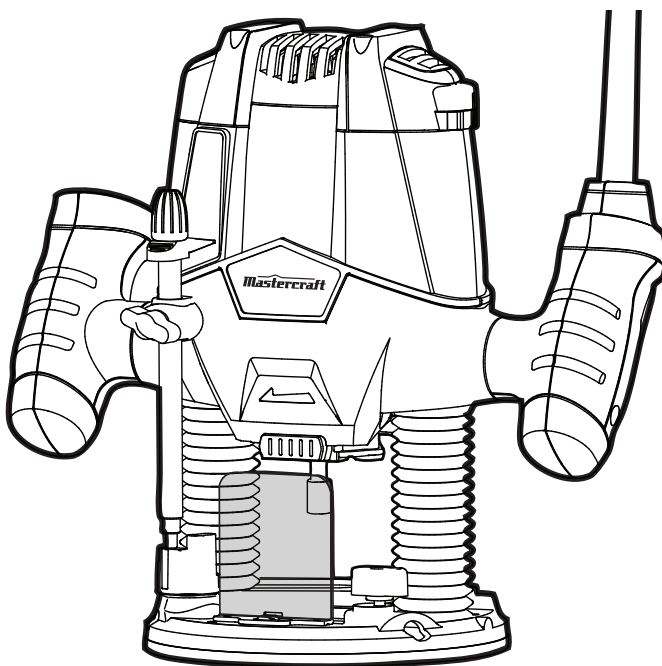


model no. 054-6988-6

Mastercraft[®] MD

PLUNGE ROUTER WITH 5-PIECE ROUTER BIT SET



IMPORTANT:

Read and understand this instruction manual thoroughly before using the product.

**INSTRUCTION
MANUAL**

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NOTE:

If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928.

**SAVE THESE INSTRUCTIONS**

- This manual contains important safety and operating instructions. Read all instructions and follow them with use of this product.

TECHNICAL SPECIFICATIONS

Rated voltage	120 V~, 60 Hz
Rated power input	10A
Horsepower	1 3/4 HP
No-load speed	11,000–28,000 RPM
Collet capacity	1/4" (6.4 mm)
Plunge stroke	2 1/8" (55 mm)
Base dimension	6 1/2" (16.5 cm)
Micro-fine depth	Adjusts to 1/256" (0.099 mm)
Depth stop	4-position turret stop
Weight	7 lb 11 oz (3.5 kg)
Noise level	95 dB(A)
Vibration	$a_{\text{H}} = 1.58 \text{ m/s}^2$, K=1.5
Sub-base opening (diameter for cutting bit use)	1 1/2" (3.8 cm)

SAFETY GUIDELINES**WARNING!**

Safety symbols in this instruction manual are used to flag possible dangers. The safety symbols and their explanations require your full understanding. The safety warnings do not, by themselves, eliminate any danger, nor are they substitutes for proper accident prevention measures.

**WARNING!**

This safety alert symbol indicates caution, warning, or danger. Failure to obey a safety warning can result in serious injury to yourself or others. To reduce the risk of injury, fire, or electric shock, always follow the safety precautions.

KNOW YOUR TOOL

To operate this tool, carefully read this instruction manual and all labels affixed to the router before using. Keep this instruction manual available for future reference.

IMPORTANT

This tool should only be serviced by a qualified service technician. For more information, call the toll-free helpline at 1-800-689-9928.

READ ALL INSTRUCTIONS THOROUGHLY**SAVE THESE INSTRUCTIONS****GENERAL POWER TOOL SAFETY WARNINGS****WARNING!**

Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

WORK AREA SAFETY

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks, which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

- **Power tool plugs must match the outlet.** Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord.** Never use the cord for carrying, pulling or unplugging the power tool. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tools in a damp location is unavoidable, use a ground-fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment.** Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting.** Ensure that the switch is in the off-position before connecting to power source or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure that these are connected and properly used.** Use of dust collection devices can reduce dust-related hazards.

POWER TOOL USE AND CARE

- **Do not force the power tool.** Use the correct power tool for your application. The correct power tool will do the job better and more safely at the rate for which it was designed.

- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories, tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

SERVICE

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES FOR ELECTRIC ROUTERS

- **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool live and shock the operator.
- **The label on your tool may include the following symbols. The symbols and their definitions are as follows:**

V Volts

A Amperes


Hz Hertz

W Watts

min Minutes

~ Alternating current

= = Direct current

n₀ No-load speed Class II Construction

.../min Revolutions or reciprocation per minute

 Grounding terminal

BPM Beats per minute



..... WARNING – To reduce the risk of injury, user must read instruction manual.



..... WARNING – To reduce the risk of injury always wear eye protection.



..... WARNING – To reduce the risk of injury always wear ear protection.

