

Installation Instructions:

TO AVOID CONFUSION DURING INSTALLATION follow steps 1 through 5 listed below

- Step 1. Remove pages 2 through 7 from book
- Step 2. Remove your router install pages
- Step 3. Return extra pages to box
- Step 4. For smoothest plunging action purchase STP® before installation. SEE PAGE 2
- Step 5. See page 3 for parts diagram

Router Install Pages

Craftsman 27505-27506-27510-27511 -- (8-9-10)

De Walt DW 625 & ELU 3337- 3338-3339 -- (11-12-13)

De Walt DW 621 -- (14-15-16)

Freud FT 2000 -- (17-18-19)

Hitachi M12V -- (20-21-22)

Hitachi TR12 -- (23-24-25)

Makita 3612 Series -- (26-27-28-29)

Porter Cable 6931 Plunge Base -- (30-31-32-33-34-35)

Porter Cable 7538 / 7539 -- (36-37-38)

Porter Cable 7529 / 8529 -- (39-40-41)

Ryobi RE 600 -- (42-43-44)

Ryobi RE 500 -- (instructions available on our website)

For Parts or Installation Assistance Contact



Visit our Website @ www.routertechnologies.com

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Page 1

METRIC EQUIVILANTS FOR INTERNATIONAL CUSTOMERS

Note: The following metric drill bit or wrench sizes may be substituted for all operations other than drilling hole for #30 Dust Cover Insert.

", 00 Durat Orac	
3/4" = 0.750"	19.0mm = 0.748
11/16"= 0.687"	17.5mm = 0.689" or 18mm = 0.708"
1/2" = 0.500"	12.8mm = 0.503 or 13mm = 0.511
21/64" = 0.328"	8.3mm = 0.326" or 8.5mm = 0.334"
5/16" = 0.312"	8.0mm = 0.315
7/32" = 0.218"	5.5mm = 0.216"
5/32" = 0.156"	no metric equivilant, this hole must be drilled to 5/32"
3/32" = 0.093	2.4mm = 0.094
1/8" = 0.125"	3.20mm = 0.126"

30 Dust Cover Insert must be 0.500" use a 12.5mm bit and sand hole to fit cover. 12.5mm = 0.492"

This instruction manual covers several different makes and models of plunge routers. The instructions are written for a person with some mechanical ability. If you understand the parts and operation of a plunge router, installing the Router Raizer is not difficult. Before beginning installation compare the illustrations and photos to your router, original subbase or router table insert plate. Understand the location and function of both original and Router Raizer parts. Keep all spare parts, instruction manual and templates for future reference.

Responsibility of the Owner

Important: Read, understand and follow instructions to avoid personal injury.

- 1. The responsibility of the owner is to follow the instructions, cautions, and warnings bellow and in the instructions
- 2. Know and understand the location of both original and Router Raizer parts.
- 3. Follow all the assembly instructions carefully.
- 4. Correctly adjust the components making sure the plunge action is smooth and plunge lock operates properly.
- 5. Carefully read and follow all notes, tips, cautions and warnings.

6. Make sure all operators of the Router Raizer know how to correctly use it.

Caution: Before and during installation of Router Raizer make sure power switch is in the off position and tool is disconnected from power source to avoid accidental starting of the tool which may result in personal injury.

Caution: Always make sure router power switch is in the off position and disconnected from power source before and during any adjustments to the router or Router Raizer.

Warning: Never remove or reinstall #31 dust cover or make any depth of cut adjustments from either end of #1 mainshaft until router power switch is off, cutting tool has completely stopped rotating and tool is disconnected from power source.

Caution: Always secure plunge lock before and during routing operations.

ROUTER TECHNOLOGIES LIMITED TWO YEAR WARRANTY

Router Technologies warrants the Router Raizer to be free from defects in material and workmanship for a period of Two (2) Years from the original date of purchase to original owner. Our responsibility under this warranty is to replace, at no cost, any part which upon inspection at our facility is found to be defective in either material or workmanship. This warranty does not imply that the product is fit for a particular use or application, this warranty does not apply to parts which have been modified, altered, misused, damaged by improper storage. It also does not cover loss of parts during use, or mechanical adjustments which are covered in the instruction manual. In no event shall Router - Technologies be liable for any indirect, incidental or consequential damages from the sale or use of the product. This disclaimer applies both during and after the term of the warranty.

