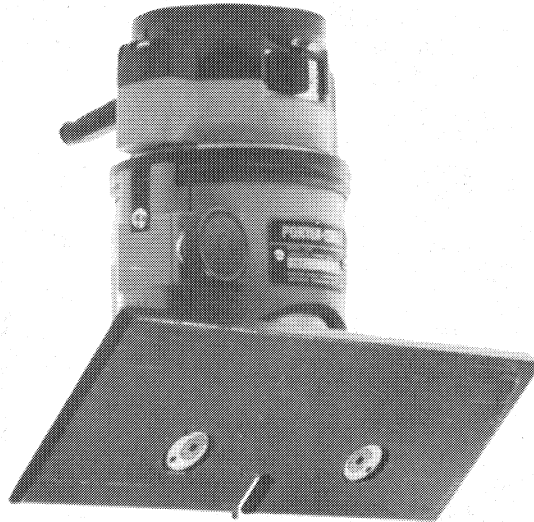


Miter Fold Laminate Trimmer

Instruction
manual



MODEL 411
Consisting of
MODEL 4111 BASE
MODEL 3102 MOTOR

IMPORTANT

Please make certain that the person who is to use this equipment carefully reads and understands these instructions before starting operations.

The Model and Serial No. plate is located on the main housing of the tool. Record these numbers in the spaces below and retain for future reference.

Model No. _____

Type _____

Serial No. _____

Part No. 878610-499

PORTER+CABLE
PROFESSIONAL POWER TOOLS

SAFETY INSTRUCTIONS

GROUNDING INSTRUCTIONS

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with an approved three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal.

If your unit is for use on less than 150 Volts, the power cord is equipped with a plug that has two flat, parallel current-carrying prongs and one longer, round or "U"-shaped, ground prong which requires a mating 3-conductor grounded type receptacle, as shown in Fig. 1.

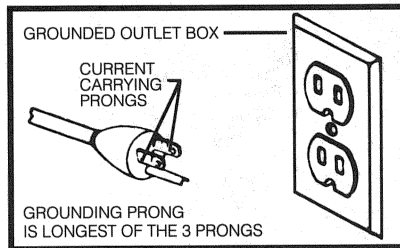


Fig. 1

An adapter, shown in Fig. 2, is available for connecting 3-prong grounding type plugs that are used on units less than 150 Volts to 2-prong receptacles. **THIS ADAPTER IS NOT ALLOWED IN CANADA.** The green colored rigid ear, lug, etc., must be connected to a permanent ground such as a properly grounded outlet box, as shown in Fig. 2.

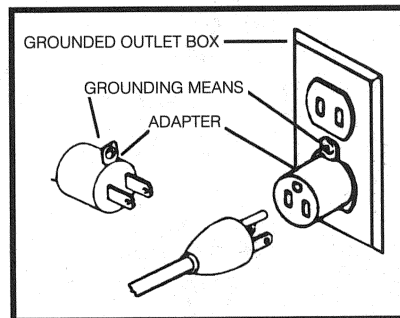


Fig. 2

If your unit is for use on 150 to 250 Volts, the power cord is equipped with a plug that has two flat current-carrying prongs in tandem, and one round or "U"-shaped, longer ground prong, as shown in Fig. 3. This plug is used only with the proper mating 3-conductor grounding type receptacle, as shown in Fig. 3. No adapter is available for this type plug.

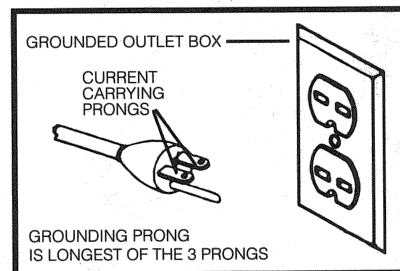


Fig. 3

IN ALL CASES, MAKE SURE THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED.

NEVER REMOVE GROUNDING PRONG FROM POWER PLUG.

EXTENSION CORDS

Use only three-wire extension cords which have three-prong grounding-type plugs and three-pole receptacle which accept the tool's plug. Replace damaged or worn cord immediately. **DO NOT ATTEMPT TO REPAIR POWER CORD.**

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

READ AND FOLLOW ALL INSTRUCTIONS.

There are certain applications for which this tool was designed. Porter-Cable strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written Porter-Cable and we have advised you.

