNER'S MANUAL OF ROUTER RECREATOR AND ROUTER BEFORE OPERATING MACHINE.
2. WEAR SAFETY GOGGLES AND EAR PROTECTION.
3. DO NOT WEAR GLOVES, NECKTIE, OR LOOSE CLOTHING. TIE BACK LONG HAIR.
4. EXCEPT FOR SPINDLE WORK NEVER USE A SMALLER DIA. STYLUS TIP THAN THE CUTTER.
5. BE POSITIVE YOU DO NOT RUN CUTTER INTO C-CLAMPS.



The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with ANSI Z87.1 (shown on Package) before commencing power tool operation. Safety Goggles are available at Sears retail or catalog stores.

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Introduction

Thank you for the purchase of your Router Recreator, we think one of the most exciting and creative tools to come along in years.

In order to facilitate handling and minimize any damage that might occur during shipment your new Recreator is packaged un-assembled. We know you're anxious to see what your new tool will do but a few minutes spent now, carefully reading the following instructions, will result in less frustration

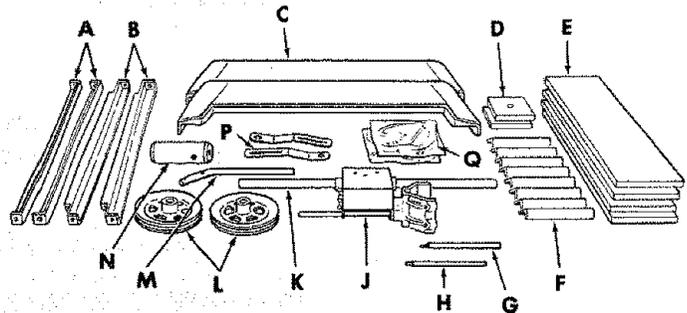
and more enjoyable operation later.

Start by checking and accounting for all the loose parts. If any parts are missing check the carton once more, then contact your local Sears Retail or Catalog outlet for replacement.

The model number of your Recreator (113.251890) and the part number of the missing part will be very helpful in securing the replacement part.

unpacking and checking contents

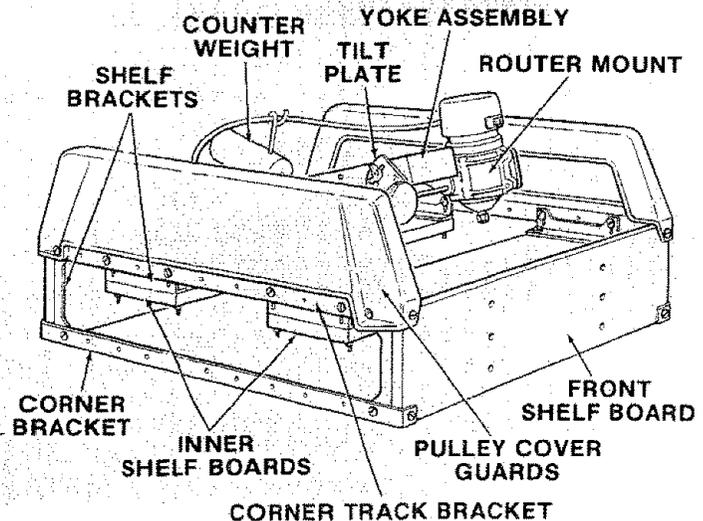
ITEM	DESCRIPTION	QTY.
A	Corner Brackets	2
B	Track Brackets	2
C	Pulley Cover Guards	2
D	Work Mounts	2
E	Shelf Boards	4
F	Shelf Brackets	8
G	1/16" Stylus Rod	1
H	1/8" Stylus Rod	1
J	Yoke Assembly	1
K	Shaft	1
L	Pulleys (5")	2
M	Counterweight Shaft	1
N	Counterweight	1
P	Shaft Lock Brackets	2
Q	Loose Parts Bags	2
Bag No. 76008 contains the following:		
	Cable	2
	Spindle Center Screw	2
	Stylus Mount	1
	Large Knob	1
	Small Knob	1
	3/4" Stylus Collar	1
	Stylus Grip	1
Bag No. 76018 contains the following:		
	Screw, Pan Hd. 1/4-20 x 1-1/4	20
	Screw, Pan Hd. 1/4-20 x 1/2	18
	Nut, Hex 1/4-20	32
	Wing Nut, 1/4-20	2



ITEM	DESCRIPTION	QTY.
	Collar	2
	Screw, Soc. Set 1/4-20 x 1/4	4
	Nut, Hex 8-32	2
	Washer, 3/16 x 3/8 x 1/32	2
	Screw, Sems Pan Hd. 10-32 x 3/4	2
	Lockwasher, External 1/4	2
	Screw, Soc. Set 5/16-18 x 5/16	1
	Screw, Hex Hd. 3/8-16 x 1-1/2	2
	Washer, 3/8 x 7/8 x 5/64	2
	Nut, Hex Jam 3/8-16	6
	Wrench, Hex "L" 1/8	1
	Wrench, Hex "L" 5/32	1
	Screw, Rd. Hd. 1/4-20 x 2-1/2	1
	Screw, Pan Hd. 10-32 x 1/2	3

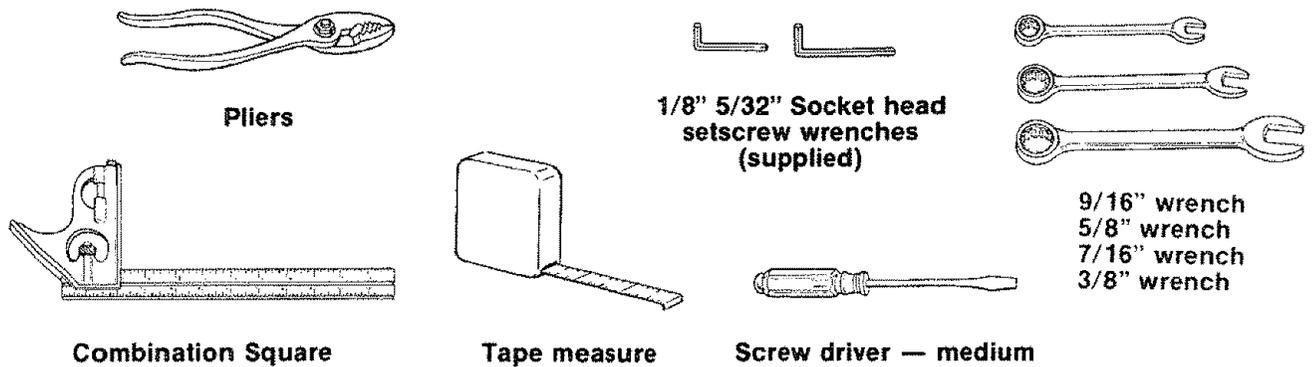
getting to know your router-recreator

We'll be referring to the various parts of the Router Recreator by name throughout this manual. It will be helpful if you study the following drawing and familiarize yourself with the major components. Periodic referral to this section will also be helpful if you become puzzled while reading some of the more detailed instructions.



assembly

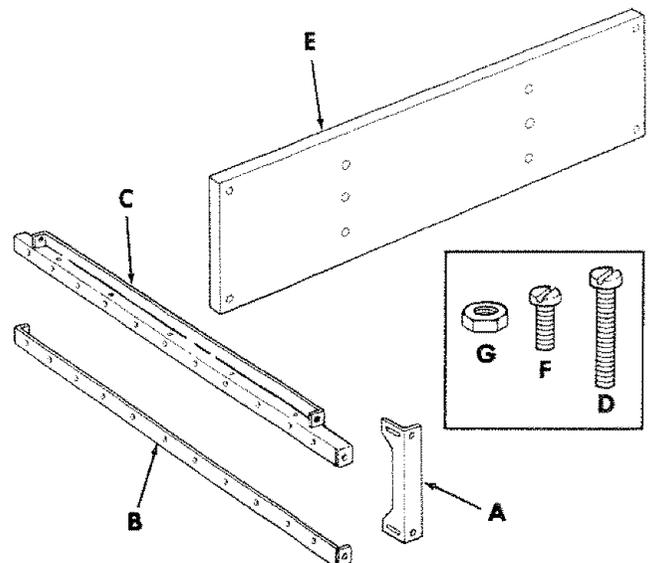
THE FOLLOWING TOOLS WILL BE REQUIRED FOR ASSEMBLY AND ALIGNMENT



I. BASE ASSEMBLY

Working in a well lit, clean area is always a plus. It's also a good idea to place all hardware (nuts and bolts) in a bowl or other suitable container so they're easily accessible and don't get scattered. **FOR THIS FIRST OPERATION YOU'LL NEED:**

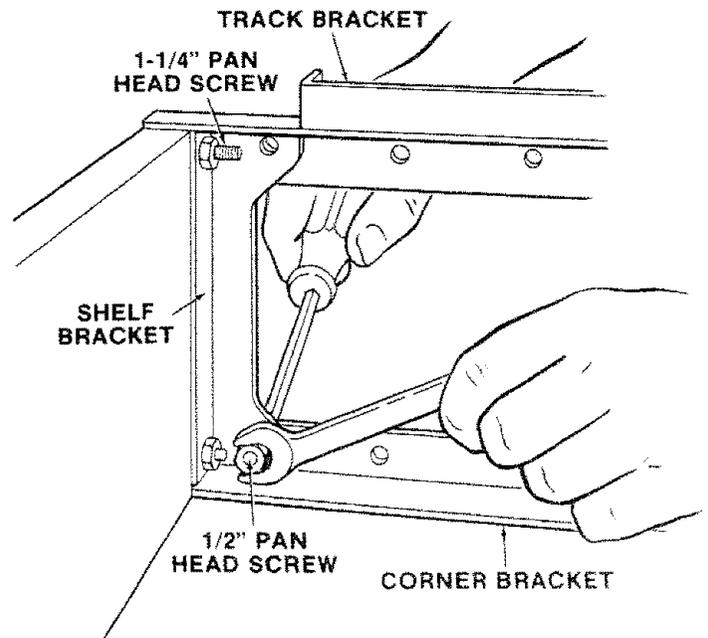
ITEM	DESCRIPTION	QTY.
A	Shelf Brackets	6
B	Corner Brackets	2
C	Track Brackets	2
D	Pan Head Screws, 1/4-20 x 1-1/4"	12
E	Shelf Boards	3
F	Pan Head Screws, 1/4-20 x 1/2"	8
G	Hex Nuts, 1/4 x 20	20



NOTE: The base of your Router Recreator is made up of 2 Shelf Boards (front and rear), 2 Track Brackets (top), and 2 Corner Brackets (bottom) see illustration.

Attach all Brackets to the Shelf Boards as shown using a 1-1/4 inch pan head screw.

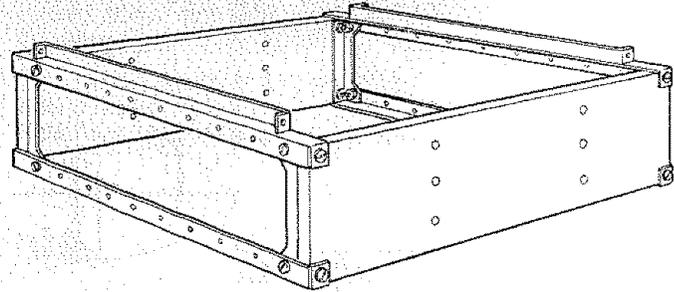
Use a 1/2 inch pan head screw to attach the Track and Corner Brackets to the Shelf Brackets (see illustration).



assembly

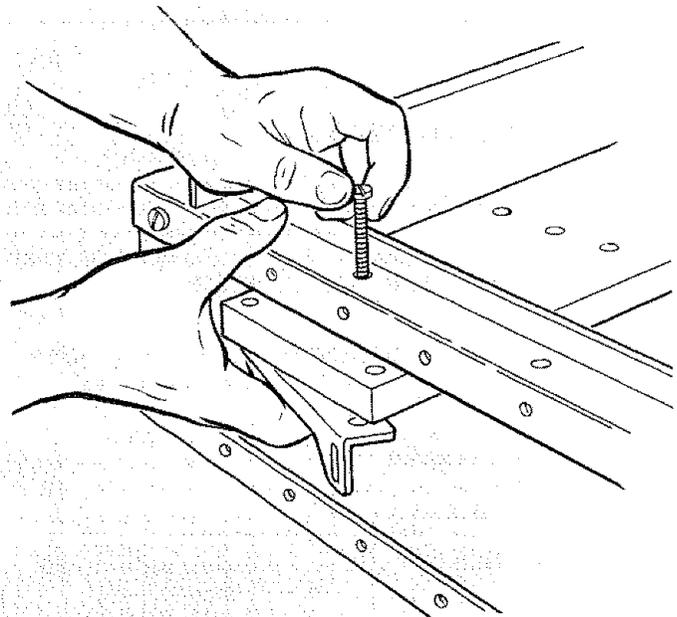
When assembling the above pieces do not tighten the screws until you have checked all four corners of the assembly with your square.