- **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.
- **Always wear a dust mask and ear protection when using this power tool.**
- **Only use cutters that are designed for this router.**
- **Only use sharp cutters that are not chipped or cracked.** Blunt cutters will cause stalling.
- **Secure small pieces of wood firmly before working.** Never hold a workpiece in your hand.
- **Keep your hands away from the cutting area.**
- **Before starting the router, check that the cutter is firmly positioned and secured in the collet.**
- **Do not exceed the maximum indicated rotation speed of the cutter.**
- **Routing operations must always be performed against the direction of rotation (cutter-rotation) of the cutter.**
- **The cutter must be running at full speed before it is lowered to the workpiece.**
- **When operating the router, always hold the handles firmly with both hands.** Always ensure that your footing is secure when working.
- **Be prepared for the reaction torque of the router, particularly if the cutter becomes jammed in the workpiece.**
- **When a plunge-cutting operation is completed, release the handle to allow the router to slide back to its initial position.**
- **Familiarize yourself with your working area, and be alert for possible hazards that you may not hear due to the noise of the router.**
- **Allow sufficient run-down time for cutter after turning the router off.** Wait for it to come to a complete stop before removing it from the workpiece.
- **Never slow the router down with your hands.**
- **Do not touch the cutter immediately after operation.** It may be extremely hot and could burn you.
- **Never stop the router by applying lateral pressure to the cutter.**
- **Do not force the router.** It will do a better job if you allow it to work at its intended speed.
- **Avoid cutting nails and screws.** Inspect timber before cutting, and remove all nails and screws.
- **Protect your hearing. Wear appropriate personal hearing protection during use.** Under some conditions and duration of use, noise from this product may contribute to hearing loss.

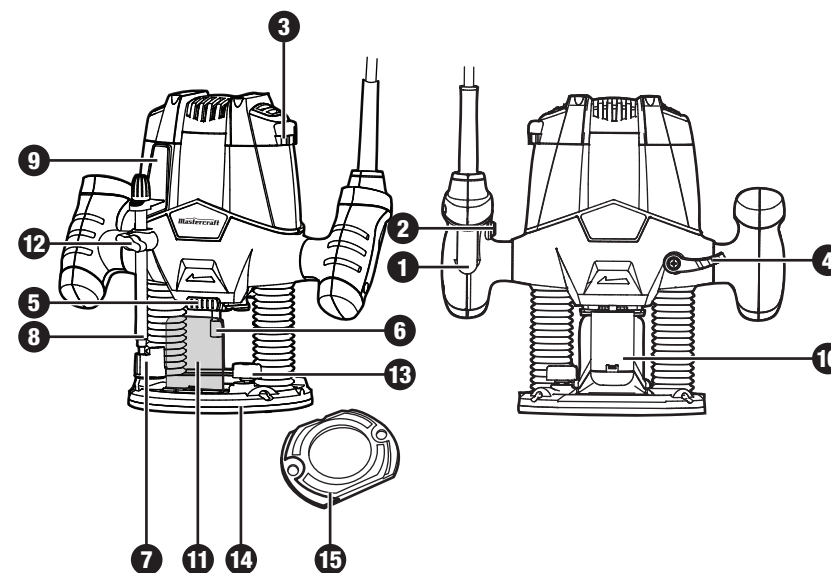
PACKAGE CONTENTS:

Router, collet wrench, chip guard, straight-edge guide, collet/nut, vacuum adaptor (with two screws), bushing adaptor (with two nuts), 5-piece router bit set, instruction manual.

5-Piece Router Bit Set:

1/4" (6 mm) diameter straight cutting bit, 1/4" (6 mm) radius cove bit, 1/4" (6 mm) radius roundover bit, 3/8" (10 mm) radius bead bit, 1/8" (3 mm) radius roman ogee bit.

KEY PARTS DIAGRAM



WARNING!

- Remove the router from the package and examine it carefully. Do not discard the carton or any router material until all parts have been examined.

No.	Description
1	Trigger switch
2	Lock-on button
3	Speed adjuster
4	Plunge-lock lever
5	Spindle lock
6	Collet nut
7	Depth-stop turret
8	Depth-stop bar

No.	Description
9	Depth-of-cut scale
10	Dust-extraction adaptor
11	Chip shield
12	Locking screw
13	Lock bolt
14	Base plate
15	Bushing adaptor

ASSEMBLY INSTRUCTIONS

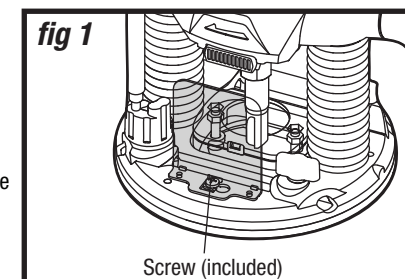
ELECTRONIC SPEED ADJUSTMENT

The speed of your router is variable (6 speeds). Use the electronic speed adjuster (3) to produce uniform results in wood, plastics and other materials. Use lower settings for large diameter bits and higher settings for small diameter bits.

CHIP SHIELD (fig 1)

The chip shield helps to keep dust and chips away from the operator; they will not stop objects larger than woodchips thrown from the bit.

The chip shield on the plunge base is held in position by a screw. To remove the chip shield from the plunge base, unplug the router and simply loosen the screw and take the chip shield off of the base.



WARNING!

- To prevent personal injury, always disconnect the plug from the power source before assembly, adjustment or changing of bits. Failure to comply with these instructions could result in accidental start-up and possible injury.
- To reduce the risk of injury, do not overload the tool. Let it work at its own pace. Guide the cord carefully to avoid accidentally cutting it.
- Always wear eye protection. The chip shield deflector is not intended as a safety guard.
- Always turn the router motor off and unplug the router from the power source before making any adjustments or installing accessories. Failure to turn the motor off and unplug the router could result in accidental starting, which can cause serious personal injury.

CAUTION!

- Always have the chip shield deflector in place on the base when operating the router.