Product Manager
Porter-Cable Corporation
4825 Highway 45 North
P.O. Box 2468
Jackson, TN 38302-2468

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **AVOID DANGEROUS ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep area well lit. Avoid chemical or corrosive environment. Do not use tool in presence of flammable liquids or gases.
3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
4. **KEEP CHILDREN AWAY.** Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
5. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place – out of reach of children.
6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
7. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended – for example – do not use a circular saw for cutting tree limbs or logs.
8. **DRESS PROPERLY.** Do not wear loose clothing or jewelry. Loose clothing, draw strings and jewelry can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **USE SAFETY GLASSES.** Wear safety glasses or goggles while operating power tools. Also face or dust mask if operation creates dust. All persons in the area where power tools are being operated should also wear safety glasses and face or dust mask.
10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges. Have damaged or worn power cord and strain reliever replaced immediately. DO NOT ATTEMPT TO REPAIR POWER CORD.
11. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.

12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Have all worn, broken or lost parts replaced immediately. Keep handles dry, clean and free from oil and grease.
14. **DISCONNECT TOOLS** when not in use, before servicing, and when changing accessories such as blades, bits, cutters, etc.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Do not carry a plugged-in tool with finger on switch. Be sure switch is off when plugging in. Keep hands, body and clothing clear of blades, bits, cutters, etc. when plugging in the tool.
17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords marked "Suitable for use with outdoor appliances – store indoors when not in use."
18. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired or while under the influence of medication, alcohol or drugs.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
20. **WEAR EAR PROTECTION** to safeguard against possible hearing loss.

SAVE THESE INSTRUCTIONS

ADDITIONAL SAFETY RULES FOR LAMINATE TRIMMERS

1. **NEVER** adjust depth of cut while motor is running. A slip at this time may cause personal injury, or damage to cutter or workpiece.
2. **BE SURE** cord set is free and will not "hang up" during trimming operations.
3. **KEEP HANDS CLEAR** of cutter when motor is running to prevent personal injury.
4. **MAINTAIN FIRM GRIP** on trimmer when starting motor to resist starting torque.
5. **STAY ALERT** and keep cutter clear of all foreign objects while motor is running.
6. **BE SURE** motor has completely stopped before setting machine down between operations.

7. DO NOT USE LAMINATE TRIMMER MOTOR without the Laminate Trimmer Base installed: loss of control could result, causing personal injury or damage to work.

8. SOME WOOD CONTAINS PRESERVATIVES WHICH CAN BE TOXIC. Take extra care to prevent inhalation and skin contact when working with these materials. Request, and follow, any safety information available from your material supplier.

MOTOR

Many Porter-Cable tools will operate on either D.C., or single phase 25 to 60 cycle A.C. current and voltage within plus or minus 5 percent of that shown on the specification plate on the tool. Several models, however, are designed for A.C. current only. Refer to the specification plate on your tool for proper voltage and current rating.

CAUTION: Do not operate your tool on a current on which the voltage is not within correct limits. Do not operate tools rated A.C. only on D.C. current. To do so may seriously damage the tool.

EXTENSION CORD SELECTION

If an extension cord is used, make sure the conductor size is large enough to prevent excessive voltage drop which will cause loss of power and possible motor damage. A table is based on limiting line voltage drop to 5 volts (10 volts for 230 volts) at 150% of rated amperes.

If an extension cord is to be used outdoors it must be marked with the suffix W-A following the cord type designation. For example – SJTW-A to indicate it is acceptable for outdoor use.

RECOMMENDED EXTENSION CORD SIZES FOR USE WITH PORTABLE ELECTRIC TOOLS

		Length of Cord in Feet									
		115V	25 Ft.	50 Ft.	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	400 Ft.	500 Ft.
		230V	50 Ft.	100 Ft.	200 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	800 Ft.	1000 Ft.
Nameplate Ampere Rating	0-2	18	18	18	16	16	14	14	12	12	
	2-3	18	18	16	14	14	12	12	10	10	
	3-4	18	18	16	14	12	12	10	10	8	
	4-5	18	18	14	12	12	10	10	8	8	
	5-6	18	16	14	12	10	10	8	8	6	
	6-8	18	16	12	10	10	8	6	6	6	
	8-10	18	14	12	10	8	8	6	6	4	
	10-12	16	14	10	8	8	6	6	4	4	
	12-14	16	12	10	8	6	6	6	4	2	
	14-16	16	12	10	8	6	6	4	4	2	
	16-18	14	12	8	8	6	4	4	2	2	
18-20	14	12	8	6	6	4	4	2	2		

OPERATING INSTRUCTIONS

FOREWORD

The Porter-Cable Model 411 Miter Fold Trimmer is designed to eliminate the dark phenolic lines associated with conventional methods of plastic laminate installation. The Miter Fold Trimmer permits accurate mitering of laminate joints so that the dark laminate core is hidden from view. This gives the finished product the appearance of being a solid block of the surface material.