**CHECK FOR SQUARENESS OF
CORNERS BEFORE TIGHTENING**



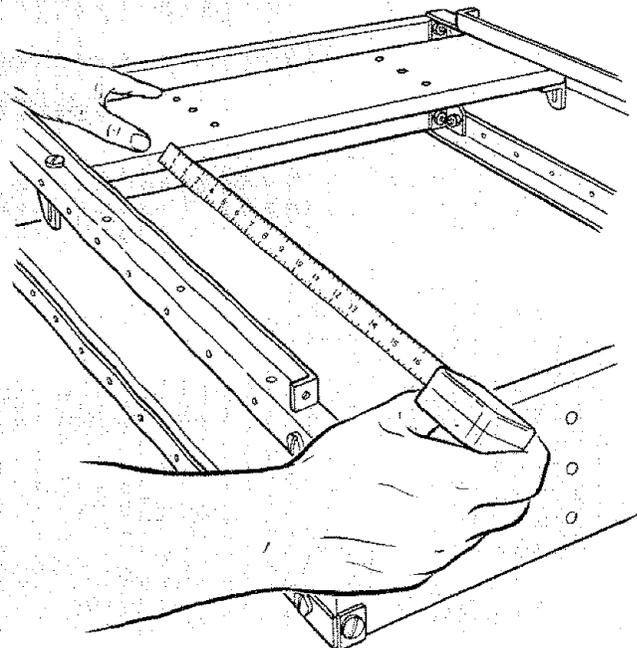
Install a third Shelf Board horizontally using the last two holes in the top of each Track Bracket.

The Shelf Brackets should be on the underside of the Shelf and suspended from the Track Brackets by four 1-1/4 inch Pan head screws and four Hex nuts as shown.



Before tightening the screws check the distance from the edge of the horizontal Shelf Board to the front Shelf Board as shown. The distance should be equal when measured at both the left and right side of the frame assembly.

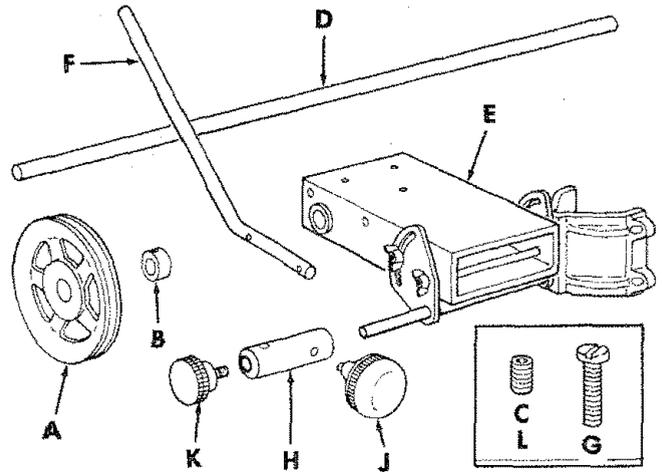
You should have one shelf board, two shelf brackets and their related hardware remaining. This shelf will be installed later, after you determine what type of work will be done.



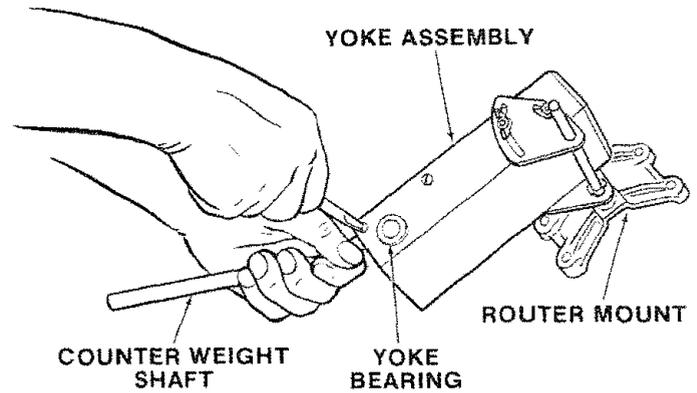
II. YOKE ASSEMBLY

Step two will require the following parts:

ITEM	DESCRIPTION	QTY.
A	5" Pulleys	2
B	Pulley Shaft Collars	2
C	Socket Head Setscrews, 1/4-20 x 1/4"	2
D	Pulley Shaft	1
E	Yoke Sub-Assembly	1
F	Counterweight Shaft	1
G	Pan Head Screws, 10-32 x 3/4"	2
H	Stylus Mount	1
J	Large Knob	1
K	Small Knob	1
L	Socket Head Setscrew, 5/16-18 x 1/4"	1

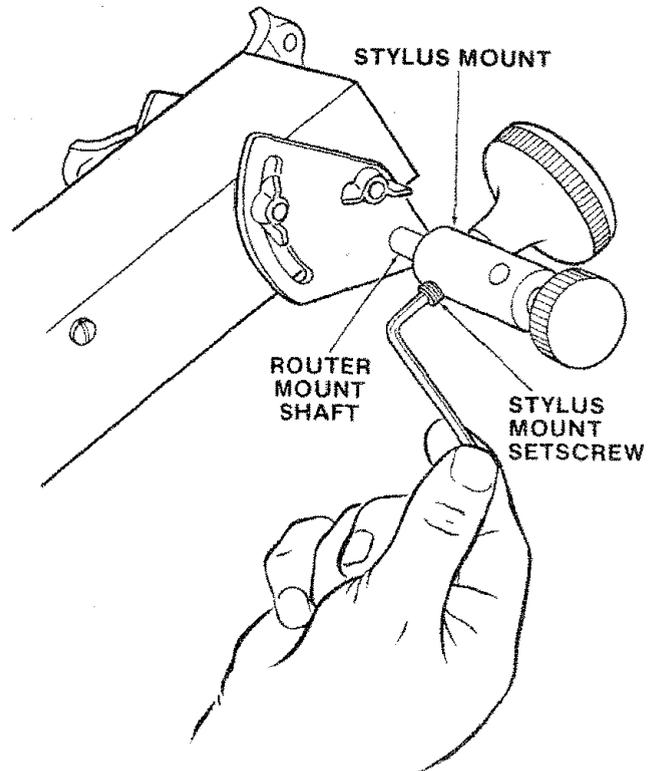


Place the Counterweight Shaft inside the rear of the Yoke with the bent section of the Shaft extending out and upward. The two holes in the Shaft should align with the two small holes in the Yoke as shown. Secure it with the two 3/4 inch pan head screws.



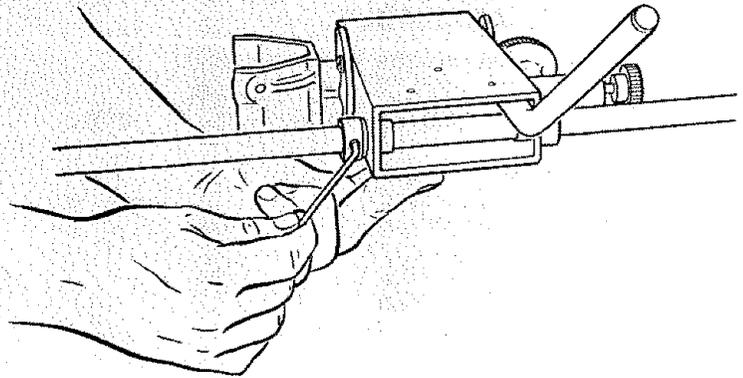
Screw the large and small Knobs and a 1/4 inch setscrew into the Stylus Mount as shown.

Slide this assembly on to the Router Mount Shaft as shown and lightly tighten the setscrew.



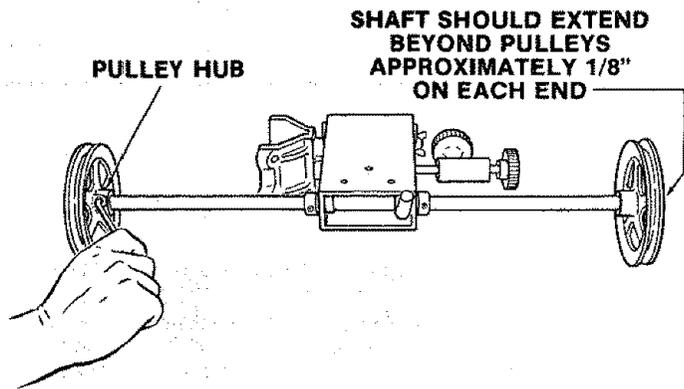
assembly

Slide the Pulley Shaft through the bearings at the rear of the Yoke Assembly, followed by the shaft Collars — one on each side of the Yoke as shown. Install 1/4 inch setscrew in the threaded hole in each of the Collars. The Collars should not be tightened at this time.



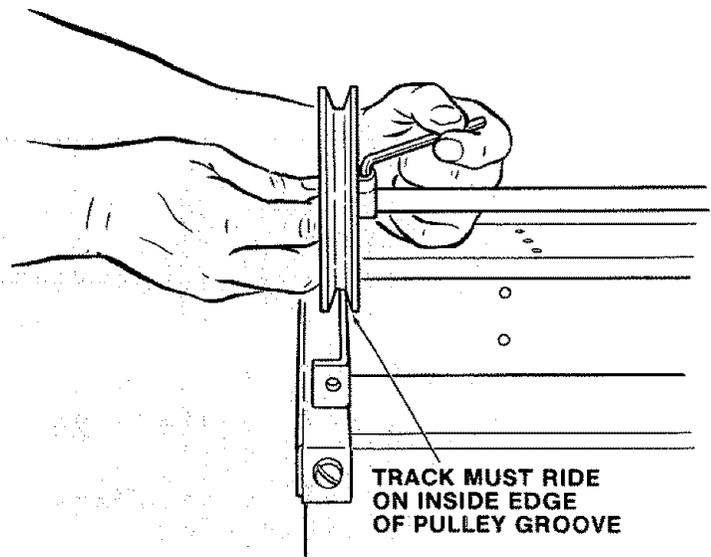
Slide the 5 inch Track Pulleys on to the Pulley Shaft with the hub of the pulley (area which contains the setscrew) facing toward the Yoke as shown. This Shaft should extend beyond the Pulleys approximately 1/8 inch on each end.

Place the pulley hubs on the Shaft such that one pulley set screw faces front while the other faces rear as shown. This will help insure access to one of the set screws during future adjustments.



Place the entire yoke assembly on the frame with the pulleys riding on the Track Brackets and the large black Knob facing the front.

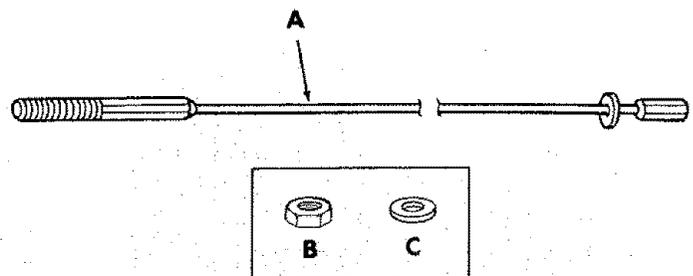
Loosen the pulley setscrews and push outward on the pulley so that the tracks are riding on the inside corners of the pulley grooves as shown. Tighten the pulley setscrews. The Pulley Shaft should extend beyond the faces of the pulleys an equal amount on each side.



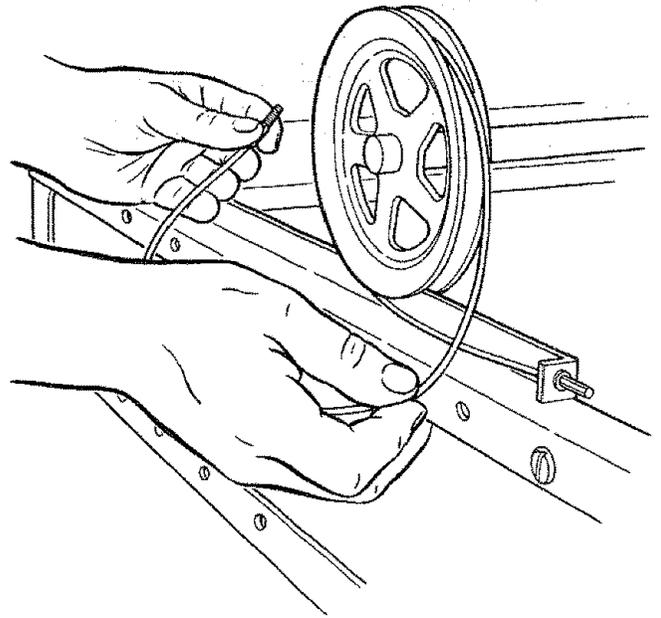
III. CABLE ASSEMBLIES

For step three you'll need —

ITEM	DESCRIPTION	QTY.
A	Steel Cables	2
B	8-32 Hex Nuts	2
C	3/16 x 3/8 Flat Washers	2



Place the threaded end of one cable through the small hole in the tab at the front end of the pulley track as shown. Wrap the cable one time around the pulley and then push it through the hole in the tab at the rear of the track.