**INSTALLING/REMOVING
THE ROUTER BIT (fig 2)****To install the bit**

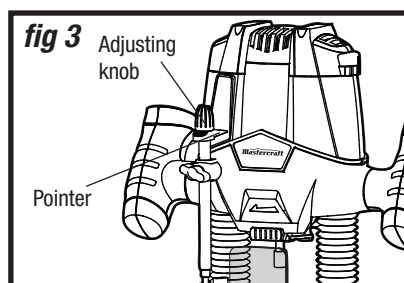
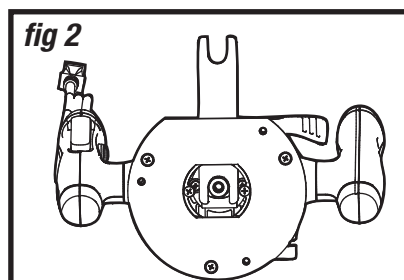
1. Unplug the router.
2. Remove the detachable chip shield (11).
3. Keep the spindle lock (5) depressed and rotate the spindle until the spindle lock fully engages.
4. Place the router upside down on a smooth, flat surface.
5. Loosen the collet nut (6) using the wrench provided. Insert the shank of the router bit into the collet.
6. Keep the spindle lock button (5) depressed and use the wrench provided to tighten the collet nut (6).
7. Release the spindle lock.

To remove the bit

1. Keep the spindle lock button (5) depressed.
2. Loosen the collet nut (6) using the wrench provided and remove the bit.
3. Release the spindle lock.

ADJUSTING THE DEPTH OF CUT (fig 3)

The depth of cut is the distance between the depth-stop bar (8) and the depth-stop turret (7). The depth of cut can be set in two different ways as follows:

**ADJUSTING THE DEPTH OF CUT USING THE SCALE**

1. Unplug the router.
2. Loosen the locking screw (12).
3. Pull the plunge-lock lever (4) up.
4. Lower the router until the router bit touches the workpiece.
5. Push the plunge-lock lever (4) down.
6. Move the pointer to the zero position on the scale (9).
7. Add the desired depth of cut to the starting position.
8. Move the depth-stop bar (8) to the calculated position on the scale.
9. Tighten the locking screw (12).
10. Fine adjust using the adjusting knob.
11. Pull the plunge-lock lever (4) up and let the router return to its original position.
12. Plug the router into an electrical outlet.
13. Turn the router on then lower the unit to make the desired cut.

ADJUSTING THE DEPTH OF CUT USING A PIECE OF WOOD

1. Unplug the router.
2. Lower the router as described above.
3. Pull the depth stop-bar (8) up.
4. Between the depth stop-turret (7) and the depth-stop bar (8), place a piece of wood with a thickness equal to the desired depth of cut.
5. Tighten the locking screw (12).
6. Fine adjust using the adjusting knob.
7. Remove the piece of wood.
8. Pull the plunge-lock lever (4) up and let the router return to its original position.
9. Plug the router into an electrical outlet.
10. Turn the router on then lower the unit to make the desired cut.

**CAUTION!**

- Burn hazard. The router bits get hot during use. Allow sufficient time for the bit to cool before replacing it.

WARNING!

- Always turn the router motor off and unplug router from power source before making any adjustments or installing accessories. Failure to turn motor off and unplug router could result in accidental starting which can cause serious personal injury.

ADJUSTING THE DEPTH-STOP TURRET

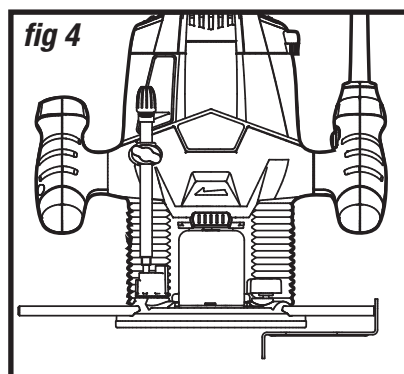
Use the depth-stop turret to change among different depths without changing the depth stop settings. The most common use of this feature is making successively deeper cuts to achieve a final depth of cut that is too deep to accomplish in a single pass. Each of the steps progresses by 1/4" (6 mm) increments. The 4 steps represent a total of 3/4" (19 mm) with a full 360° rotation of the turret.

1. Unplug the router.
2. Loosen the locking screw.
3. Set the depth-stop turret to the desired setting. Turn clockwise or counter-clockwise to lower or raise the depth-stop turret.
4. Tighten the locking screw.

EDGE GUIDE FOR THE ROUTER (fig 4)

The straight edge guide is an effective aid to cutting a straight line when chamfering or grooving.

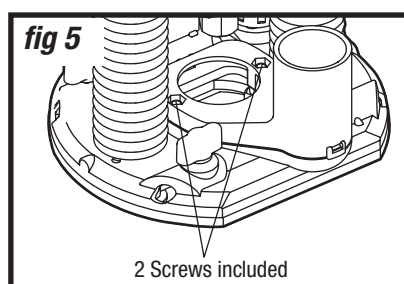
1. Loosen the lock bolts.
2. Feed the bars on the edge guide through the holes in the base plate.
3. Adjust the distance between the router bit and the edge guide by moving the guide until it is situated at the proper distance.
4. Tighten the lock bolts to hold the straight edge guide in position.

**DUST COLLECTION WITH VACUUM ADAPTOR (fig 5)**

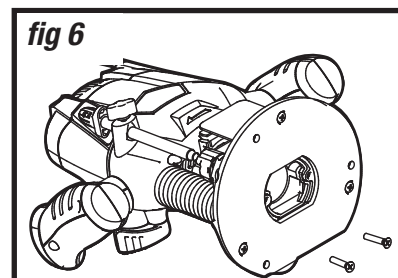
The vacuum port is sized to accept a 1 1/4" (3.2 cm) vacuum hose.

To attach the vacuum adaptor onto the plunge base, position and secure it to the back of the base with the two screws (included).