TO START AND STOP MOTOR

The Model 411 is equipped with a slide type power switch, see Fig. 1. The words ON and OFF are stamped into the front of the switch.

CAUTION: Make sure bit area is clear and grasp motor firmly to resist starting torque.

TO START THE MOTOR: Slide the switch button to the right to expose the word ON.

TO STOP THE MOTOR: Slide the switch button to the left to expose the word OFF.

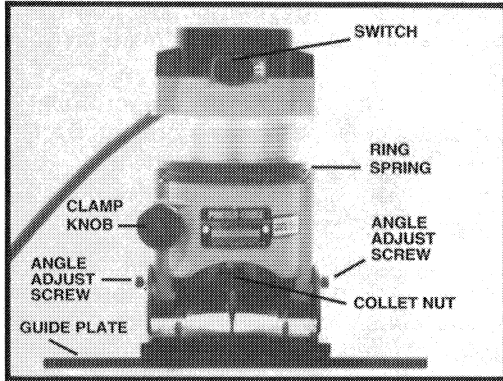


Fig. 1

ADJUSTING ANGLE OF CUT

CAUTION: DISCONNECT TRIMMER FROM POWER SOURCE.

1. Place the eccentric adjusting wrench into the trimmer collet (see Fig. 2), and tighten the collet nut to retain the wrench.
2. Use the $\frac{5}{32}$ " hex wrench to loosen the two angle adjustment lock screws (see Fig. 1).

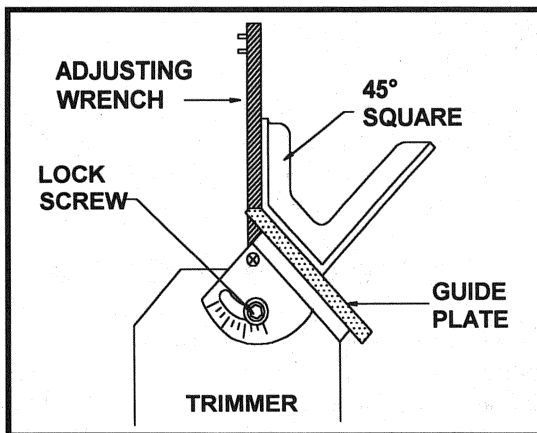


Fig. 2

3. Use a 45° square to position the trimmer base at 45° to the adjusting wrench that is clamped in collet (see Fig. 2).
4. Firmly tighten the two angle adjustment lock screws.
5. Recheck the 45° alignment between the base and the wrench. Readjust as necessary. THIS ADJUSTMENT IS CRITICAL to the proper operation of the miter fold trimmer.
6. Loosen collet nut and remove the adjusting wrench.

SELECTING THE BIT

The Model 411 Trimmer is designed to use Porter-Cable Trim Bit #43109. These bits are available from your Porter-Cable dealer or service center. Use exact replacement bits only.

INSTALLING THE BIT

CAUTION: DISCONNECT TRIMMER FROM POWER SOURCE.

1. Remove power unit from base unit as follows:
 - A. Loosen clamp knob (Fig. 1).
 - B. Grasp power unit and pull straight up and out of the base. This will also release the depth adjusting ring from the ring springs.
2. Clean and insert shank of bit into collet. Position the bit so that it extends between 1¹/₁₆" and 1¹/₈" from the collet nut.
3. Place one wrench on flats of shaft directly above collet nut (with collet facing you). Let far end of wrench rest on bench to your RIGHT.
4. Place other wrench on collet nut and turn clockwise to tighten. TIGHTEN SECURELY.
5. Align one of the grooves in the motor housing with the pin protruding from the inner wall of the base. Insert power unit into base until ring springs snap into the depth adjusting ring groove.
6. Using finger pressure only; tighten clamp knob.

REMOVING THE BIT

CAUTION: DISCONNECT TRIMMER FROM POWER SOURCE.

1. Repeat Step 1 under INSTALLING THE BIT.

CAUTION: Never touch bit immediately after use, as it may be extremely hot.