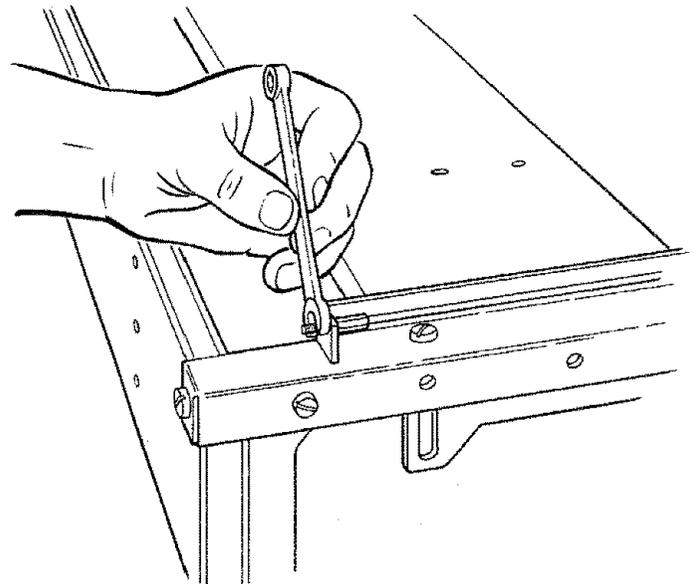


While applying slight tension on the cable, with the aid of pliers, install the 3/8 inch washer followed by the 8-32 Hex Nut on the threaded end of the cable as shown.

Repeat the cable installation on the other pulley.

Check for free movement of the pulleys. The pulleys should not slide on the tracks but roll freely without any cable slippage. If additional cable tension is needed, tighten the 8/32 Hex nut securing the cable at the rear, while holding the body of the threaded end with a pliers.

NOTE: The tension on the two cables should be about equal. Check the tension on each by "picking" the cable like a guitar string and listening to the sound. Adjust the tension to make the two sounds similar in pitch.

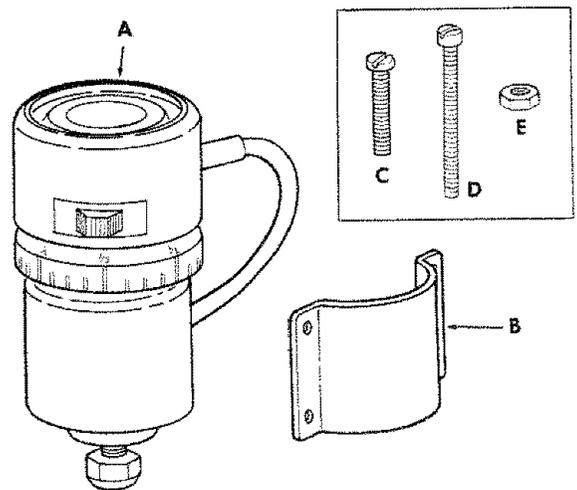


IV. INSTALLING THE ROUTER (not supplied)

Step four requires the following:

ITEM	DESCRIPTION	QTY.
A	Router (motor assembly)	1
B	Router clamp	1
C	1/4-20 x 1-1/4 pan head screws	4
D	1/4-20 x 1-1/2 round head screws	1
E	1/4-20 Hex nut	1

Your Router Recreator is designed to accept most routers with a motor body from 3 inches to 3-3/4 inches in diameter. If your router does not easily adapt to the router mount, it is not recommended that you attempt any alteration of the mount or your router.



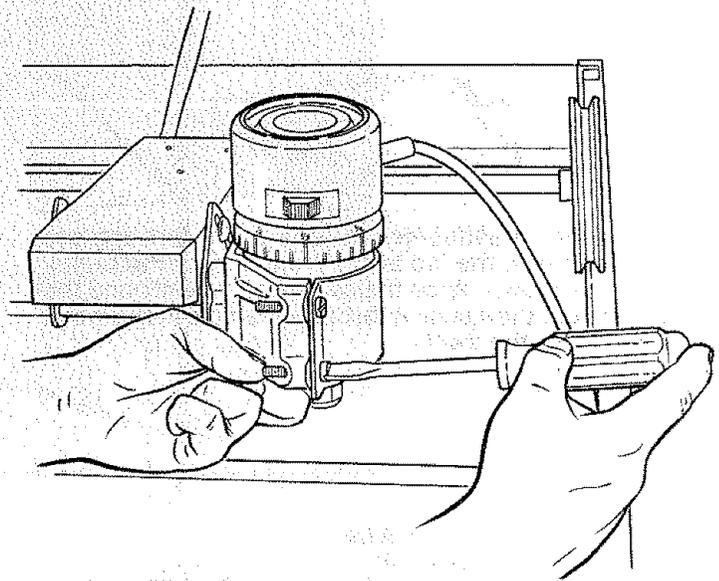
assembly

Align the four holes in the Router Clamp with four holes in the Router Mount as shown. Thread the four 1-1/4 pan head screws into the threaded holes in the Router Mount.

If your router on/off switch is located on the motor assembly, simply remove the motor assembly from its base, by loosening the elevation lock and lifting.

It may be necessary to consult the owners' manual which accompanied your router for assistance in removing the router from its base.

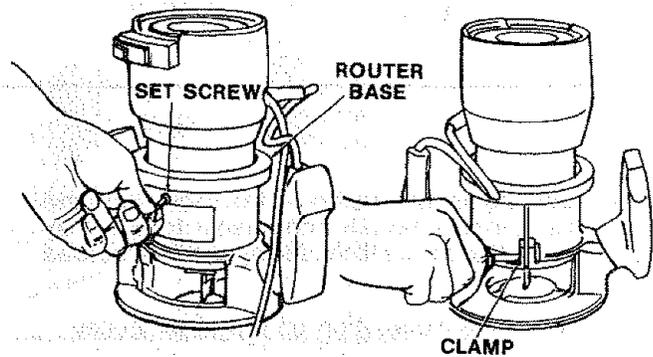
Slip the motor assembly into the hole formed by the clamp and router mount. Place any protrusions such as elevation gear racks in the recess in the Router Mount or in the gap between the Router Mount and Clamp. Tighten the four pan head screws.



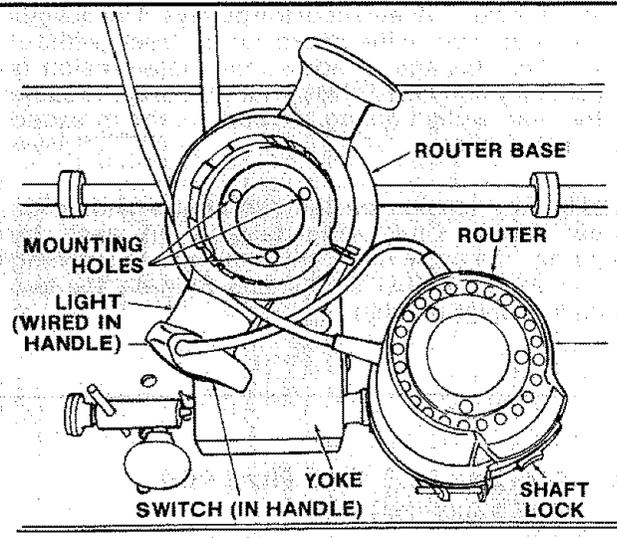
If your router has a built-in work light or switch wired through the handle, the steps below should be followed to secure both miter base and motor:

1. Remove the base of the router from the motor. (Usually done by loosening the setscrew* located near the logo plate). Loosen any clamps securing router to router base.

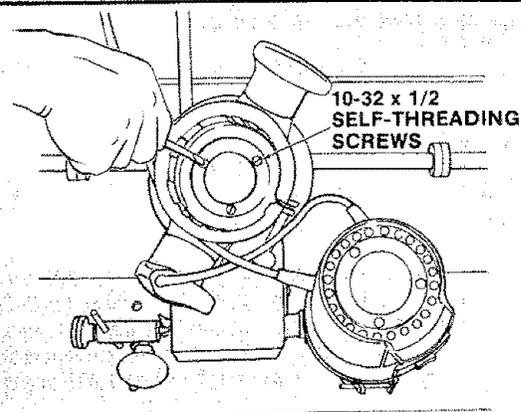
***NOTE:** When the router is removed from the Router Recreator, remember to tighten the set screw into the base until it touches the housing; then back the set screw out half-a-turn.



2. Leave both handles intact, and securely mount the motor of the router between the router clamps as described previously.
3. Place the router base on top of the yoke; sub-base side down.
4. Align the holes in the yoke with the three (3) holes in the router sub-base. Check that the router is located with the switch (in the handle) facing towards the operator for easy access.



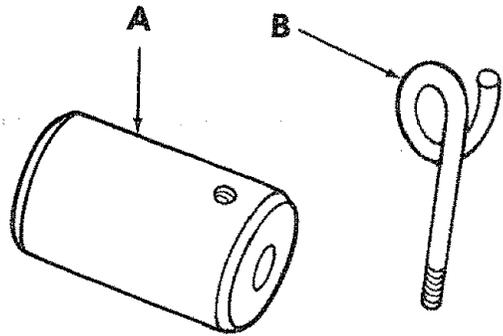
5. Locate three (3) 10-32 x 1/2-inch self-threading screws from the loose parts bag.
6. Insert and thread the three screws in the router sub-base and yoke holes. Tighten with a screwdriver.



V. INSTALLATION OF THE COUNTERWEIGHT

Needed for step five —

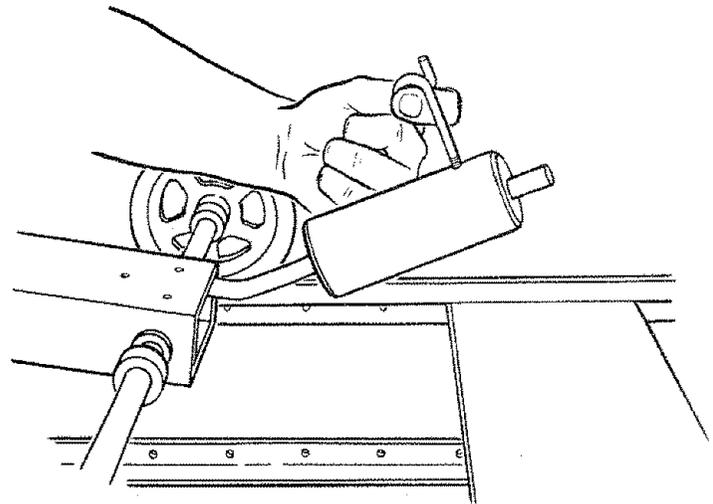
ITEM	DESCRIPTION	QTY.
A	Counterweight	1
B	Cord Hook	1



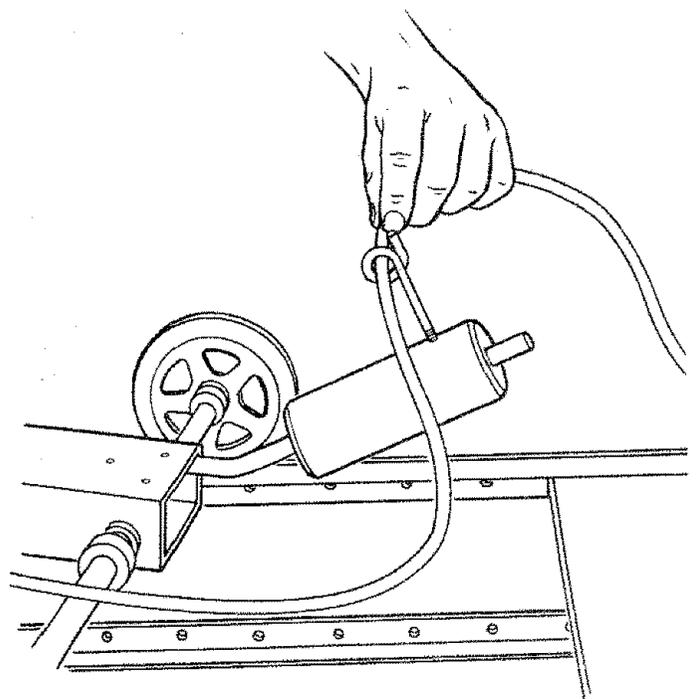
Screw the Cord Hook into the Counterweight about 2 or 3 turns.

Slide the Counterweight onto the Counterweight shaft.

Move the Counterweight on the shaft compensating the weight of the motor, yoke assembly, and router base if mounted on yoke. When the router chuck rests lightly on the edge of the front shelf board, secure the Counterweight on the shaft by turning the Cord Hook until it seats against the shaft.



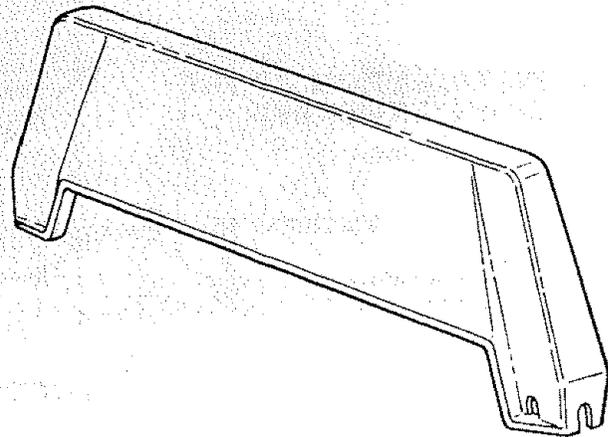
Pass the motor power cord through the Cord Hook and route toward the rear of the Recreator.



assembly

VI. INSTALLING THE PULLEY GUARDS

Parts required —
2 ea. Pulley Guards



Loosen the 1/4-20 x 1-1/4 inch pan head screw located at the top of each corner of the frame assembly.