The vacuum adaptor can also be installed with the hose outlet facing the front of the plunge base by removing the chip shield and attaching the adaptor at the front of the base.

**TO INSTALL ROUTER BUSHINGS (NOT INCLUDED)**

1. Unplug the router.
2. Remove two screws from router base (fig 6).
3. Put the bushing into the centre hole of the adaptor, and screw in the bushing ring (not included) to secure it.
4. Use the two screws removed in Step 2 and two nuts packaged with bushing adaptor to attach the adaptor with the bushing to the router base (fig 8).

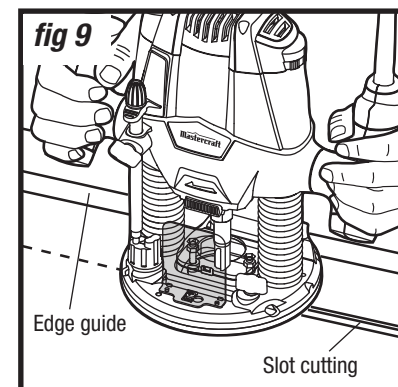
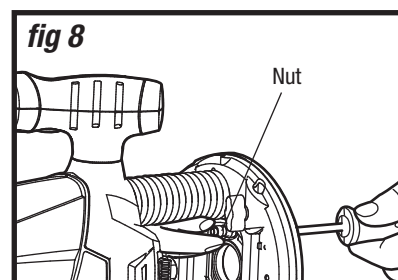
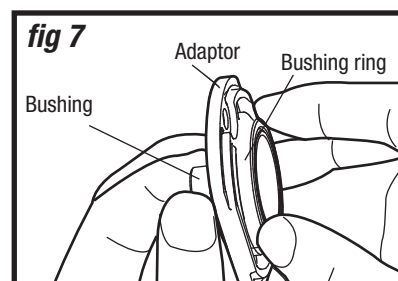
**PLUNGING ACTION (fig 9)**

The plunge base feature simplifies depth adjustments and allows the cutter bit to be accurately lowered into the workpiece for precise set-ups.

1. After setting the cutting depth as described in ADJUSTING THE DEPTH OF CUT, position the router so that the bit is directly above the point you plan to cut.
2. Release the plunge-lock lever by moving it "UP" to the unlocked position.

With the router running, apply an even, downward pressure on the plunge action until the cutter bit reaches the desired depth, then move the plunge-lock lever "DOWN" to the locked position (do not force the router down).

1. Once you have finished routing, loosen the plunge-lock lever and allow the spring to lift the router directly out of the workpiece. Always have the plunge action in the raised position and locked when the bit is not cutting in the workpiece.

**WARNING!**

- Always turn the router motor off and unplug router from power source before making any adjustments or installing accessories. Failure to turn motor off and unplug router could result in accidental starting which can cause serious personal injury.

OPERATING INSTRUCTIONS**TURNING THE ROUTER ON AND OFF (fig 10)****Turning the router on**

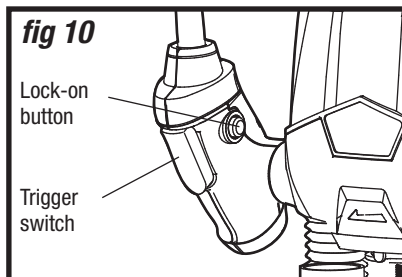
Press the trigger switch (1).

Turning the router off

Release the trigger switch.

Continuous operation

To lock the trigger switch on for continuous operation, squeeze the trigger switch (1) and hold it while depressing the lock-on button (2). Hold the button while you release the trigger switch and the tool will continue to run. Squeeze and release the trigger switch to turn the tool off.

**STARTING THE CUT**

Much of routing is a trial-and-error process of making various adjustments, followed by test cuts as you become familiar with all of your router's operational abilities. To avoid ruining good material, make your test cuts on scrap materials.

For ease of operation and to maintain proper control, your router has two handles: one on each side of the router base. When operating the router, always hold it firmly with both hands (fig 11).

DEEP CUTS

The proper cutting depth for each pass is always determined by the material, the cutter bit size and type, and the power of the motor.

Always make several progressively deeper cuts: start at one depth and then make several passes, each time increasing the cutting depth, until the desired depth is reached.

Making a cut that is too deep will stress the router motor and the cutter bit, and it may burn the workpiece and dull the cutter bit. It could also "grab" too much of the workpiece, causing you to lose control of the router, which may result in a serious accident.

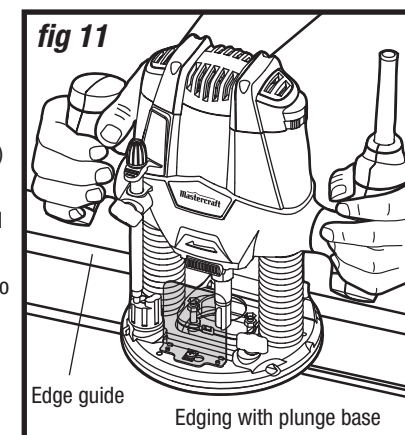
To be certain that your depth settings are correct, always make test cuts in scrap material similar to your workpiece before beginning the final cutting operation.

Remember, knowing the right depth for each cut comes with routing experience.

NOTICE: Making test cuts is essential with most routing applications. Even with careful set-ups, you won't know exactly how the cut will go until you try it out. A test cut will give a feel for the set-up, the router's speed, the depth of cut, and how the cutter bit reacts to the workpiece.