2. Lay power unit on bench with collet toward you.
3. Place one wrench on flats of shaft directly above collet nut. Let far end of wrench rest on bench to your LEFT.
4. Place other wrench on collet nut and turn counterclockwise approximately one turn. Tap side of bit shank with wrench to release collet. Remove bit.

NOTE: Never tighten collet nut without bit in collet. To do so is likely to damage the collet.

ADJUSTING DEPTH OF CUT

NOTE: The angle of cut MUST be set to 45° prior to adjusting depth of cut (see ADJUSTING ANGLE OF CUT).

CAUTION: DISCONNECT TRIMMER FROM POWER SOURCE.

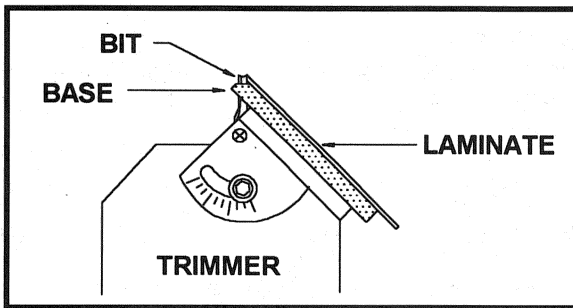


Fig. 3

1. Stand the trimmer on its top, and position a piece of scrap laminate to the base (see Fig. 3).
 2. Loosen the base clamp knob (see Fig. 1), and rotate the depth adjusting ring to align the base so that the corner of the trimmer bit will just cut through the sheet of laminate.
 3. Tighten the clamp knob.
 4. Make a trial cut as follows:
 - Place tape on the FACE side of a scrap piece of laminate. **NOTE:** This tape should be opposite the cutting path of the bit, as shown in Fig. 4.
 - Lay the laminate FACE DOWN on a work table.
 - Position a board (core), onto the laminate, approximately one inch from the edge, and clamp in place.
 - Place the trimmer to the laminate with the edge of the guide plate against the core (see Fig. 4), and make a test cut moving from right to left.
- NOTE:** You must keep the base of the miter fold trimmer flat on the laminate throughout the cut. It may be helpful to place a piece of scrap laminate under the back of the base to provide support.

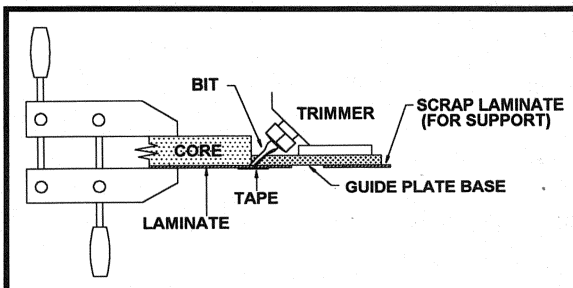


Fig. 4

CAUTION: DISCONNECT TRIMMER FROM POWER SOURCE.

5. The corner of the bit should just cut through the laminate, without cutting through the tape. Repeat adjustment and test cut as necessary to achieve desired results.

ADJUSTING LOCATION OF CUT

NOTE: The angle of cut and the depth of cut **MUST** be set prior to adjusting the location of cut (see ADJUSTING ANGLE OF CUT and ADJUSTING DEPTH OF CUT).

Using the same trial cut set-up as used in ADJUSTING DEPTH OF CUT, make a trial cut. **DO NOT** release clamp. Fold the edge material up against the core. The edge material should fit flat against the core material.

If the edge material does not fit flat against the core, it will be necessary to adjust the location of cut as follows:

1. **CAUTION: DISCONNECT TRIMMER FROM POWER SOURCE.**
2. Use the eccentric adjusting wrench to rotate the base cams.

If the top edge (edge opposite the mitered joint), of the laminate does not touch the core, turn the eccentric cams in direction "A" (see Fig. 5).

If the bottom (mitered) edge of the laminate does not touch the core, turn the eccentric cams in direction "B".