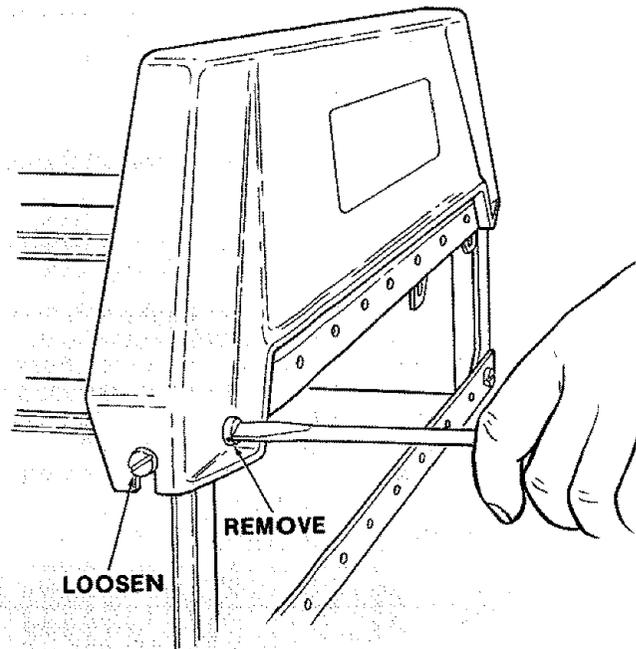
Remove the 1/4-20 x 1/2 inch pan head screw and 1/4-20 Hex nut from the top of each corner of the frame assembly.

Place the pulley cover over the pulley and align the slot at the front of the guard with the 1-1/4 inch pan head screw and re-install the 1/2 inch pan head screw through the holes in the side of the guard, then through the Corner Track Brackets.

Tighten the four pan head screws.

Repeat the pulley guard installation with the remaining guard.

Run the pulley and yoke assembly back and forth to make sure that the pulleys do not drag on the inside of the covers. It may be necessary to loosen the screws and shift the covers slightly to clear the pulleys.



VII. MOUNTING YOUR ROUTER RECREATOR TO A STAND

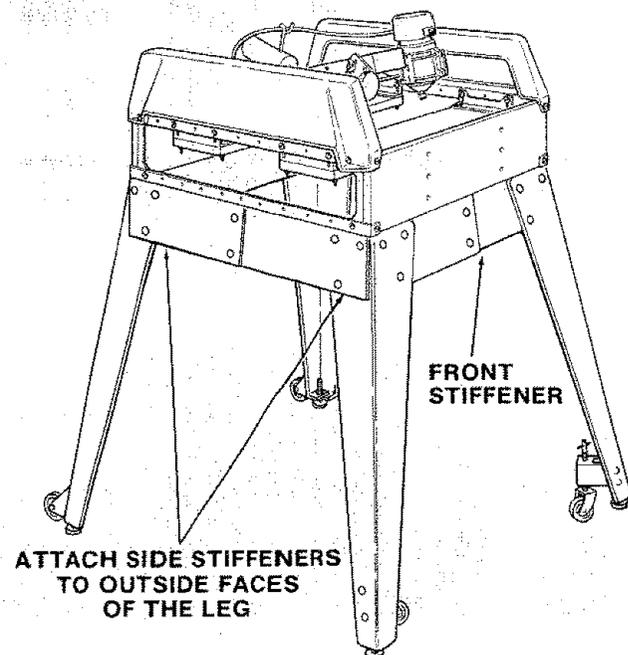
To insure safe accurate operation it is important that the frame of your Router Recreator is fastened to a suitable table or leg set.

If you fashion your own leg set, remember to provide access to center of the unit and sufficient clearance of the corner brackets for the positioning of the shelf boards.

NOTE: The recommended leg set for the router recreator is catalog no. 9-22238.

NOTE: See page 2 & 3 of instructions for catalog no. 9-22238 leg set and assemble the legs according to the section headed "For Bases Measuring 24" x 27"."

IMPORTANT: You must attach the side stiffeners to the outside faces of the legs as shown in this illustration.

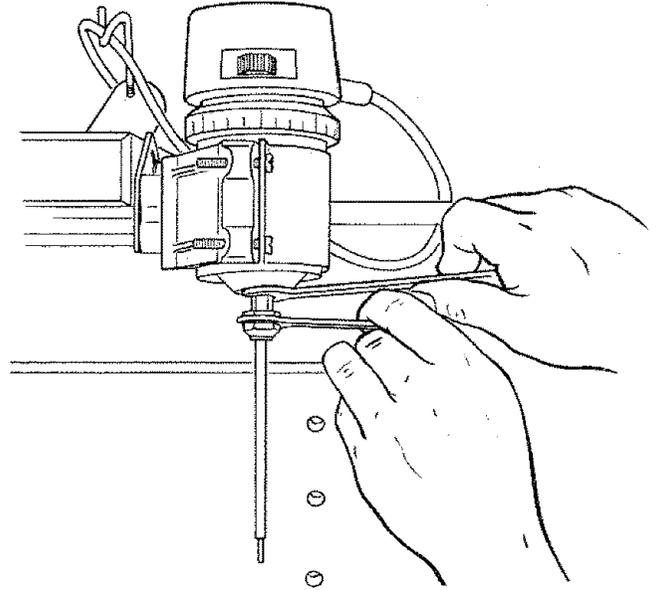


alignment

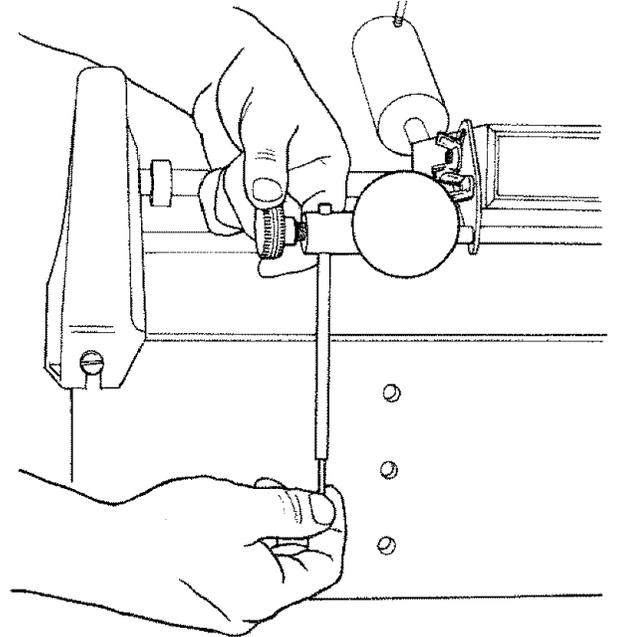
ALIGNING YOUR ROUTER RECREATOR

Proper alignment of your Router Recreator is essential for accurate results. Although your Recreator is designed to maintain its' alignment, it is suggested that you check the pulley tracking and Router/Stylus alignment not only before beginning a project, but occasionally during the project itself.

Remove the two Stylus Rods from the loose parts bag. Place the 1/4 inch end of one of the Stylus Rods in the chuck of the router. Snug the Stylus in place with the Router Chuck Wrench (supplied with Router).

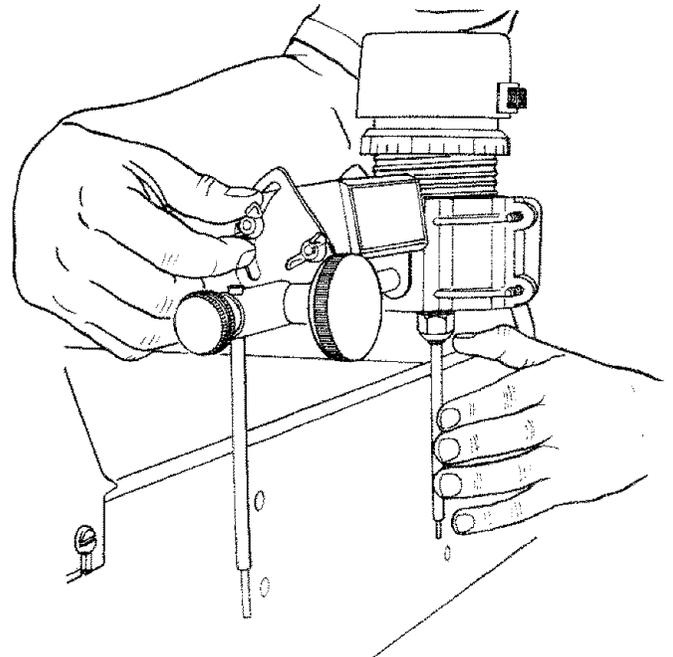


Place the second Stylus in the Stylus Mount. This is done by backing off on the small black knob and then re-tightening when the stylus is in place.



Loosen the two Tilt Plate wing nuts which will allow the Stylus/Router Mount to pivot.

Roll the Yoke Assembly forward on the Tracks and position the Stylus located in the Router chuck flush against the front face of front Shelf Board with the chuck face resting on the edge of the shelf. Tighten both Tilt Plate wing nuts.

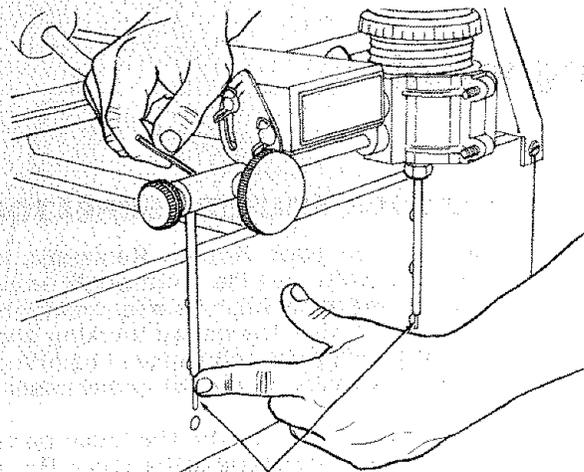


alignment

Slide the Yoke Assembly either left or right on the pulley shaft until the Stylus in the router centers on the righthand set of holes in the front Shelf Board.

While holding the router Stylus Rod in place, (centerline of righthand holes) loosen the Stylus Mount setscrews and slide the mount left or right until the second Stylus aligns with the lefthand set of holes.

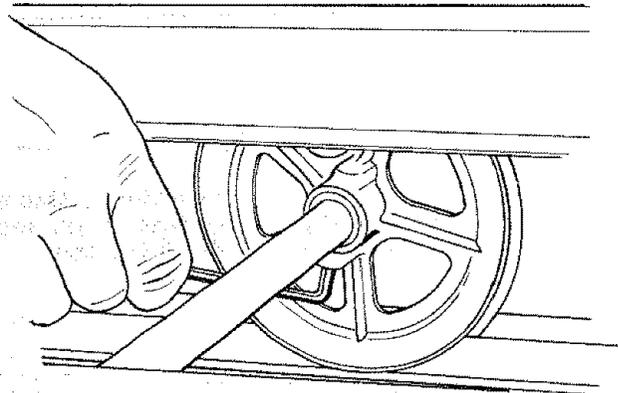
If both of the Stylus Rods are not flush with the face of the front Shelf Board at the same time, the pulleys require adjustment.



STYLUS TO BE CENTERED ON HOLES
AND FLUSH AGAINST SHELF FACE

Reaching under either one of the pulley cover guards with the 5/32 setscrew wrench, locate the setscrew and loosen it sufficiently to allow the pulley to rotate independent of the pulley shaft. Note! Adjustment of only one pulley is necessary, either the left or the right pulley may be adjusted.

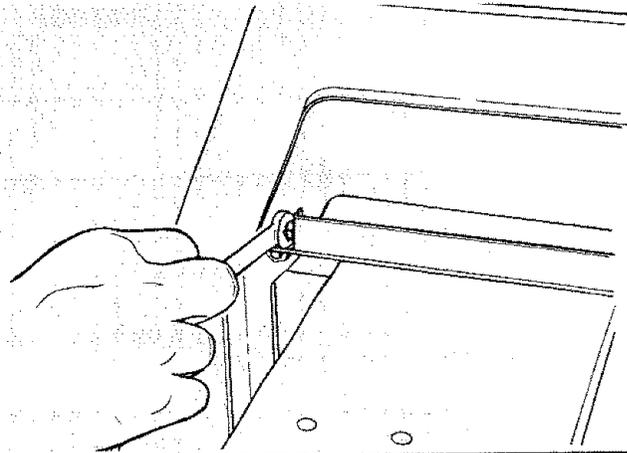
Roll the Yoke Assembly back and forth on the Tracks several times. This should bring the two pulleys into unison. Check to determine if the correction was made by again placing the Stylus Rods against the front Shelf Board. If some mis-alignment is still detected it may be necessary to gently roll the righthand pulley forward while simultaneously rolling the lefthand pulley rearward. If this worsens the mis-alignment reverse the procedure. Once the two Stylus are flush and properly spaced (centered on holes) tighten the pulley and Stylus Mount setscrews securely. Make sure that the Tracks are again riding on the inside edge of the pulley grooves when making any pulley adjustments.



Finally check for free movement of the Yoke Assembly on the Tracks.