EDGE ROUTING (fig 11)

1. Set the cutting depth and, place the router on the edge of workpiece, making sure that the cutter does not contact the workpiece.
2. Clamp an edge guide (board or metal straightedge) in place to help guide the router base.
3. Turn the router "On", and allow the motor to build to the full selected speed.
4. To begin your cut, gradually feed the cutter bit into the edge of the workpiece.
5. When the cut is complete, turn the motor "Off" and allow cutter bit come to a complete stop before removing it from the workpiece.
6. Unplug the router from the power source, place the router upside down on the worktable, and inspect the finished cut in the workpiece.



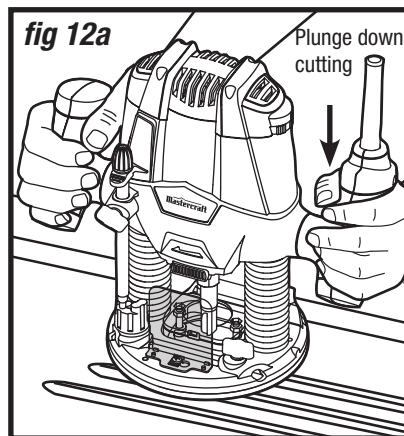
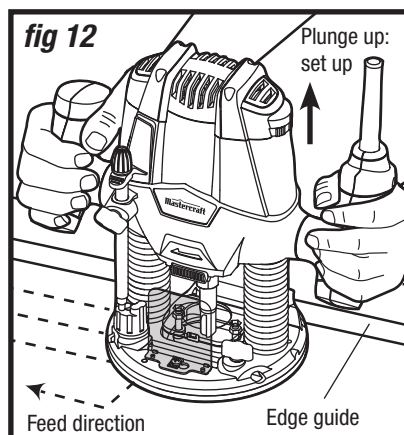
NOTICE: Making test cuts in scrap material that is similar to your workpiece is essential. Learning how the router's speed, depth-of-cut and cutter bit will react in the workpiece will help you produce quality cuts.

**WARNING!**

- Always securely clamp your workpiece and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing possibly serious personal injury.
- Removing the cutter bit from the workpiece while it is still rotating could damage the workpiece and result in loss of control, causing serious personal injury.

INTERNAL ROUTING (figs 12 and 12a)

1. Set the cutting depth and lock the plunge action in the raised (Up) position. Turn the motor "On" and allow the motor build up to its full speed (fig 12).
2. To begin your cut, unlock the plunge-lock lever and gently lower the plunge action into the workpiece (fig 12a).
3. When the desired depth-of-cut is achieved, lock the plunge lock-lever (Down) and proceed to make your cut (fig 12a).
4. When the cut is completed, turn the motor "off" and allow the cutter bit to come to a complete stop before removing it from the workpiece.
5. When the cutter bit comes to a complete stop, unlock the plunge-lock lever (Up) and the plunge action will automatically retract the cutter bit from the workpiece.
6. Unplug the router from the power source, place the router on the worktable, and inspect the finished cut in the workpiece.

**EDGING WITH A PILOT BIT (figs 13 and 13a)**

Arbor-type bits with pilots are excellent for edge shaping any workpiece edge that is either straight, or has a curve equal to or greater than the radius of the bit to be used.

The pilot prevents the bit from making an excessively deep cut, and holding the pilot firmly in contact with the workpiece edge throughout prevents the cut from becoming too shallow.

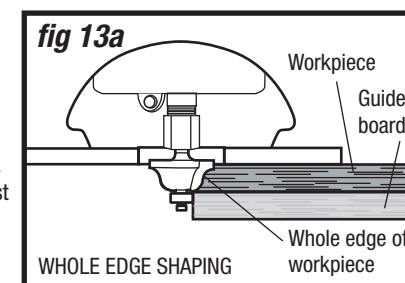
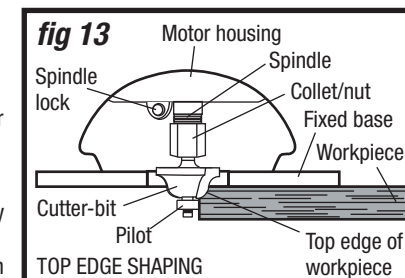
Top Edge Shaping

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" (1.6 mm) thick uncut portion at the bottom), the pilot can ride against the uncut portion, which serves to guide it (fig 13).

Whole Edge Shaping

If the workpiece is too thin, or if the bit is set so low that there will be no uncut edge against which to ride the pilot, you will be shaping the whole edge of the workpiece, and an extra board must be placed under the workpiece to act as a guide (fig 13a).

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 (cutting in as far as the bit radius). On the other hand, if the guide is positioned so that it extends beyond the edge of the workpiece, the bit will make less than a full cut — which will alter the shape of the finished edge.