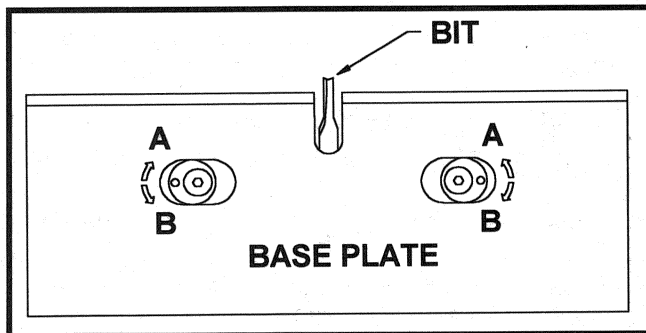


Fig. 5

3. Repeat the test cut and the adjustment as necessary to achieve desired results.

USING THE MITER FOLD TRIMMER

1. Apply laminate to a panel leaving enough laminate extending beyond all four sides to cover the edges of the core.
2. Place tape on the face side of the laminate, opposite the edges of the core.
3. Position the panel face side down on a flat work surface and secure with clamps.
4. Position the miter fold trimmer onto the laminate with the edge of the base against the side of the core and the bit beyond the right edge of the laminate (see Fig. 6).

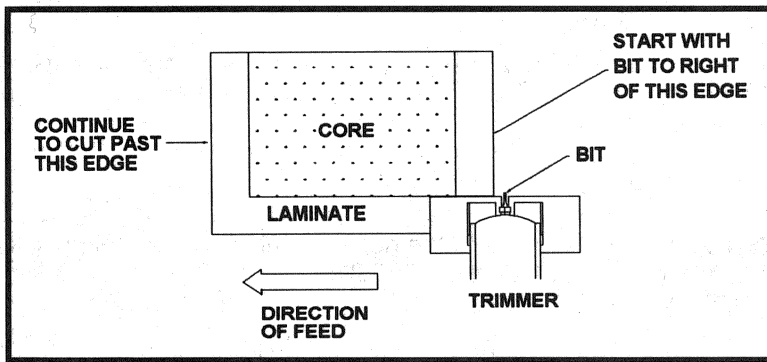


Fig. 6

5. Start the trimmer motor and allow it to reach full speed. Make the cut moving from right to left.

NOTE: You must keep the base of the miter fold trimmer flat on the laminate throughout the cut. It may be helpful to place a piece of scrap laminate under the back of the base to provide support.

6. When cut is complete, turn motor OFF and allow bit to completely stop before setting trimmer down.

NOTE: The bit will also cut a small groove in the edge of the core. This provides a relief area for excess adhesive from the mitered joint.

7. Repeat Steps 4 through 8 on each remaining edge of the panel.
8. Remove the corners of the laminate. (The tape is all that is holding them in place).
9. Apply adhesive to the edges of the core and to the corresponding laminate.
10. Fold the edges up and trim the laminate flush with the back of the panel. Remove the tape from the face of the laminate.

MAINTENANCE

KEEP TOOL CLEAN

Periodically blow out all air passages with dry, compressed air. Remove buildup of grime resulting from working with green or sappy wood.

CAUTION: Wear safety glasses while using compressed air.

FAILURE TO START

Should your tool fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

LUBRICATION

This tool has been lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. No further lubrication is necessary.

BRUSH INSPECTION

At approximately 100 hours of use, take or send your tool to your nearest Authorized Porter-Cable Service Station to be thoroughly cleaned and inspected; worn parts replaced, when necessary; relubricated with fresh lubricant, if required; reassembled with new brushes; and performance tested.

Any loss of power before the above maintenance check may indicate the need for immediate servicing of your tool. **DO NOT CONTINUE TO OPERATE TOOL UNDER THIS CONDITION.** If proper operating voltage is present, return your tool to the Service Station for immediate service.

SERVICE AND REPAIRS

All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations, including brush inspection and replacement, should **ONLY** be performed by either an **AUTHORIZED PORTER-CABLE SERVICE STATION** or a **PORTER-CABLE SERVICE CENTER**. All repairs made by these agencies are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by anyone other than these agencies.

Should you have any questions about your tool, feel free to write us at any time. In any communications, please give all information shown on the nameplate of your tool (model number, type, serial number, etc.).

ACCESSORIES

The testing of these tools has been accomplished with the use of the following accessories **ONLY**. For safest operation, it is recommended that **ONLY** these accessories be used with this product.

WARNING: Since accessories other than those listed have not been tested with this product, use of such accessories could be hazardous.