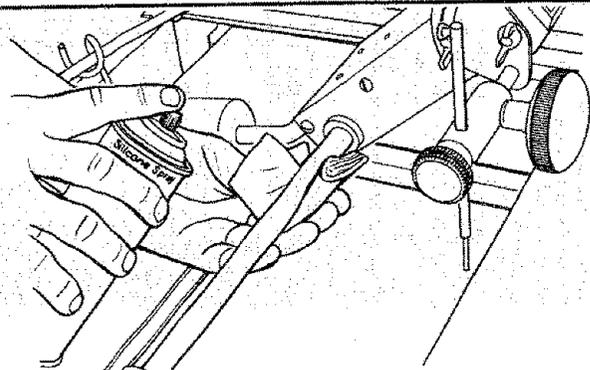
If the pulleys slip on the Tracks additional cable tension may be required. This is done by tightening the 8/32 nut at the rear of the Cable Assembly.

If the pulley seems to bind on the Tracks the Cables may be excessively tight or the pulleys may not be riding on the inside edge of the pulley groove. If necessary, adjust accordingly.



If the Yoke Assembly does not slide freely from side to side, lubrication of the pulley shaft may be required. Silicon spray or graphite provide excellent lubrication and will not attract sawdust.

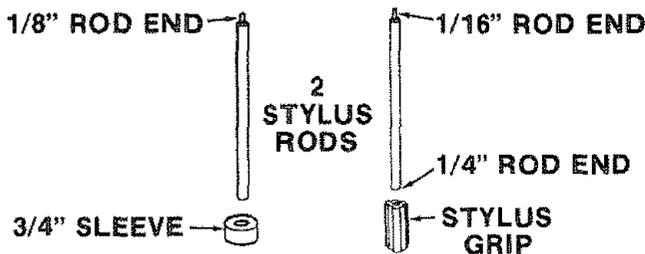
If the yoke assembly does not slide freely after lubrication, the bearings may be slightly misaligned. Rap the yoke sharply above the bearings with the heel of the hand to realign the bearings.



operation

GENERAL OPERATING HINTS

1. Most projects undertaken with the Router Recreator will require some time to complete. Make sure when you begin your work that you are comfortable. Although your Recreator can be operated from a standing position you'll find a chair will be helpful.
2. It is recommended that your work begin with the largest router bits and step down in bit diameter as the work progresses. The smaller the bit diameter the greater the detail. ALWAYS MAKE SURE THE STYLUS DIAMETER PRECISELY MATCHES THE DIAMETER OF THE BIT SELECTED. For stylus diameters greater than 1/4", a 3/4" stylus collar is provided. Secure it to the 1/4" end of a stylus with the setscrew wrench. The sleeve should be flush with the bottom of the stylus tip.



STYLUS TIP RECOMMENDED ROUTER BIT

3/4" sleeve	3/4" straight face 9-25529
1/4" rod end	1/4" straight face 9-25521
1/8" rod end	1/8" straight face 9-2552
1/16" rod end	1/16" straight face 9-25528 or 1/16" double ended 9-25599

3. Before beginning your work check for the proper relationship of the router bit to the stylus in respect to elevation. The easiest way to check for proper cutting depth is to rest the router bit on the ledge of the front shelf board then loosen the stylus mount knob (small knob) and allow the stylus to also rest on the shelf edge.

It is possible to set the stylus above or below the router bits, and some operations which are discussed later will require this.

4. The wing nuts on the tilt plate may be loosened which allows you to orient the stylus and bit to perform some relief work although most work will be done with the bit and stylus perpendicular to the piece. These wing nuts should be tightened after the desired angle is obtained.
5. When operating your Recreator place the left hand on the small knob (stylus mount knob) and the right hand on the large knob. It is less tiring if you rest your forearms or wrist on one of the nearby shelf boards while maneuvering the stylus and bit.
6. For very fine detail work, it may be more convenient to attach the stylus grip (provided) to the stylus and guide the stylus with the fingers of either hand on the stylus grip. The stylus grip should be between the small end of the stylus and the small knob.
7. When excessive stock must be removed don't overwork your router or Router Recreator. Several successive shallow cuts will produce better results than a few deep cuts and prolong the life of your tool and bits.
8. To produce straight line movement (front to rear) lock the yoke assembly in place with the aid of the shaft lock collars.
9. To produce straight line cuts left to right use the shaft lock brackets.
10. Always keep in mind the direction of rotation of the router bit (clockwise when viewed from above) and always move the router bit into the workpiece so that the cutting edge of the bit is chopping into the work and not gouging out. This will help prevent splintering of the workpiece, tearing out large sections, or kickback. Never turn the router on with bit in contact with the workpiece.
11. If the bit begins to scorch the wood as it cuts this usually indicates that resin, gum or pitch has accumulated on the cutting edge or that the bit is dull. Remove any gum or pitch with "Sears Gum and Pitch Remover" or sharpen and dress the cutting edge with a flat oil stone to regain the sharp edge.

As you become more familiar with your Router Recreator you will begin to realize its versatility. In addition to its primary function of a three dimensional duplicator, it also does an excellent job of reproducing signs from an existing sign or drawing. It is capable of carving two dimensional

plaques. It can turn a simple piece of rectangular or round stock into a handsomely decorated spindle.

The following pages will instruct you in the proper mounting and operating techniques for all of the above operations.

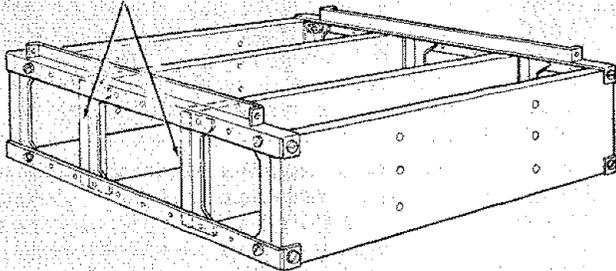
operation

One of the reasons your Recreator is so flexible is due to the multi-positioning of the shelf boards.

Although the front and rear shelf boards should never move, the two center shelves can be mounted in a number of positions.

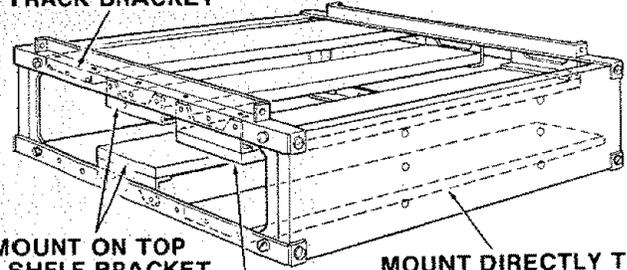
They can be installed vertically at various spacings. They can be installed horizontally by suspending them from the shelf brackets or on top of the shelf

MOUNT VERTICALLY (VARIOUS SPACINGS)



brackets. In addition, they can be secured to either the top corner brackets (with tracks) or the bottom corner brackets resulting in four different work heights. When mounting the workpiece pick a shelf position that will permit complete access to both the master and duplicate.

MOUNT DIRECT TO TRACK BRACKET



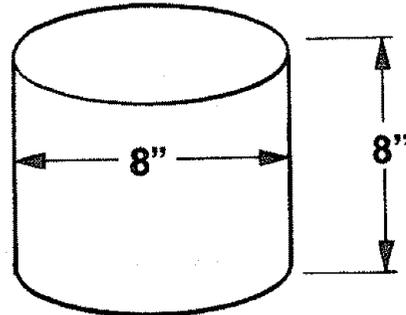
MOUNT ON TOP OF SHELF BRACKET

MOUNT TO BOTTOM OF SHELF BRACKET

MOUNT DIRECTLY TO CORNER BRACKET

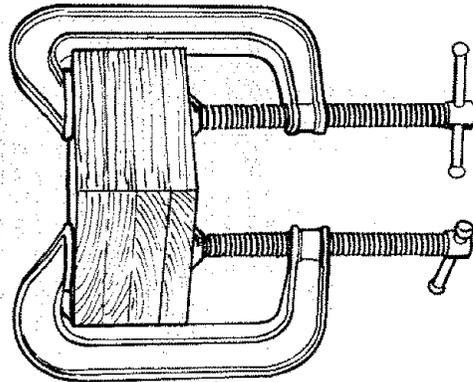
THREE DIMENSIONAL CARVING

When carving three dimensional objects bear in mind that the capacities of your Recreator will limit you to an object not more than 8 inches in diameter and 8 inches tall. Measure the master to make sure it is within these limits before proceeding.

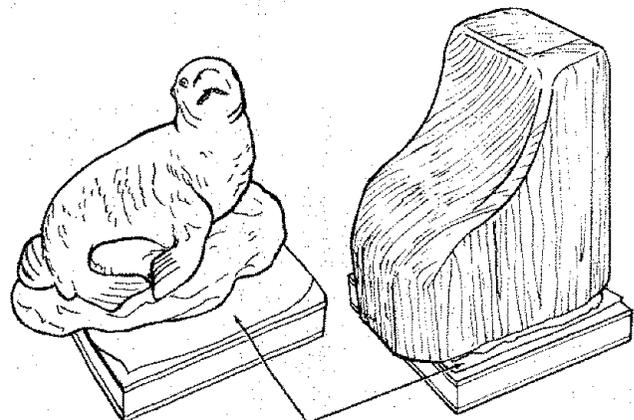


Unless a single block of wood large enough to contain the entire carving is available, it will be necessary to laminate several pieces of 3/4 inch stock to the size required.

An interesting effect can be achieved by laminating woods of contrasting colors such as redwood and white pine. For your initial attempts, however, an all redwood or pine workpiece is recommended.



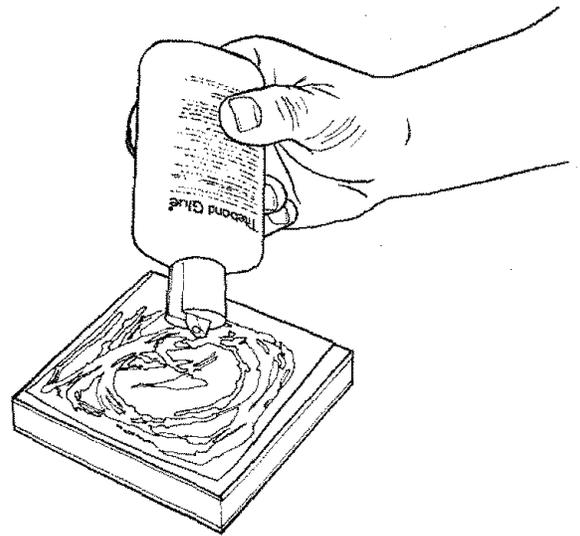
After the laminated workpiece has dried, remove any excess stock with a sabre saw, band saw or coping saw. Try to remove as much excess stock as possible but make sure the workpiece remains larger than the silhouette of the master.



BROWN KRAFT PAPER

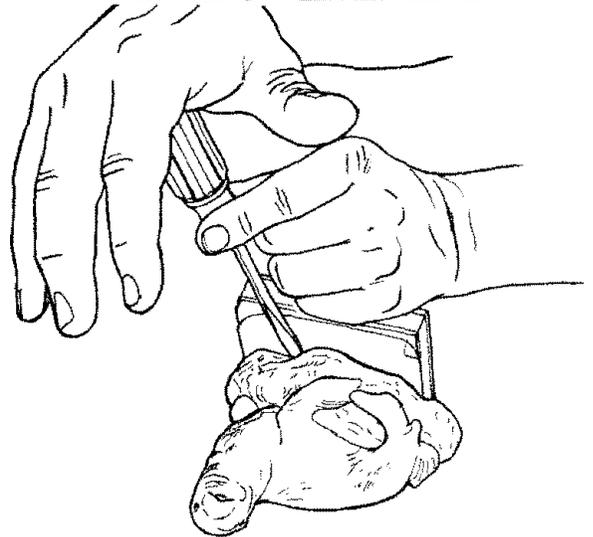
The two work mounts will be required for 3 dimensional carving. The master and workpiece can be attached to the work mounts by either wood screws or carpenters glue and must be mounted on the same side of the work mount as the threaded T nut. By drilling pilot holes in the work mount the master and workpiece can be secured with 1-3/4 inch wood screws. Make sure the heads of the screws are counter-sunk to prevent any interference.

When screwing the object to the work mount is not possible or desirable, carpenters wood glue will bond most wood or ceramic type objects. Spread a liberal amount of glue on the work mount. Cut a piece of Brown Kraft paper (shopping bag paper). Place it on the work mount and apply glue to the paper. Place the master or workpiece on the paper. Allow to dry per directions specified with glue.



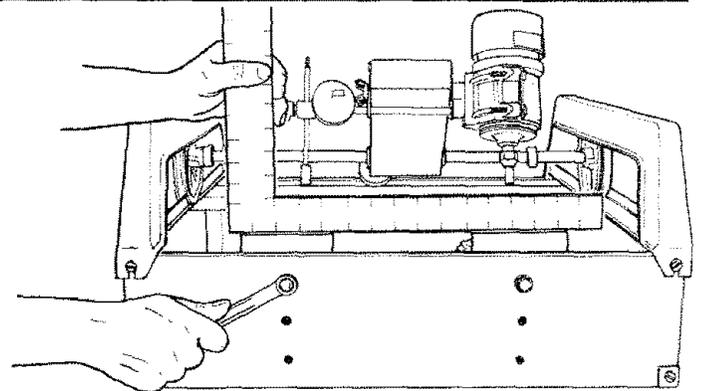
This process will hold the objects securely to the work mounts yet allow easy removal with no damage to the master or duplicate. To remove the objects all that will be necessary will be to place a sharp chisel or screwdriver between the object and work mount and rap sharply with the palm of your hand.