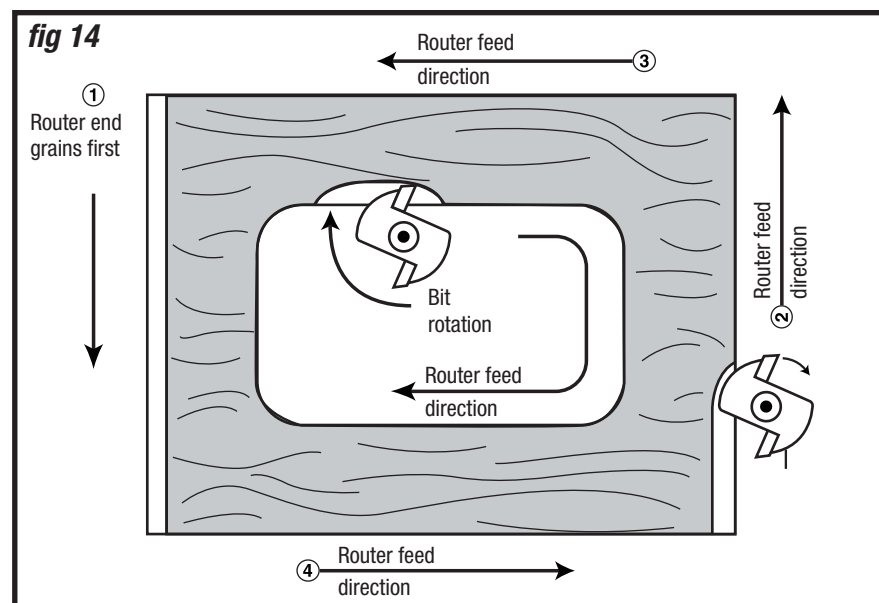
NOTICE: The size (diameter) of the pilot that is used determines the maximum width that can be cut with the pilot against the workpiece edge. The small pilot exposes all of the bit; the large one reduces this amount by 1/16" (1.6 mm). Any of the piloted cutter bits can be used without a pilot for edge shaping with guides.

**WARNING!**

- Always securely clamp your workpiece and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing possibly serious personal injury. If using a router table, large cutter bits should be used for edging only.
- Removing the cutter bit from the workpiece while it is still rotating could damage the workpiece and result in loss of control, causing serious personal injury.

**WARNING!**

- Always securely clamp your workpiece and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing possible serious personal injury.

FEEDING THE ROUTER (fig 14)

The secrets to professional-looking routing are careful set-up for the cut, proper depth-of-cut selection, knowing how the cutting bit reacts in the workpiece, and the rate and direction of feed of the router.

DIRECTION OF FEED: EXTERNAL CUTS

The router motor and cutting bit rotate clockwise. This requires the feed of the cutting bit to be from left to right (fig 14). Feeding the bit from left to right will cause the bit to pull the router towards (up against) the workpiece.

If the router is fed in the opposite direction (right to left), the rotating force of the cutting bit will tend to throw the bit away from the workpiece, making it hard to control. This is called "climb cutting:" cutting in the opposite direction of the proper feed direction. "Climb cutting" increases the chance of losing control, resulting in possible personal injury. When "climb cutting" is required (backing around a corner, for example), exercise extreme caution to maintain control of the router.

NOTICE: When the router is installed in a router table, the bit rotation will be counter-clockwise and the workpiece must be fed from right to left on the table.

KICKBACK

Because of the high speed of the cutting bit during a proper feeding operation (left to right), there is very little kickback under normal conditions. However, if the cutting bit strikes a knot, an area of hard grain in the workpiece, or a foreign object, the normal cutting action could be affected and cause kickback. Kickback may cause damage to your workpiece, and could cause you to lose control of the router, causing possible personal injury. Kickback is always counter-clockwise: the opposite direction of the clockwise cutting bit rotation.

To guard against, and help prevent, kickback: Always inspect the workpiece for knots, hard grain, and foreign objects that could cause a kickback problem. Plan the set-up and direction of feed so that the router is always moving and keep the sharp edges of the cutting bit continuously biting straight into new (uncut) wood (workpiece).

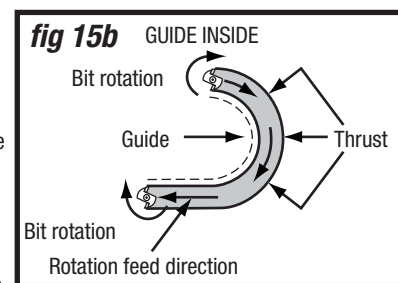
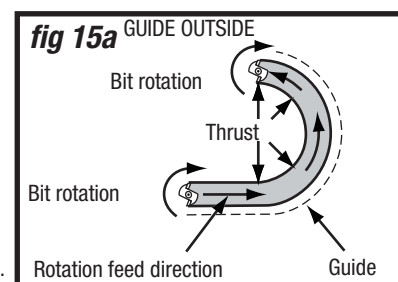
DIRECTION OF FEED: INTERNAL CUTS (figs 15a and 15b)

When making an internal cut, such as a groove, dado, or slot, the edge guide, straight edge, or board guide must always be positioned on the right-hand side of the router as you make the cut (fig 15a).

When the guide is positioned on the right hand side of the router, the router travel should be from left to right and "counter-clockwise" around curves (fig 15a). This counter-clockwise action around the curve could cause "climb cutting." Always be alert and exercise extreme caution to maintain control of the router when making this type of cut around curves.

When the guide is positioned as shown in fig 15b, the router travel should be from left to right and clockwise around curves.

If there is a choice, the set-up in fig 15a is easier to use, but there is the possibility of "climb cutting" around curves. In either case, fig 15a or fig 15b, the sideways thrust of the router cutting is always against the guide, as is proper.

**WARNING!**

- Always securely clamp the workpiece in place and keep a firm grip on the router base with both hands at all times. Failure to do so could result in loss of control, causing possibly serious personal injury.

RATE OF FEED (figs 16a and 16b)

The proper rate of feed depends on several factors: the hardness and moisture content of the workpiece, the depth of cut, and the cutting diameter of the bit. When cutting shallow grooves in soft woods, such as pine, you may use a faster rate of feed. When making deep cuts in hardwoods, such as oak, you should use a slower rate of feed.

