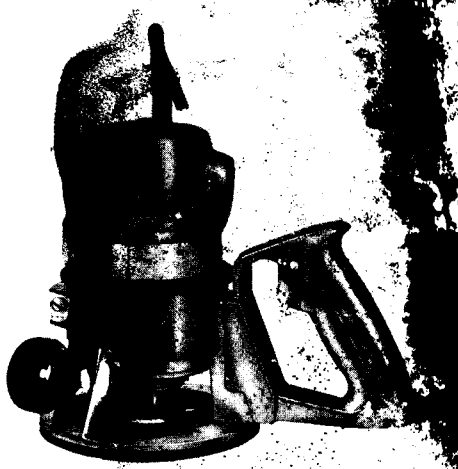
Operating Instructions

PORTER-CABLE ROUTER



Porter-Cable
Rockwell
MANUFACTURING COMPANY

PORTER-CABLE MACHINE COMPANY
SYRACUSE, NEW YORK
a subsidiary of
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PITTSBURGH 8, PENNSYLVANIA
In Canada: Manufactured by Rockwell of Canada, Ltd
Clinton Street, Toronto

Porter-Cable

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YOUR new Porter-Cable Tool is simple to operate and is built to give long years of trouble-free performance. However, you will achieve maximum results if you will first take a few minutes to read through this manual. On the following pages you will find several hints that will increase the utility of your machine and better maintain its efficiency.

Porter-Cable Tools mechanize countless laborious hand chores around the home, farm and workshop. They eliminate fatigue and speed up slow operations in construction, industry, and many specialized types of work.

These portable power tools are built to the same standards of precision and quality that have made Porter-Cable famous for over fifty years as producers of fine machines for the professional trades.

This machine has been carefully tested and inspected at the Factory and is guaranteed to be free from any defect in material or workmanship. The Company will, under this guarantee, repair or replace any parts which prove, upon examination, to be defective. The complete machine must be returned prepaid to the Factory, a Factory Branch or an Authorized Service Station. Repairs made by other than the Authorized Agencies automatically void this guarantee.

Each machine has a guarantee card packed with it, and this should be returned to Syracuse in order to complete the guarantee.

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OPERATING INSTRUCTIONS FOR PORTER-CABLE ROUTERS

Carefully read this manual before operating your Router.

The router is used for controlled stock removal from surface areas and as a portable shaper for moulding ornamental edges on furniture and other woodworking projects. The operations performed by this machine fall into two general groups. First, free-hand cutting or guiding with the hands alone. Second, those operations performed with the aid of various templets such as the Porter-Cable Hinge Butt and Dovetail templets as well as plywood templets made by the craftsman.

There are a number of different jobs that may be performed by this free-hand routing method. One example involves the routing out of stock from the surface of the wood, following a pencilled layout. An interesting form of free-hand routing is raised letterwork where the background is recessed. Incised routing is possible by cutting letters or patterns directly into the surface. Background routing also prepares woodcarving projects for the actual carving or modeling of the remaining portion.

Dadoes may be accurately cut by simply guiding the router base along a straight piece of wood. Mortise and tenon joints for cabinet work, or screen and storm sash may also be cut with the router. A large part of free-hand routing operation involves the shaping of the edges of wood. One of these edge routing operations includes such basic cuts as rabbeting kitchen cupboard doors to provide overlapping edges. A corner-rounding bit puts a radius on this overlapping edge and gives a pleasing uniformity to all cupboard doors.

A moulded or [illegible] effect, [illegible] infinite variations [illegible] provided [illegible] edges of woodwork very simply with a wide variety of bits and cutters. A list of the most popular Porter-Cable bits and cutters may be obtained from your Porter-Cable dealer.

Most router bits fall into three major classifications. The first group includes the one-piece bits which already have a shank built into the cutting head. This shank fits into the collet of the router motor. Another type of bit has a threaded hole completely through the center of the cutting head. When this type of bit is used with the router, a separate shank (or arbor) is screwed into the top of the cutting head. The third type of bit is a one-piece form-cutting tool which includes the shank and also a pilot or cylindrical tip below the cutting edge. When moulding the edge of a board, the pilot controls the horizontal depth of cut by riding along the edge of the work.

All shaping cutters, in contrast to bits, have a smooth hole in the center of the cutting head. These cutters are mounted on a spindle between spacing collars in order to obtain the type of cut desired. Shaping cutters are most frequently used in the mounted shaper table. Selection of the router bit or cutter is entirely dependent, of course, on the type and cut which the operator wishes to obtain.

Two of the most widely used router applications in the professional building and woodworking trades involve the use of the Porter-Cable Hinge Butt and Dovetail templets. In addition to these manufactured templets, many craftsmen have constructed their own craftsman-designed templets to suit their particular job. Most of these templets are inexpensively made of plywood, masonite or other hard

board. The templet is simply a pre-cut pattern which is used to guide the router over the workpiece. When used with such templets, a templet guide is fitted into the router base. This guide rides against the templet and prevents the bit from cutting into the templet.

PREPARING THE ROUTER FOR USE

CAUTION: While preparing the Router for use, while making adjustments and when the Router is not in actual use, always disconnect the cord from the power outlet.

SELECTING THE BIT

First, select the correct bit for the job which you are going to do. If the bit you have chosen does not contain a built-in shank, the No. BAA-1L Arbor must be used. The threaded end of the arbor should then be screwed hand-tight into the threaded hole on top of the bit.

SELECTING THE COLLET

Routers, depending on size and classification, are furnished with 1/4", 1/2" or both 1/4" and 1/2" capacity collets. Use the 1/4" collet with bits having 1/4" shanks and the 1/2" collet with bits having 1/2" shanks.