Trim Bit	43109
Special Adjustment Wrench	878507
Hex Wrench ($\frac{1}{8}$ "	698110
Hex Wrench ($\frac{5}{32}$ "	48245
Collet	43002
Collet Nut	844642
Wrench (Collet/Spindle)	44745

PORTER-CABLE SERVICE CENTERS

Parts and Repair Service for Porter-Cable Power Tools are Available at These Locations

CALIFORNIA

City of Industry 91745 (Los Angeles)
1305 John Reed Court
Phone: (818) 333-3566
Fax: (818) 330-5900

San Leandro 94577 (Oakland)
3039 Teagarden Street
Phone: (510) 357-9762
Fax: (510) 357-7939

COLORADO

Denver 80204
2561 West 8th Avenue
Phone: (303) 892-6113
Fax: (303) 595-0358

FLORIDA

Hialeah 33014 (Miami)
16373-75 NW 57th Ave.
Phone: (305) 624-2523
Fax: (305) 628-2654

Tampa 33609
4538 W. Kennedy Boulevard
Phone: (813) 877-9585
Fax: (813) 289-7948

GEORGIA

Morrow 30260 (Atlanta)
1286 Citizens Parkway
Suite C
Phone: (404) 961-0900
Fax: (404) 961-8624

ILLINOIS

Addison 60101 (Chicago)
311 Laura Drive
Phone: (708) 628-6100
Fax: (708) 628-0023

MARYLAND

Baltimore 21227
7397 Washington Blvd.
Suite #102
Phone: (410) 799-9394
Fax: (410) 799-9398

MASSACHUSETTS

Franklin 02038 (Boston)
Franklin Industrial Park
101E Constitution Blvd.
Phone: (508) 520-8802
Fax: (508) 528-8089

MICHIGAN

Troy 48083 (Detroit)
1355 Combermere
Phone: (810) 597-5000
Fax: (810) 597-5004

MINNESOTA

Minneapolis 55429
4315 68th Avenue North
Phone: (612) 561-9080
Fax: (612) 561-0653

MISSOURI

North Kansas City 64116
1141 Swift Avenue
P.O. Box 12393
Phone: (816) 221-2070
Fax: (816) 221-2897

ST. LOUIS

St. Louis 63119
7574 Watson Road
Phone: (314) 968-8950
Fax: (314) 968-2790

NEW YORK

Flushing 11365-1595 (N.Y.C.)
175-25 Horace Harding Expwy.
Phone: (718) 225-2040
Fax: (718) 423-9619

NORTH CAROLINA

Charlotte 28209
4303-B South Boulevard
Phone: (704) 525-4410
Fax: (704) 525-0618

OHIO

Columbus 43214
4560 Indianola Avenue
Phone: (614) 263-0929
Fax: (614) 263-1238

Cleveland 44125
8001 Sweet Valley Dr.
Unit #18
Phone: (216) 447-9030
Fax: (216) 447-3097

PENNSYLVANIA

Philadelphia 19154
12285 McNulty Road
Phone: (215) 677-7800
Fax: (215) 677-9908

TEXAS

Dallas 75220
10720 N. Stemmons Freeway
Phone: (214) 353-2996
Fax: (214) 350-3943

Houston 77055
West 10 Business Center
1008 Wirt Road, Suite 120
Phone: (713) 682-0334
Fax: (713) 682-4867

WASHINGTON

Renton 98055 (Seattle)
268 Southwest 43rd Street
Phone: (206) 251-6680
Fax: (206) 251-9337

Authorized Service Stations
are located in all large cities.
For the one nearest you,
see the classified section
in your phone book (under
"Tools-Electric").

PORTER-CABLE LIMITED ONE YEAR WARRANTY

Porter-Cable warrants its Professional Power Tools for a period of one year from the date of original purchase. We will repair or replace at our option, any part or parts of the product and accessories covered under this warranty which, after examination, proves to be defective in workmanship or material during the warranty period. For repair or replacement return the complete tool or accessory, transportation prepaid, to your nearest Porter-Cable Service Center or Authorized Service Station as listed under "TOOLS-ELECTRIC" in the Yellow Pages of your telephone directory. Proof of purchase may be required. This warranty does not apply to repair or replacement required due to misuse, abuse, normal wear and tear or repairs attempted or made by other than our Service Centers or Authorized Service Stations.

ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL LAST ONLY FOR ONE (1) YEAR FROM THE DATE OF PURCHASE.

To obtain information on warranty performance please write to: PORTER-CABLE CORPORATION, 4825 Highway 45 North, P.O. Box 2468, Jackson, Tennessee 38302-2468; Attention: Product Service. THE FOREGOING OBLIGATION IS PORTER-CABLE'S SOLE LIABILITY UNDER THIS OR ANY IMPLIED WARRANTY AND UNDER NO CIRCUMSTANCES SHALL PORTER-CABLE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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

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