Feeding too rapidly (fig 16a)

Clean and smooth finished cuts can only be achieved when the cutting bit is rotating at a relatively high speed, taking very small bites, and producing tiny, clean-cut chips.

Forcing the feed of the cutting bit forward too rapidly slows the revolution of the cutting bit, and the bit takes larger bites as it rotates. Larger bites mean larger chips and a rough finish. This forcing action can also cause the router motor to overheat.

Under extreme force-feeding conditions, the revolutions can become so slow and the bites become so large that chips are only partially cut off, causing splintering and gouging of the workpiece.

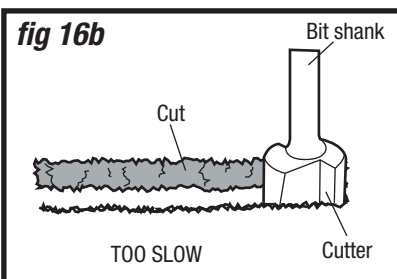
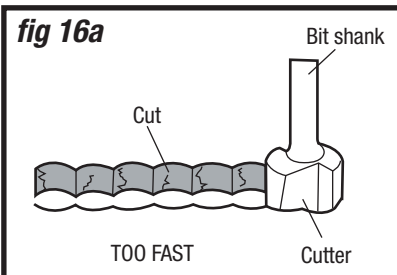
The router will make clean, smooth cuts if it is allowed to run freely without the overload of forced feeding. You can detect forced feeding by the sound of the motor. Its usual high-pitched whine will sound lower and stronger as it loses speed. Holding the router against the workpiece will also be more difficult to do.

Feeding too slowly (fig 16b)

When you feed the cutting bit too slowly, the rotating cutting bit does not cut into new wood rapidly enough to take a bite. Instead, it scrapes away sawdust-like particles. This scraping produces heat, which can glaze, burn, and mar the cut in the workpiece and, in extreme cases, overheat the cutting bit.

When the cutting bit is scraping instead of cutting, the router is more difficult to control as you feed it.

With almost no load on the motor, the cutting bit has a tendency to bounce off the sides of the cut in the workpiece, producing a cut with a rippled finish instead of clean, straight sides.

**MAINTENANCE**

Before cleaning or performing any maintenance, make sure the router has been disconnected from its power supply. Keep all ventilation openings clean. Avoid using solvents to clean plastic parts. Most plastics are vulnerable to damage from commercial solvents. Use a clean cloth to remove dirt, oil and grease.

- Regularly clean the air vents in your tool using a soft brush or dry cloth.
- Regularly clean the motor housing using a damp cloth. Do not use any abrasive or solvent-based cleaner.

**WARNING!**

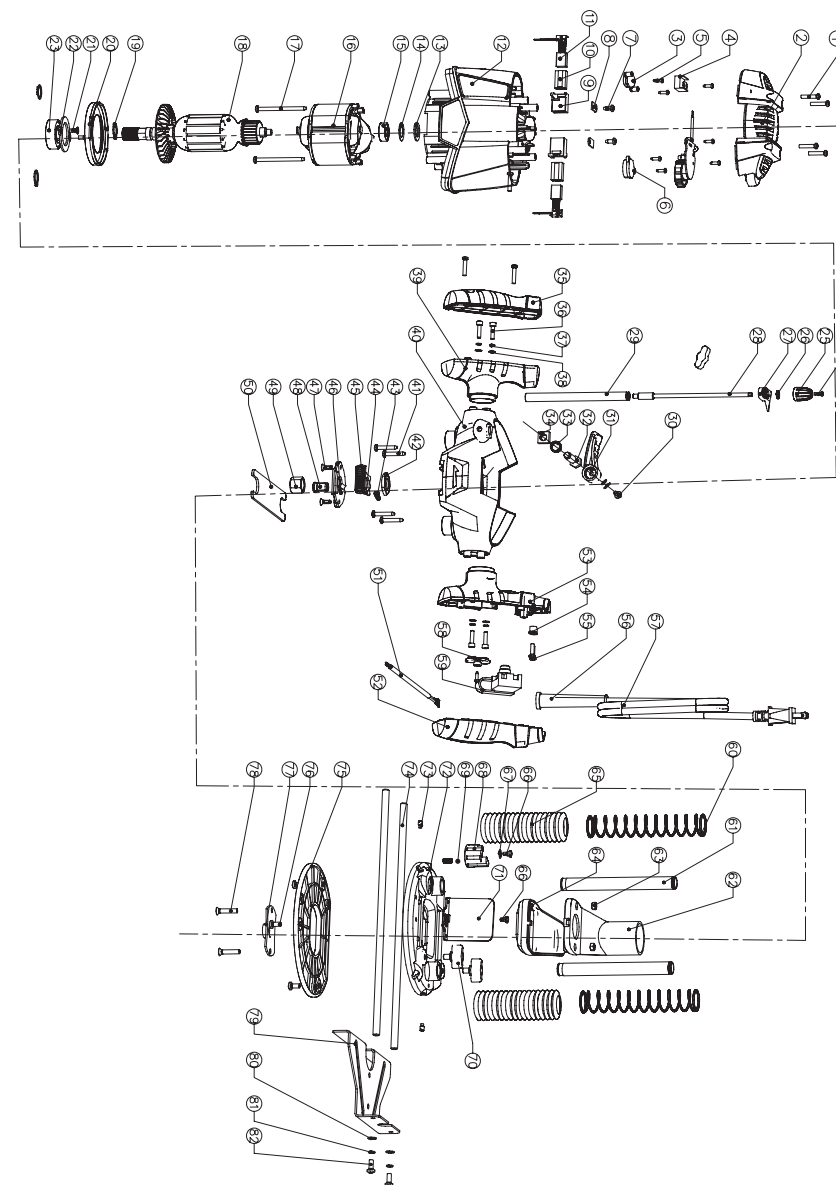
- Do not allow brake fluids, gasoline and petroleum-based products, penetrating oil, etc. come into contact with plastic parts. These substances contain chemicals that can damage, weaken, or destroy plastic.
- When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product.
- Use only accessories that are recommended for this router by the manufacturer. Accessories that may be suitable for one tool may become hazardous when used with another tool.
- If the supply cord is damaged, it must be replaced by a specially prepared cord available through the service organization.
- To ensure safety and reliability, all repairs should be performed by a qualified service technician.