This warranty is your only remedy and parts are to be returned prepaid to our facility for inspection at Router Technologies, 2729 Delaware Ave, Des Moines, IA. 50317. This warranty gives you specific legal rights, and you may have other rights which may vary from state to state. Any legal actions must be brought in Polk County Iowa.

READ THIS PAGE BEFORE INSTALLATION

Page 2

FULL SIZE PARTS DIAGRAM ON BACK OF THIS PAGE (PAGE 3)

1. Remove Pages From Book

Before installation please remove the pages required for your router from this book. Failure to due so can result in referring to the wrong page. confusion and damaged parts!

2. Installation

The Router Raizer is designed to make the plunge router easy and enjoyable to adjust. It may appear to be complex and difficult to install, but the plunge router is an easy tool to disassemble and reassemble. Allow approximately 11/2 hours for installation. For technical assistance call toll free 1-866-266-1293

3. Multiple Parts (After installation you will have extra parts)

The Router Raizer is a universal kit containing many parts you will not install into your router. Each instruction page lists the parts required for installation into that router. We advise keeping and storing all the extra parts and instructions.

4. STP® for Lubricating The Plunging Action (All Plunge Routers)



For maximum performance and smoothest plunging action all plunge posts require a light film of lubrication. We only recommend using STP® MOTOR OIL TREATMENT.

Before beginning the installation please purchase a bottle of STP®. Apply a light film to the posts and inside the post bushings just before reassembling the router.

- 1. Install the Router Raizer components into the base and motor housing of the router.
- 2. Before reinstalling the motor housing onto the base, use a Q tip, brush or little finger to apply a film of STP® to the inside of both post bushings and the outside of both plunge posts.
- **NOTE:** STP® on the posts can attract dust, but the lubricating properties are not affected. periodically wiping the posts clean and reapplying STP® to the posts only will keep the router operating smoothly.

Post Bushings Apply light film on the inside surface of both post bushings.



5. Plunge Post Boots

Some plunge routers use rubber boots to seal the posts from dust and debris.

We recommend leaving these boots off when reassembling the router, and using the above lubrication and maintenance to keep the router operating smoothly.

Plunge Post Boots



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Use this pin to simplify locating the Router Raizer access hole required through the original subbase or router table.

Original Subbase or Router Table # 46 Locating Pin #1 Mainshaft Head 1. #1 Mainshaft Plunge Post fig 1

Locating Hole in Original Subbase

Using fig 1 support router upside down on bench and place locating pin into bottom of #1 mainshaft head. Secure subbase to router base gently tightening screws. Using a hammer gently tap the subbase over the pin. Remove subbase and drill hole on center punch mark using the Router Raizer template instructions.

Locating Hole in Router Table

If your router table is already drilled to mount the router, use above step using table or insert plate in place of original subbase.

If your router table or insert plate have not been drilled use the provided paper template or original subbase to first locate and drill the router mounting holes, then use #46 locating pin to drill Router Raizer access hole.

NOTE: For highest accuracy, the locating pins point should just project above the #1 mainshaft head. Shorten the pin to desired length by securing pointed end of locating pin in jaws of cord-less or electric drill. Grind but end of pin off and debur ground end. Cool pin before removing from chuck jaws!

Preparing and Drilling Router Table Top

1. Determine if the head of the #1 mainshaft protrudes above the base of your router (shown Fig 1 above)

A. If the head of the #1 mainshaft does not protrude above the base of your router, use #46 locating pin then drill a 1/2" hole throught table top or insert plate and install #30 dust cover insert as shown at bottom of page 5

B. If the head of the #1 mainshaft protrudes above the base of your router clearance is required for the head of #1 mainshaft to rotate freely. Select either method #1 or #2 (page 4 and 5) and follow instructions for selected method.

METHOD #1 (Drilling 3/4" Pocket in Back of Insert Plate requires min 3/8" thick plate)

- 1. Use the #46 locating pin to mark the back of the insert plate or table top.
- 2. Center 1/8" drill bit on locating pin center mark and drill completely through plate or top.
- 3. CAUTION 3/4" pocket must be drilled on the bottom side of plate or table top. (fig's 2 & 3) From bottom side, center 3/4" forstner bit on 1/8" pilot hole and drill pocket no deeper than 3/32"
- 4. From top side, center 1/2" drill bit on 1/8" pilot hole and drill through into 3/4" pocket.
- 5. From top side, press #30 dust cover insert into 1/2" hole until flush with top surface. If insert is loose in 1/2" hole, place a drop of super glue from bottom side around edge of the insert ring. (fig's 3 & 4)





Page 5 Preparing and Drilling Router Table Top Method #2 (A) and (B)

NOTE: All installations require a 1/2" diameter hole drilled through the top of your router table top or insert plate to accept the #30 dust cover insert shown bottom of page.