When gluing or screwing the objects to the work mounts, make sure that they are oriented in the same direction, in respect to the work mount, for the sides of the work mount will be used as references when rotating.

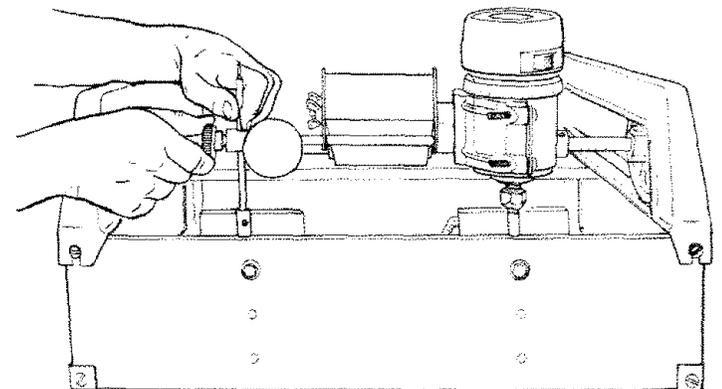


Secure the master and the workpiece to the front shelf board by screwing the 1-1/2 inch Hex head bolts and washers through the front of the shelf board and then into the threaded "T" nut centered in the work mount.

Align the work mounts by placing a straight edge along the top edges of both the master and workpiece work mounts. When the work mounts touch the straight edge at all points tighten the 3/8 bolt in each mount.



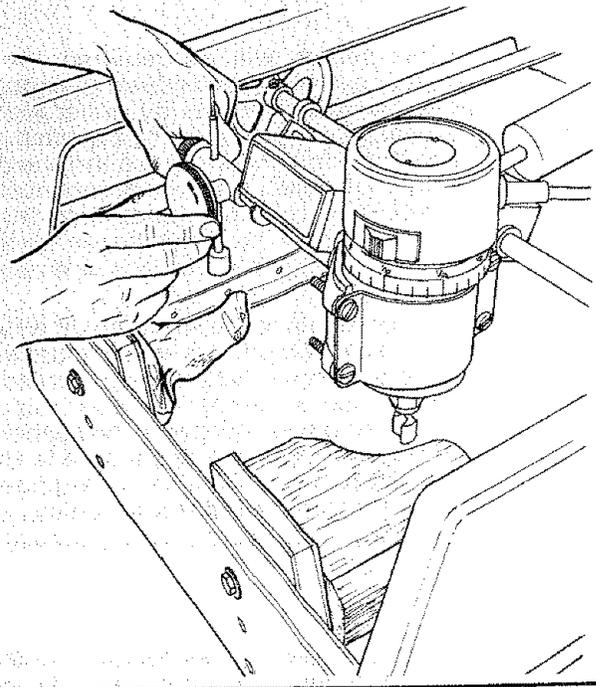
Install a 3/4 inch router bit and a matching stylus. Set the depth of the stylus to the same height as the bit by using the edge of the front shelf as a guide.



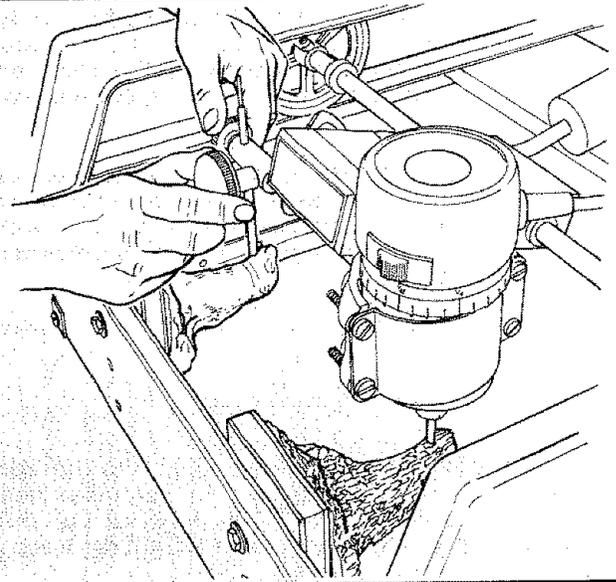
operation

With adequate eye protection in place, plug the router motor in. While holding one of the control knobs to insure that the bit is free of the workpiece, turn the switch on. Using two hands, one on the large knob the second on the small black knob, gently stroke the router bit into the workpiece. The stylus will guide from the master and the profile of the master will soon begin to appear in the workpiece.

After sufficient material has been removed from the starting position, turn the router off, loosen the 3/8 bolt and rotate both work mounts 90° again aligning with a straight edge. Repeat the above on all four edges of the work mount.

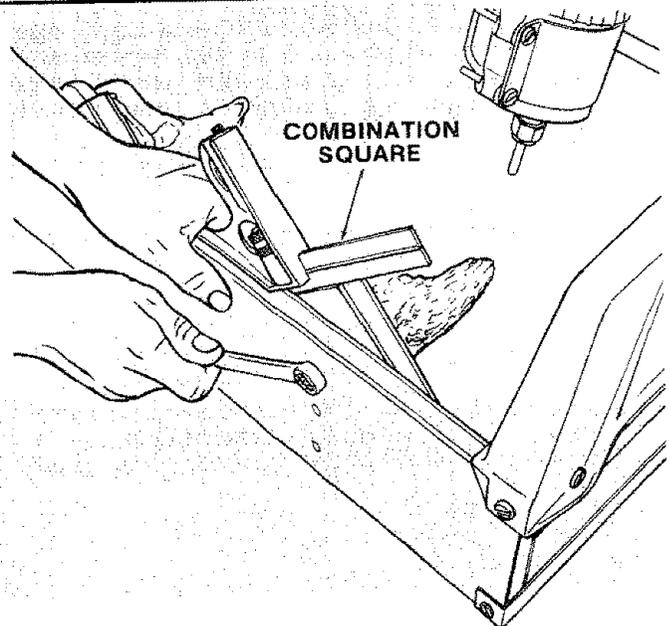


After the workpiece has been rotated 360° remove the large bit and step down to the next smallest diameter bit and repeat the above process. Always re-set the elevation of the stylus in respect to the bit when changing bits.

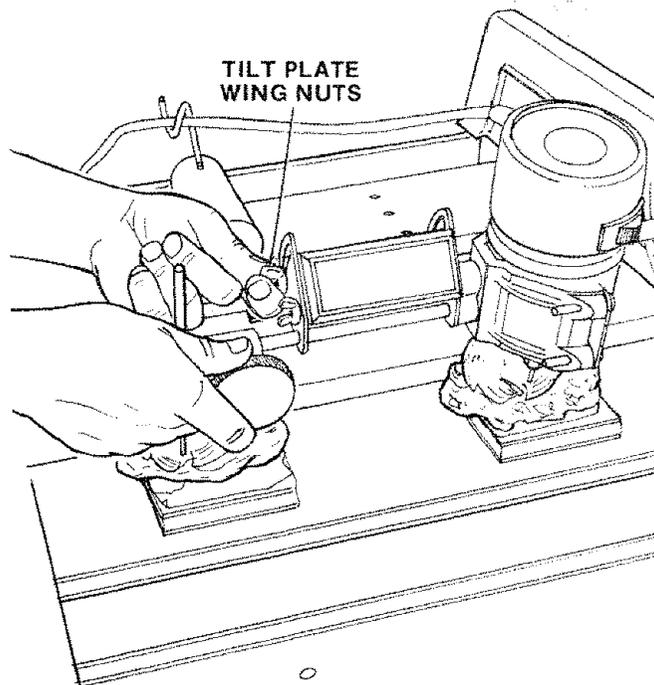


Some intricate carvings may require a 45° orientation. This can be accomplished with the aid of a combination square.

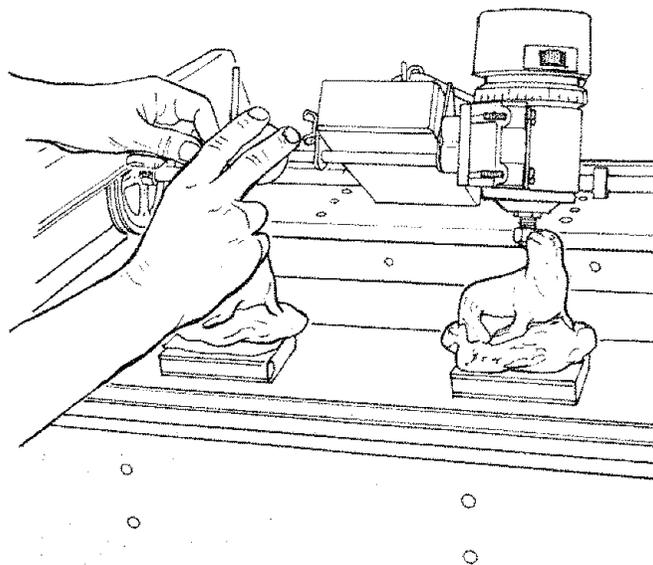
Note! When carving objects which are symmetrical, it may become difficult to tell front from rear. You may wish to identify the starting edge of both work mounts to keep them in proper relation.



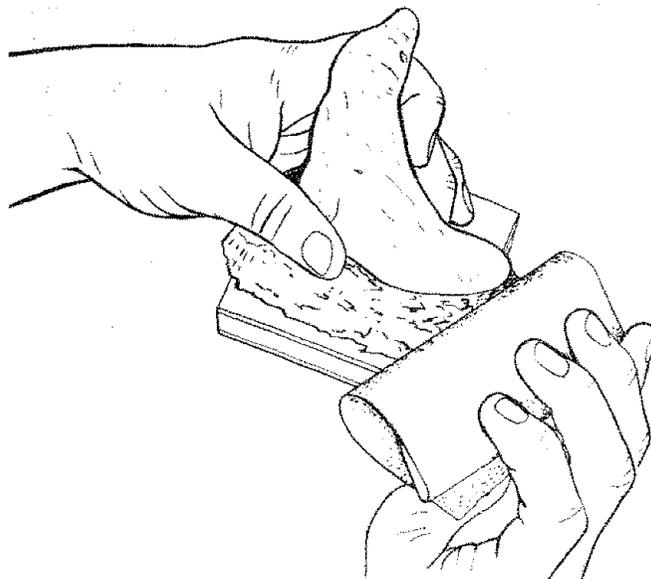
As the carving begins to take shape some undercut work may be necessary. This can be accomplished by loosening two wing nuts near the yoke tilt plate, tilting the yoke assembly to the desired angle and then re-tightening the wing nuts. **"Always turn the router off when pivoting the yoke or making any adjustment."**



After the object is nearing completion you may find it necessary to re-mount the master and workpiece in a vertical plane rather than horizontal. This will allow the bit to contact the workpiece on the top and base sections of the carving that were inaccessible in the horizontal plane.



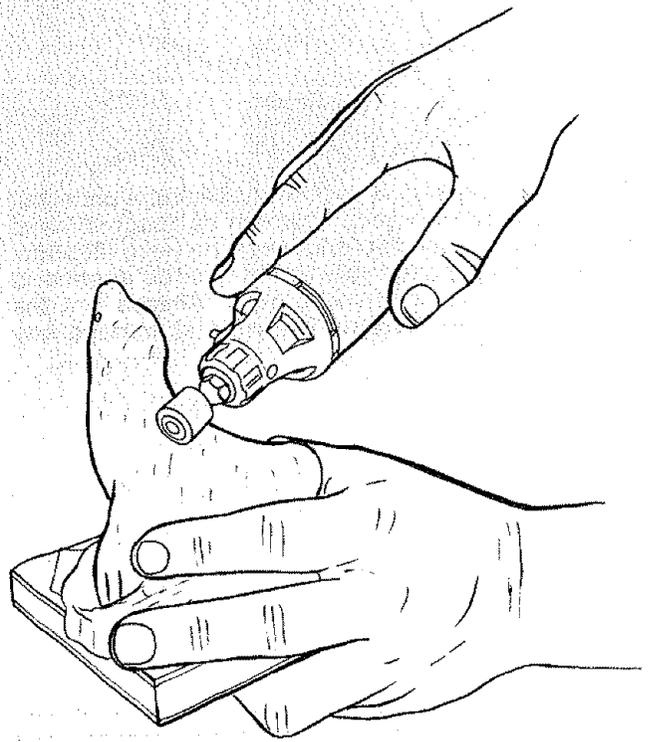
After the object has been completely carved it can be finished in a number of ways. Some prefer the rustic hand carved appearance that results from the router bits while others prefer sanding by hand or with a small hobby tool.



operation

After the desired finish is achieved, additional detail can be added with hand sculpturing tools or a small engraving tool.

Remove the workpiece and master from the work mount and if glued, any residue can be removed from the work mounts or workpieces with sand paper.



SIGN MAKING

Signs can be duplicated from originals or reproduced from a drawing. The Recreator will carve signs up to 10 inches wide and 24 inches long or even longer if there is sufficient room for the sign to overhang the front and rear shelf boards.