TROUBLESHOOTING

Problem	Possible Causes	Solution
The router does not work	Plug is not connected to a functioning electrical outlet	Connect the plug to a functioning electrical outlet
	Switch is in "OFF" position	Pull the switch to "ON" position
The surface of the workpiece is not smooth after cutting	The bit is dull	Change to a sharp bit
	Routing at an inappropriate bit speed	Select an appropriate bit speed

If any parts are missing or damaged, or if you have any questions, please call the toll-free helpline at 1-800-689-9928.

EXPLODED VIEW



PARTS LIST

No.	Part No.	Description
1	5610106000	Tapping screw
2	3320386000	Cover
3	3123273000	Cover
4	4900252000	Speed adjuster
5	5610017000	Tapping screw
6	3122984000	Cover
7	5610053000	Tapping screw
8	3700539000	Epoxy board
9	3123039000	Brush holder
10	3703641000	Brush bush
11	4960250000	Carbon brush
12	3122908000	Motor housing
13	3121049000	Spring
14	3700249000	Washer
15	5700008000	Bearing
16	2740236000	Stator
17	5610049000	Tapping screw
18	2750831000	Rotor
19	5660018000	Circlips for shaft
20	3122985000	Fan baffle
21	5620068000	Screw
22	3700072000	Bearing clamping plate
23	5700017000	Ball bearing
24	5620032000	Screw
25	3120200000	Adjusting knob
26	5690002000	O-ring
27	3123038000	Depth indicator
28	3550750000	Depth adjusting bolt
29	3550749000	Depth stop bar
30	5620039000	Screw

No.	Part No.	Description
31	3122997000	Plunge lock lever
32	5620346000	Slotted set screw
33	3700074000	Spring
34	5630037000	Nut
35	3320387000	Left handle cover
36	5620013000	Hexagon socket screw
37	5650007000	Spring washer
38	5650006000	Plain washer
39	3320388000	Left handle
40	3420481000	Plunge frame
41	5610044000	Tapping screw
42	5630036000	Nut
43	3660030000	Spring
44	3700079000	Spindle lock
45	3123040000	Spindle lock button
46	3120300000	Lock cover
47	5610083000	Thread forming screw
48	3550572000	Collet
49	5630034000	Lock nut
50	3700870000	Wrench
51	4860224000	Inner wire
52	3320389000	Right handle cover
53	3320390000	Right handle
54	3120234000	Cord anchorage
55	5610031000	Screw
56	3121050000	Cord guard
57	4810002000	Power cord and plug
58	3122983000	Cover
59	4870093000	Switch
60	3660166000	Spring

No.	Part No.	Description
61	3550759000	Plunge rod
62	3123306000	Upper cover
63	5630003000	Hexagon nut
64	3123305000	Lower cover
65	3121632000	Bellows seal
66	5620103000	Slotted shoulder screw
67	3700078000	Waver washer
68	3420387000	Turntable
69	5700046000	Steel ball
70	3400189000	Lock bolt
71	3121583000	Chip shield

No.	Part No.	Description
72	3420482000	Bottom support
73	5620112000	Slotted set screw
74	3550588000	Guiding rod
75	3122909000	Base plate
76	5620220000	Screw
77	3700872000	Guide bush
78	5620076000	Screw
79	3700871000	Parallel guide
80	5650013000	Plain washer
81	5650015000	Spring washer
82	5620050000	Screw

If any parts are missing or damaged, or if you have any questions, please call the toll-free helpline at 1-800-689-9928.

PARTS LIST



This Mastercraft product is guaranteed for a period of **3 years from the date of original retail purchase** against defects in workmanship and materials, except for the following components:

- a) Component A: Batteries, chargers and carrying case, which are guaranteed for a period of 2 years from the date of original retail purchase against defects in workmanship and materials;
- b) Component B: Accessories, which are guaranteed for a period of 1 year from the date of original retail purchase against defects in workmanship and materials.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any costs of labour relating thereto.

These warranties are subject to the following conditions and limitations:

- a) a bill of sale verifying the purchase and purchase date must be provided;
- b) this warranty will not apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial or rental purposes;
- c) this warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product that are expected to become inoperative or unusable after a reasonable period of use;
- d) this warranty will not apply to routine maintenance and consumable items such as, but not limited to, fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e) this warranty will not apply where damage is caused by repairs made or attempted by others (i.e. persons not authorized by the manufacturer);
- f) this warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g) this warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made or attempted by unauthorized persons;

- h) this warranty will not apply to normal deterioration of the exterior finish, such as, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and
- i) this warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

Additional Limitations

This warranty applies only to the original purchaser and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

Notice to Consumer

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

Made in China

Imported by

Mastercraft Canada Toronto, Canada M4S 2B8