If metod #1 drilling pocket is not possible, a spacer must be placed between the router and table top providing space for #1 mainshaft rotation.

METHOD #2(A) Black Rubber spacer

Some table tops and steel insert plates do not allow cutting the pocket from the back side. An 8" X 8" black rubber spacer is provided to cut out and place between the router and the table top or insert plate.

1. Place the rubber spacer onto base of your router with the pre-punched 3/4" hole centered on the #1 mainshaft head.

2. Use a utility knife or raiser blade to cut out the center hole and router mounting holes. Note: Mounting holes can be cut square and rounding outside of spacer is optional. This method may require slightly longer mounting screws.

METHOD #2 (B) Routers Original Sub Base

Preferred method for steel insert plates or installations where the router is secured to the plate using a pre designed clamping system. This method may also be used in place of method #2 (A)

1. Use #46 locating pin, then drill 3/4" hole through original sub base and secure subbase to router with original screws.



Installing #30 Dust Cover Insert and #31 Dust Cover

 Using (fig 7) select #30 dust cover insert (1/2" dia, X 3/16" tall, turned aluminum ring) and #31 dust cover (3/8" dia. X 1/8 thick stamped steel plug) From top of insert plate, press #30 cover insert into the 1/2" Router Raizer access hole until flush.

Tip: If cover insert fits loosely, secure with drop of Super Glue® or Krazy Glue®.

- 2. Mount router to insert plate and install into table
- 3. Place #31 dust cover into #30 dust cover insert. Using (fig's 1 & 2) remove #30 dust cover with magnet on back of #29 speed wrench. With dust cover on speed wrench, insert wrench to make adjustments. To reinstall dust cover, place cover into insert and slide wrench away. *Caution: Remove dust cover with speed wrench before removing router from table or cleaning table with vacuum sweeper.*







Using Paper Drilling Template Page 6



6" Scale. If template is copied or downloaded from web site, use this scale to accurately check template size.

Troubleshooting

Problem	Cause	Solution
Router Raizer will not raise or lower the router	#19 or #20 Drive nut loose	The drive nut cannot rotate, Retighten the drive nut on router.
	Router plunge posts dry	Clean posts and lubricate with STP® MOTOR OIL TREATMENT
Router Raizer Speed Wrench turns hard	Pocket in table top or insert plate not counter sunk deep enough	Check pocket depth and deepen if necessary. #1 mainshaft head must rotate freely.
	#21 lead screw has no lubrication	Re lubricate using supplied red grease or heavy wheel bearing grease.
	Router plunge posts dry	Clean posts and lubricate with STP® MOTOR OIL TREATMENT
Router Raizer will not raise router high enough	Turret stop on router improperly set	Locate rotating turret stop on base of router and adjustable stop directly above. Adjustable stop must be retracted as high as possible. Turret stop must be rotated so shortest post is under adjustable stop.
	Reached maximum plunge depth of router	All plunge routers have a predetermined plunge stroke, the Router- Raizer will not increase this stroke. With router fully compressed- check amount of plunge post still visible. 1/16" to 1/4" post should be visible. If more than 1/16" to 1/4" of post is visible, Call 1-866-266-1293 Addition of a collet extension is required to safely run some bits.
Router becomes harder to raise and lower	Router plunge posts dry	Clean posts and lubricate with STP® MOTOR OIL TREATMENT

Page 7 Router Raizer Use Instructions

Caution: Always make sure router switch is in the off position, and tool is disconnected from power source when performing maintenance or making any adjustments to either the router or height adjustments to avoid accidental starting of tool which may result in personal injury.

Using in a Router Table

Dust Cover Insert and Dust Cover

The dust cover insert and dust cover allow easy adjustment access to the Router Raizer mainshaft and restricts dust and debris infiltration during use. A small magnet is recessed into speed wrench handle to remove and hold the dust cover during adjustments.

- **1. Removing dust cover:** Using (fig 1) place #29 speed wrench over #31 dust cover, lift speedwrench to remove dust cover. Leave dust cover on wrench while making height adjustments.
- 2. Replacing dust cover: Position speed wrench with dust cover over the insert, press cover into insert and swipe wrench away leaving the dust cover in the insert.
- 3. Always remove #31 dust cover before removing router and insert from table. Or cleaning table with vacuum sweeper
- Warning: Never remove the dust cover while the router is running. Allways wait until the bit has stopped spinning.
- **4. Rapid collar positioning:** The rapid collar is for hand held use only, for router table use position collar against retainer clips and top drive (fig 2). Secure with #24 thumb screw or optional #25 black set screw.