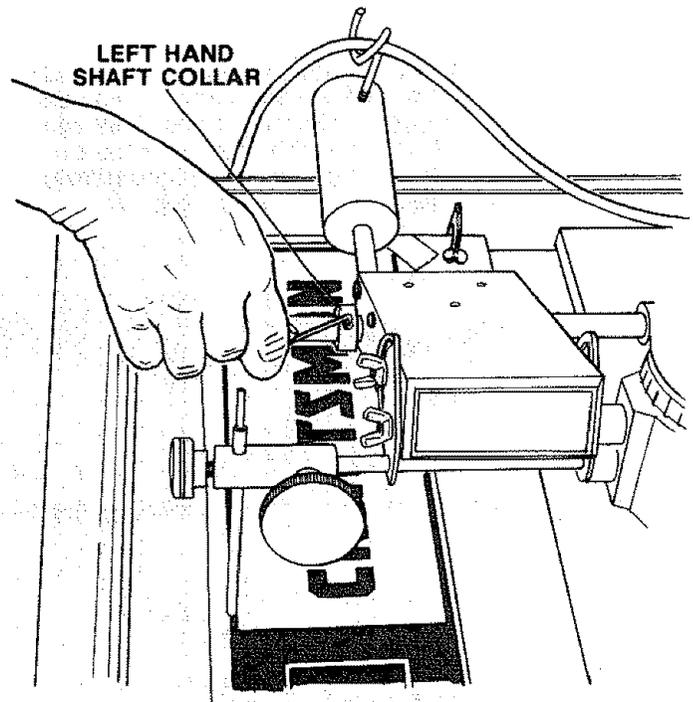
Place the two inner shelf boards between the front and rear shelf boards with their surfaces flush to the top edge of the front and rear shelf board. Secure the two inner shelf boards with the shelf brackets, pan head screws and nuts.

Using a piece of plywood, masonite or particle board larger than the drawing, tape the drawing of the sign to this back-up board.

Select a workpiece cut to the desired final size of the sign. Redwood is an excellent and relatively inexpensive material to use for sign making.

Mount the master and its hardboard backing on the left side of the Recreator and align the master to the tracking of the Recreator by tracing the edge of the sign with the stylus in the stylus mount. With the stylus in contact with the edge of the sign, move one of the shaft collars into contact with the yoke bearing face. Tighten the set screw in this collar to limit the stylus to straight line front to rear travel. When the edge of the sign follows the travel of the stylus as it moves from front to rear, secure the master to the inner shelf boards with C-clamps. Position the C-clamps on the back up board where they will not interfere with the free movement of the yoke assembly.

Mount the workpiece to the right of the master and using a 1/4 inch router bit in the same fashion as the stylus was used, align the workpiece to the master at front and rear. Move the yoke assembly from front to rear making sure the router bit touches the edge of

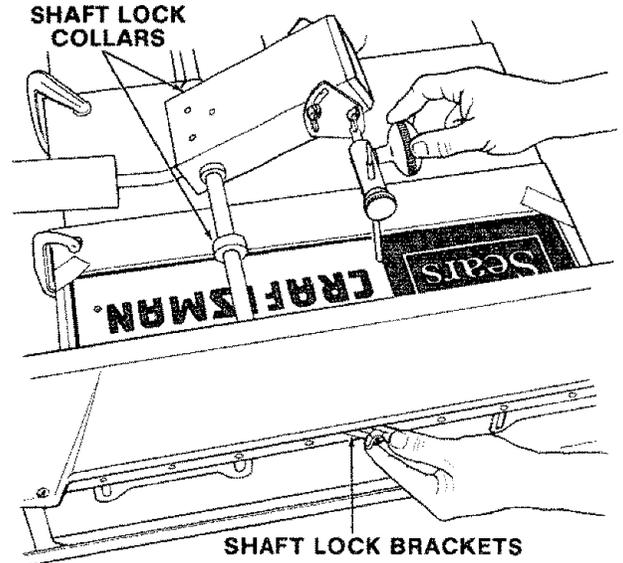


the workpiece at all points while the stylus is following the line indicating the top of the sign on the drawing. C-clamp the workpiece when the master and workpiece are parallel. Again, use caution when C-clamping the workpiece to prevent the bit from striking the C-clamp.

Move the stylus to the bottom line of the sign on the drawing. The router bit should also be touching the bottom edge of the workpiece. Move the right hand shaft collar against the yoke bearing and lock it with the setscrew wrench.

In addition to the shaft lock collars, shaft lock brackets are also provided. These can be slipped under the outside lip of the pulley cover guards and the hole in the bracket placed on the pulley shaft. The opposite end of the bracket which is slotted can be screwed to the corner track bracket with a 1/2 inch pan head screw, lockwasher, and wing nut.

These shaft lock brackets will immobilize the pulley shaft and only permit the yoke assembly to travel left to right or right to left. This is an excellent way to produce straight line cuts from side to side. These brackets are also helpful in securing your Router Recreator when transporting.



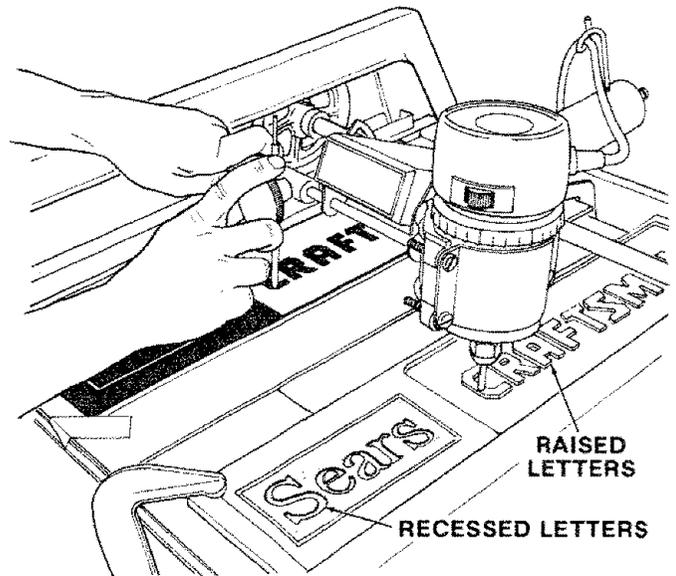
After aligning the master and the workpiece, a router bit and matching stylus suited for the application should be selected and the elevation set. If working from a drawing determine whether the letters are to be raised or recessed, and the amount of recess or desired height of the letters. If a raised letter is desired, raise the stylus above the drawing the same height as the desired height of the letters. A small scale or ruler is helpful in determining the depth of cut. Route all areas around the letters leaving the letter intact.

Smaller diameter bits and stylus may be required for the detailing of more intricate lettering.

If recessed letters are desirable, simply trace the letters with the stylus after the depth of cut has been selected.

When duplicating a sign from an existing sign the elevation of the stylus and bit should be the same.

If the sign requires some relief cutting or slight undercuts, this can be accomplished by loosening the tilt plate wing nuts, pivoting the yoke assembly to the desired angle, and the resecuring the two wing nuts.



operation

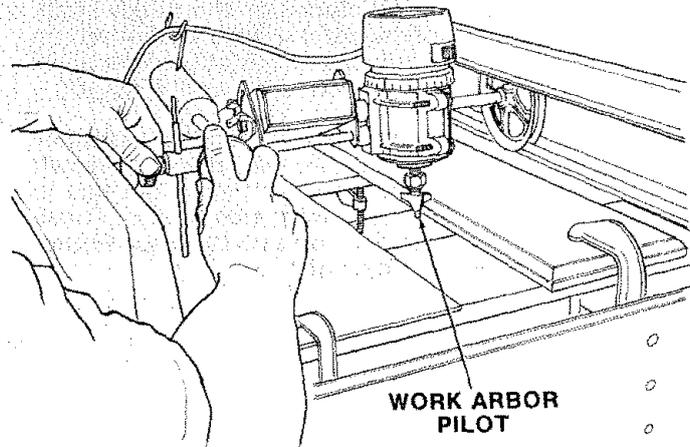
DECORATIVE EDGING

A molded or decorative edge can be added to most rectangular shaped pieces of stock with your Recreator, a decorative edging bit and the router work arbor set.

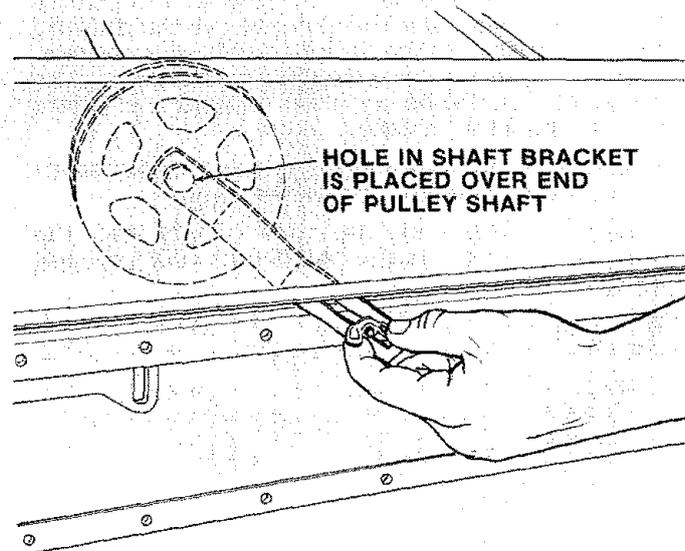
Set the two inner shelf boards as prescribed for sign making.

Check for parallelism between the Recreator and the workpiece by using the pilot section of the work arbor.

- A. Touch the pilot to the edge of the workpiece at the front of the Recreator.
- B. C-clamp the workpiece to the shelf board and set both left and right hand shaft collars.
- C. Move the yoke assembly to the rear. Shift the rear of the workpiece until it also strikes the pilot section of the work arbor. C-clamp the rear of the workpiece to the shelf board.
- D. The depth of cut will be controlled by the stylus riding on the back up board located on the left of the Recreator. You will note that variations in the molding can be obtained by altering the depth of cut or by setting the workpiece slightly away from the pilot of the work arbor.



Shaping cross grain can also be accomplished with the aid of the shaft lock brackets.



SPINDLE DECORATING

Your Recreator is also capable of adding decorative rings, or axial veins and grooves on spindles up to 24 inches long.

These decorative cuts can be made from a drawing template or an existing turning. Some exact duplicates of original turnings may not be possible because of the contours that are available from router bits.

MOUNTING THE SPINDLE

This operation will require —

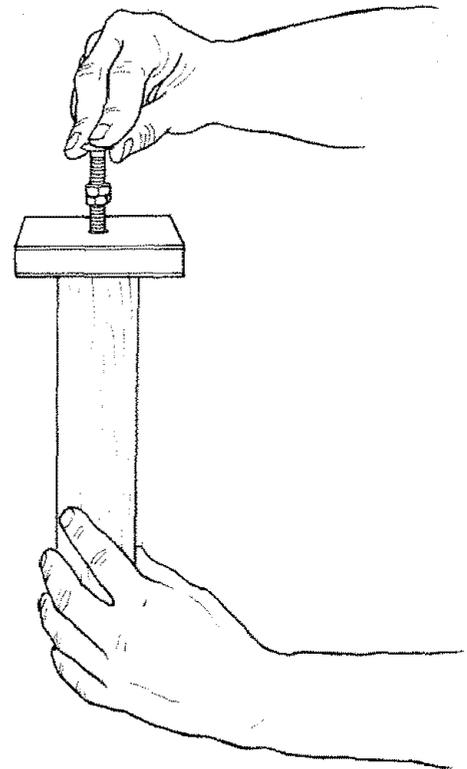
- 1 ea. Work Mount
- 1 ea. 3/8-16 x 1-1/2 inch Hex head bolt
- 1 ea. cone point spindle mount
- 3 ea. 3/8"-16 Hex Jam nuts.
- 1 ea. 3/8 x 7/8 x 5/64 inch washer

Locate the center of each end of the spindle and make an impression with a hammer and punch.

Cut a piece of brown kraft paper (paper bag) the size of the work mount and cut a hole in the center of the paper over the T nut.

Screw the cone point spindle mount through the work mount allowing the cone point to protrude above the face of the work mount T nut.

Take the brown paper, coat both sides with carpenters glue and lay it on the work mount. With the paper in place, lay the work mount on the end of the spindle. Using the cone point spindle mount as a centering point, align it with the impression previously made in the center of the spindle. Carefully back the cone point spindle mount away from the workpiece and allow these pieces to dry. If done correctly this will center the spindle on the work mount.



Remove the two inner shelf boards and re-install one of them vertically spacing it away from the front shelf board the length of the spindle plus 1-3/4 inch.

Screw one 3/8" nut on the cone point spindle mount. Place the spindle mount through the top right hand hole of the center shelf board. Install a second 3/8" nut on the end of the cone point spindle mount protruding through the shelf board.

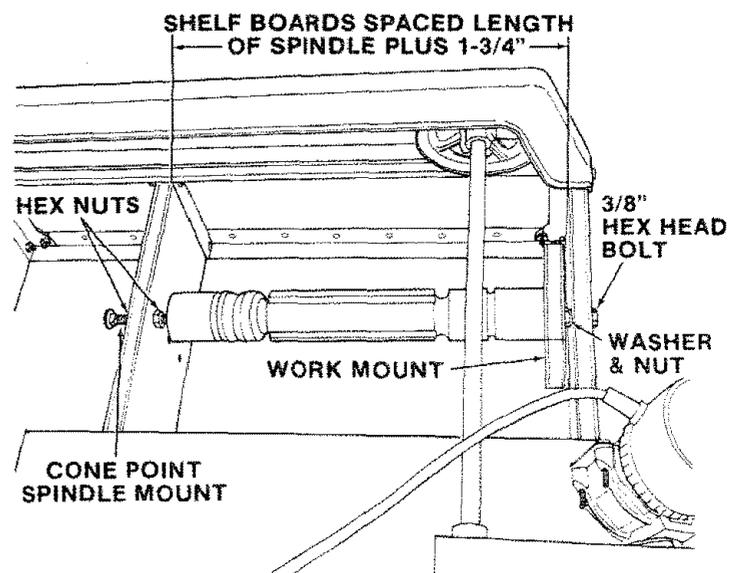
Place a 1-1/2 inch Hex head bolt through the top right hand hole of the front shelf board and secure it with a flat washer and nut.