For bits with shank diameters other than 1/4" and 1/2", it is necessary to use adapters (available as accessory equipment) to properly accommodate them. DO NOT ATTEMPT TO USE BITS WITH SHANK DIAMETERS OTHER THAN 1/4" AND 1/2" WITHOUT ADAPTERS. TO DO SO WILL CAUSE BREAKAGE OF THE COLLETS. Select the adapter to be used from the following table.

If it is desired to use a bit with shank diameter smaller than 1/4" in a router having 1/2" diameter capacity, two adapters will be required. Insert adapter D808 (1/2" to 1/4") into router collet. Now insert into adapter D808, that adapter which will reduce the hole diameter from 1/4" to the diameter of the bit shank in question.

Diameter of Bit Shank	Collet	Use Adapter
1/16"	1/4"	D402
3/32"	1/4"	D403
1/8"	1/4"	D404
5/32"	1/4"	D405A
3/16"	1/4"	D406A
1/4"	1/4"	Adapter not req'd.
1/4"	1/2"	D808
5/16"	1/2"	D810
3/8"	1/2"	D812
7/16"	1/2"	D814
1/2"	1/2"	Adapter not req'd.

INSTALLING THE BIT

Routers with Threaded Collet Only

Screw the collet into the threaded motor chuck as far as it will go without tightening. The bit (with arbor) or bit shank (with or without adapter, depending on whether or not the shank is 1/4" or 1/2") should be inserted all the way into the collet and then backed out about 1/16".

To tighten the bit in the chuck, lay the motor on the bench top with the chuck facing away from you. Slip one wrench on the chuck so that the opposite end of the wrench rests on the bench to your left. This will prevent the chuck from slipping when the collet is tightened with the other wrench. Reverse this procedure when removing the bit. You will find this to be the easiest and safest way of installing the bits and removing them from the Router motor.

Routers with Kam-Lock Collets Only

Insert the collet into the motor chuck as far as it will go without tightening. Next, insert the bit shank all the way into the collet. BE SURE THE SHOULDER OF THE COLLET IS SEATED FIRMLY AGAINST THE FACE OF THE CHUCK. Place one wrench on the chuck and with the other wrench, turn the collet to the right (clockwise when viewing the motor unit from the chuck end). Approximately one-quarter turn is sufficient to lock the bit in the collet. The chuck and collet will lock and unlock best if they are coated with light oil. Always wipe wood chips and/or dust or other foreign materials from the chuck and collet before assembling. NEVER TIGHTEN COLLET WITHOUT A BIT (OR BIT AND ADAPTER OR ARBOR OF PROPER SIZE) INSERTED INTO COLLET. To do so will cause breakage of the collet which is matched for perfect fit with the motor chuck.

Routers with Collet Lock Nut and Shaft Lock

Turn chuck so flats are parallel with shaft lock rails. Slide shaft lock until rails are in position that chuck cannot turn. Hand tighten collet lock nut. Insert bit shank into collet as far as it will go and then back it out approximately 1/16". Firmly tighten collet lock nut with wrench. Slide shaft lock until chuck is centrally located in cut-out sections of shaft lock rails. Turn chuck by hand to make sure it turns freely and does not touch shaft lock rails. Never firmly tighten collet lock nut without a bit (or bit and adapter or arbor) of proper size inserted into collet. To do so may cause collet breakage.

Routers with Collet Lock Nut

Insert collet into chuck. Thread collet lock nut on chuck. Insert bit shank into collet as far as it will go and then back it out approximately 1/16". While holding chuck with one wrench, firmly tighten collet with another wrench. Never firmly tighten collet lock nut without a bit (or bit and adapter or arbor) of proper size inserted into collet. To do so may cause collet breakage.

ROUTER BASES

There are two types of router bases. One has a knob and handle with built-in trigger switch. The other has two knobs. For correct installation of motor, refer to whichever of the following instructions applies to the type of base you have.

ASSEMBLING THE MOTOR INTO THE ROUTER BASE WITH SWITCH-IN-HANDLE

Loosen the locking wing nut on the Router Base. Pick up the Router Motor in your right hand. Grip it such that your right thumb is on one brush cap, your index finger is on the top and your middle finger is on the other brush cap. The short motor cord should be on the side opposite your hand. Now, with the Router Base resting on the work bench, grasp the handle with your left hand, the thumb passing around the handle under the switch. Insert the Router Motor into the Base with the cord positioned over the handle. Next, twist the Motor clockwise, engaging the lower guide pins in the spiral grooves in the Base. Continue twisting the motor until the upper guide pins enter the spiral grooves and the cord is positioned opposite the handle. Now, insert the cord plug into the outlet located on the right side of the handle. Continue turning the motor clockwise until it fits rigidly in the base and tighten the locking wing nut. If the diameter of the bit you are using is too large to pass through the hole in the sub-base, the sub-base may be removed by taking out the retaining screws.

ASSEMBLING THE MOTOR INTO THE ROUTER BASE WITH TWO KNOBS

Loosen the locking wing nut on the router base. Pick up the router motor in your right hand with your thumb just to the right of the toggle switch. Insert the motor into the base so the lower guide pins enter the spiral grooves in the base. Now, turn the motor clockwise until the upper guide pins are in the grooves and the motor fits rigidly in the base. Tighten the locking wing nut. If the diameter of the bit you are using is too large to pass thru the opening in the sub-base, the sub-base may be removed by taking out the retaining screws.

HOW TO ADJUST THE DEPTH OF CUT

Place the router on a flat wood surface and loosen the locking wing nut. Turn the motor in the router base in