Using Handheld

When used hand-held the hex shaped #1 mainshaft provides a constant engagement of the Router Raizer mechanism, allowing easy height adjustments while retaining original plunge capabilities and all other original functions of the router.

1. Height adjustments can be made from either end of the router. To adjust from the base, engage #29 speed wrench into the head of #1 mainshaft. To adjust from the top, engage #29 speed wrench into the top of #26 top drive. The knurled #26 top drive also allows adjustments by hand.

The #24 thumb screw and #22 rapid collar allow positioning the cutter to height. bypassing multiple revolutions of the speed wrench

- 1. (fig 2) Illustrates compressing the plunge router with rapid collar locked in the router table position. Insert #29 speed wrench into #26 top drive, or lay router on its side and insert #29 speed wrench into bottom of #1 mainshaft. Rotating the speed wrench will thread #21 lead screw in or out of the drive nut, compressing and un compressing the router.
- **2.** (**fig 3**) Illustrates compressing the plunge router with the rapid collar. Thread #21 lead screw into the drive nut leaving approx 1/2" exposed threads, the router will be un compressed. Secure desired router bit in collet, stand router upright hand plunge to approx desired depth lock plunge lock lever. Release #24 thumb screw and drop rapid collar into contact with #21 lead screw. secure thumb screw and release plunge lock lever. Insert #29 speed wrench into #26 top drive,
- 5-266-1293 ay router on its side and insert #29 speed wrench into bottom of #1 mainshaft and adjust to required depth. Re lock plunge lock before routing. When done release thumb screw and router will quickly return to the un compressed position for easier bit removal.

Caution: #22 rapid collar is not designed to maintain cutter height during routing operations. *Always secure plunge lock before and during all routing operations.*

4. If #24 thumb screw will not provide enough pressure to secure #22 rapid collar, replace thumb screw with #25 optional black set screw and #28 allen wrench.

Direction of Rotation for Adjustment

Adjustments from #26 top drive:

Clockwise rotation Decreases depth of cut. Counterclockwise rotation Increases depth of cut.

Adjustments from #1 Mainshaft Head :

Clockwise rotation Increases depth of cut. Counterclockwise rotation Decreases depth of cut.

One complete rotation of the speedwrench, raises or lowers the bit 1/16"

Caution: Always secure plunge lock during routing operations.

Transporting or Storing Router

To prevent damage to the #1 mainshaft and #21 lead screw, adjust the lead screw leaving 1/2" threads exposed. Grasp router handles, release plunge lock, advance router up until lead screw rapid collar and retainers are all in contact, engage plunge lock.







NOTE: Check Off Each Step When Done

Tools Required: Two 11/16" wrench's, r, 1/2" twist drill, drill, hammer, hacksaw

Router Raizer Parts Required: (see page 1) #1, #3, one #6, #7, #13, #14, three #15. #16, #18, #19, #21, #22, #23, #24,

fig 1 -Height Knob Motor Housing Plunge Lock Lever Original Roll Pin Base #3 Red Drive Pin Sub-base #19 Short Drive Nut fiq 3 Small Shoulder #19 Short #18 Drive Nut **Drive Nut** Washer #18 Drive Nut Washer Height Rod Hole #16 Housing Bushing Drill to 1/2 **Final Position** Place #16 on #1. Threads up and pull into final position fiq 4 #13 Hollow Spring Guide Flange Up Installation tool only remove & store 25 #15 retainer clip install teeth up # 15 Retainer #14 Steel Washer **Original Stee** Bushing

#7 Brass Washer #1 Mainshaft #26, #27, #28, #29, #35 Silver Spring (#30, #31 & # 46 for router table installation).

Cut #1 mainshaft to 10, 7/8" overall length, debur cut end. Set aside to install later.

Hitachi M12VC

Preparing Plunge Lock

For proper Router Raizer operation, the plunge lock spring is replaced so the lock lever operates manually.

1. Using (figs 1&2) Remove plunge lock screw and lock lever. Remove brass lock bolt and original plunge lock spring. Store original spring. Place the #35 spring onto the brass lock bolt thread bolt into motor housing until tight. Replace lever pointing up, Replace & tighten screw. Check operation of plunge lock.