Take the spindle and work mount, after it has sufficiently dried, and screw it on the Hex head bolt located in the front shelf board.

While holding the spindle in place screw the cone point spindle mount until it engages the impression in the spindle center.

To secure the spindle:

- A. Spin the inside hex nut on the cone point spindle mount until it strikes the shelf board.
- B. Tighten the hex nut on at the front shelf board until it is snug against the work mount.
- C. Tighten the hex nut on the back side of the cone point spindle mount to prevent it from rotating.



operation

It should now be possible to rotate the workpiece by placing a 9/16 wrench on the Hex head bolt located in the front shelf board and turning. The workpiece should remain snug in its position and very little "off center" wobble should be detectable. If the spindle is not secure in its mounting do not attempt to operate until the necessary adjustments have been made.

Operating: To create rings on the spindle using a sketch or drawing proceed as follows:

Mount the sketch on the back up board which is installed on the left side of the Recreator.

Install a 1/4 inch stylus in the stylus mount.

Select a bit desired for the first cut and secure it in the router chuck.

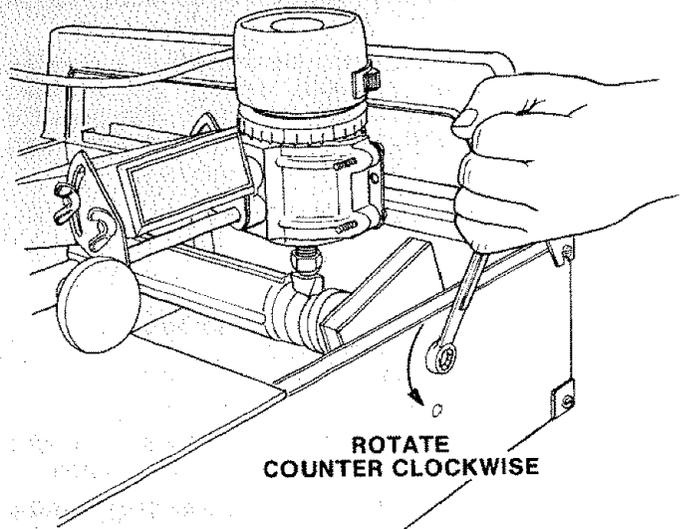
Move the yoke assembly on the pulley shaft until the bit is approximately 1/4 inch off the centerline of the spindle to the left. Lock the right hand pulley shaft collar against the yoke bearing to serve as a stop.

Rest the router bit on the spindle and check for perpendicularity. If adjustments are required loosen the tilt plate wing nuts and square as necessary. Re-tighten the tilt plate wing nuts.

Move the bit to the area of the first cut as determined by the drawing or template and lock the pulley shaft at that location with the pulley shaft locks and wing nuts.

Set the depth of cut by raising the stylus above the back up board the desired amount.

Move the router bit to the left of the spindle making sure it is clear of the spindle.



Holding the stylus tip in contact with the back-up board during the operation, turn the router on, using a 9/16 box end wrench. Begin rotating the spindle "counter clockwise" simultaneously start moving the bit into the spindle until it stops against the right hand shaft collar.

After the cut is completed (usually several revolutions of the spindle), back the bit away from the spindle and turn the router off.

Move to the next desired location and repeat above procedure.

To create axial cuts, those running along the length of the spindle mount the spindle as indicated above then:

Move the router bit to the centerline of the spindle and lock the yoke at this setting by securing both left hand and right hand shaft collars.

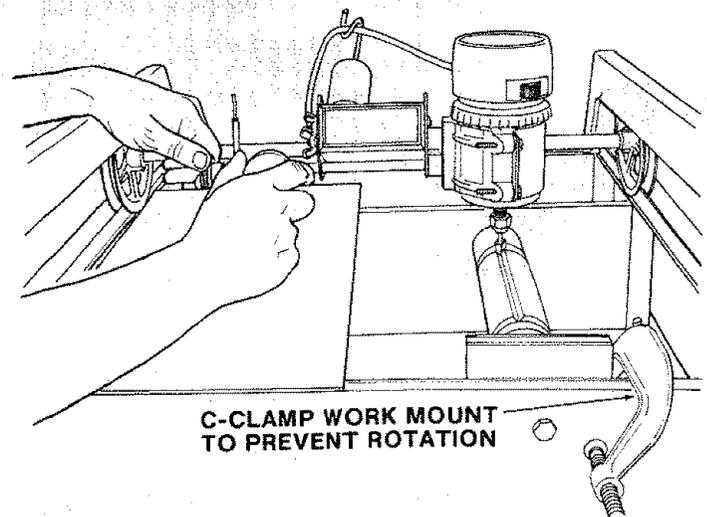
Set the depth of cut using the stylus and the back up board as a guide.

C-clamp the work mount to the front shelf board to prevent it from rotating.

Lift the bit clear of the spindle, turn the router on and lower the bit into the spindle.

Move the yoke assembly back and forth until the cut is completed. Veins deeper than 1/8 of an inch should be made in successive cuts of 1/8 inch.

The spindle may be indexed to other positions for axial cuts using the faces on the workpiece mounts to set the angle.



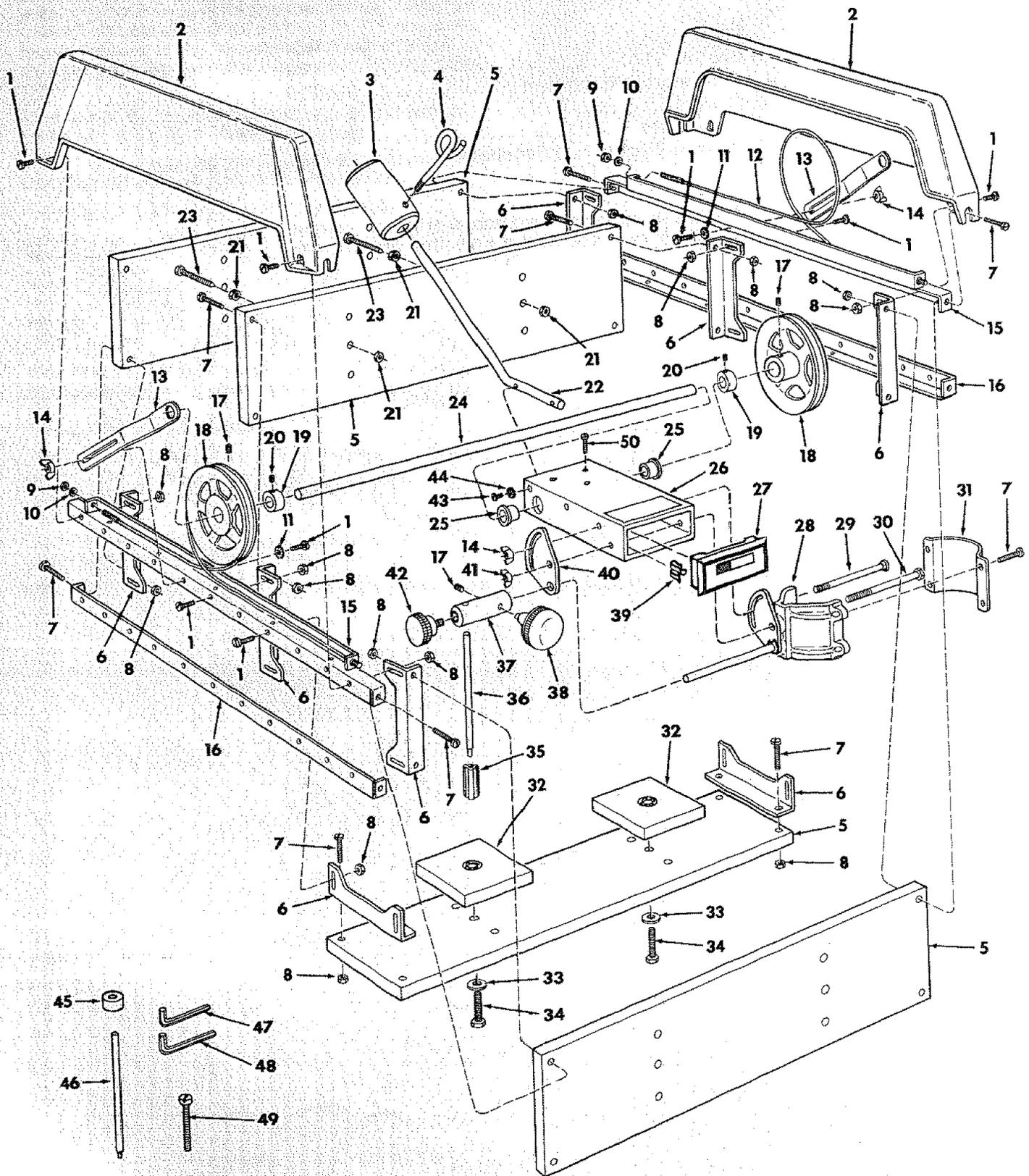
recommended accessories

ITEM	CAT. NO.
Leg Set	9-22238
Recreator Bit Assortment	9-21216
Casters	9-22208
Face Shield	9-18613
Portable Electric Tool Handbook	9-2949

The above recommended accessories are current and were available at the time this manual was printed.

repair parts

PARTS LIST FOR CRAFTSMAN ROUTER-RECREATOR MODEL NO. 113.251890



PARTS LIST FOR CRAFTSMAN ROUTER-RECREATOR MODEL NO. 113.251890

Key No.	Part No.	Description
1	STD512505	*Screw, Pan Hd. 1/4-20 x 1/2
2	76025	Cover, Pulley
3	76007	Counterweight
4	63221	Hook, Cord
5	76021	Frame, Shelf
6	76028	Bracket, Shelf
7	STD512515	*Screw, Pan Hd. 1/4-20 x 1-1/4
8	STD541025	*Nut, Hex 1/4-20
9	STD541008	*Nut, Hex 8-32
10	STD551008	*Washer, 3/16 x 3/8 x 1/32
11	STD551225	*Lockwasher, External 1/4
12	76009	Cable
13	76024	Lock, Shaft
14	STD541625	*Nut, Wing 1/4-20
15	76020	Bracket, Track
16	76019	Bracket, Corner
17	STD503103	*Screw, Set Socket Hd. Cup Pt. 5/16-18 x 3/8
18	STD328052	Pulley (Includes Set Screw)
19	60372	Collar
20	STD502502	*Screw, Set Socket Hd. 1/4-20 x 1/4
21	STD541237	*Nut, Hex Jam 3/8-16
22	76022	Shaft, Counterweight
23	76010	Screw, Spindle Center
24	76026	Shaft
25	76001	Bearing, Sleeve
26	76000	Yoke (Includes Key #25)
27	76004	Panel, Trim

Key No.	Part No.	Description
28	76003	Mount Assembly, Router
29	60371	*Bolt, Carriage 1/4-20 x 4-1/2
30	9430187	*Screw, Hex Hd. 5/16-18 x 5
31	76023	*Clamp, Router
32	76006	Mount Assembly, Workpiece
33	446364	Washer, 3/8 x 7/8 x 5/64
34	STD523715	*Screw, Hex Hd. 3/8-16 x 1-1/2
35	76017	Grip, Stylus
36	76014	Rod, Stylus 1/8
37	76011	Mount, Stylus
38	76012	Knob, 2"
39	76027	Clip, Speed
40	76002	Plate, Tilt
41	STD541631	*Nut, Wing 5/16-18
42	76013	Knob, 1-1/4
43	STD511107	*Screw, Pan Hd. 10-32 x 3/4
44	STD551210	*Lockwasher, No. 10
45	76016	Collar, Stylus 3/4 (Includes Set Screw)
46	76015	Rod, Stylus 1/16
47	30505	*Wrench, Hex "L" 1/8
48	37837	*Wrench, Hex "L" 5/32
49	113967	Screw, Rd. Hd. 1/4-20 x 2-1/2
50	STD601105	*Screw, Pan Hd. 10-32 x 1/2
—	76008	Bag Assembly, Loose Parts (Not illustrated)
—	76018	Bag Assembly, Loose Parts (Not illustrated)
—	76005	Owners Manual (Not illustrated)

*Standard Hardware Item — May be Purchased Locally

Sears

*owners
manual*

SERVICE

**MODEL NO.
113.251890**

**HOW TO ORDER
REPAIR PARTS**

ROUTER-RECREATOR

Now that you have purchased your Router-Recreator, 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-Recreator will be found on a plate attached to the yoke assembly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

PART NUMBER	PART DESCRIPTION
MODEL NUMBER 113.251890	NAME OF ITEM ROUTER-RECREATOR

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.

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.