Seperating Motor Housing from Base

- 1. Using (fig 1) Remove motor from the moter housing.
- 2. Remove clear sub base from bottom of base.
- **3.** Plunge router completely and lock plunge lock lever. The following will remove the height knob and shaft from the motor housing.
- 4. Locate original roll pin in the base of router.
- 5. Using (fig 1) select #3 red drive pin, place drive pin on original roll pin and using hammer drive roll pin out of base.
- 6. Place hand on router, unlock plunge lock lever allow router to rise quickly. This should pull the height rod from base and alow seperation of the plunge base. Note: If router does not seperate lock plunge lock, turn base over and use #3 red drive pin to tap shaft from bottom of router.
- 7. Remove plunge springs, from base and set aside, instructions are provided to re install.
- 8. Select one #6 yellow roll pin, drive yellow roll pin into original roll pin hole securing post.

Preparing Motor Housing

1. Using (fig 3) enlarge height rod hole to 1/2" using standard drill bit. Select #19 short drive nut #18 drive nut washer #40 housing bushing. Thread #16 housing bushing into #19 short nut to clean threads, then un thread. Use #1 mainshaft to install #16 bushing, drop #16 housing bushing onto main shaft treads up. Feed mainshaft from bottom through adjust rod hole just enlarged and pull into position. Drop the #18 washer, then #19 drive nut onto the mainshaft, Thread #19 onto #40 housing bushing. Tighten #19 onto #40 using 11/16 wrench. Tip: If nut will not tighten insert flat blade screwdriver into housing to wedge bushing while tightening the nut.

Installig #1 Mainshaft in Base

- 5. Select #1 mainshaft, #7 brass washer, #13 hollow spring guide #14 steel 3/16" washer, one #15 retainer.
- Check #1 mainshaft is cut to 10 7/8" overall length, and the cut end is debured. Using (fig 4) Grease both sides of #7 brass washer with included red grease. Slide #7 down #1 mainshaft. slide #1 mainshaft through original steel bushing bottom of base, place base upright. Drop (#14) 3/16" washer down #1 mainshaft. Set #15 retainer clip teeth up on top of #1 mainshaft. Use #13 hollow sprige guide flange up to start and push #15 retainer down mainshaft, when brass guide is even with top of post place a screwdriver or #29 speed wrench on flange of brass guide and push into post until tight.

Return #13 hollow spring guide to box. Check end play of #1 mainshaft, re-tighten if necessary.

Reassembling Router (*Plunge Springs*)

For smoother plunge action with Router Raizer installed the springs are installed opposite of factory installation.

- 1. Stand base upright, using (fig 5) remove black plastic spring guide from longer spring place this spring down the #1 mainshaft. Place the black plastic spring guide removed from long spring into the hollow plastic guide in remaining spring. Place this spring in the empty post.
- 2. Unlock plunge lock on motor housing. Grasp router handles and guide springs into motor housing. Slowly lower the motor housing. Aligning #1 mainshaft through #19 short drive nut. Plunge the router and engage plunge lock. See other side to finish installation

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Page 24 Hitachi M12VC 11 AMP MOTOR & BASE KIT

- Select #13 Hollow spring guide (Two #15 retainers) #21 lead screw, #22 rapid collar, #23 O-ring, #24 thumb screw, #26 top drive, #27 yellow set screw, #28 allen wrench, red grease. Using (fig 7) place grease on threads of #21 lead screw, Place lead screw down #1 mainshaft and thread into #19 short drive nut leaving one inch of lead screw threads exposed.
 Alignment of #1mainshaft and #21 screw hex is required (fig 6). Tip: # 29 speed wrench can be used to speed threading.
- 4. Press #23 O-ring onto #24 thumb screw shaft. Thread thumb screw into #22 rapid collar. Place rapid collar onto #1 mainshaft 1/2" from top of mainshaft to top of rapid collar and tighten. Release plunge lock and slowly raise the router until lead screw contacts the rapid collar. If the collar moves, reset to 1/2". Place one #15 retainer teeth up on top of #1 mainshaft, using #13 hollow spring guide as installation tool push, retainer into contact with collar, repeat with second #15 retainer and drive flush with first retainer. Return #13 spring guide to box. Place #26 top drive onto #1 mainshaft until it contacts retainer clip, Thread #27 yellow set screw into #26 top drive using #28 allen wrench and tighten.
- 5. With plunge lock disengaged, make sure plunging action operates smoothly.

Sub-base Plate or Router Table Insert Plate Installation

- fig 6 Top veiw of #21 lead screw and #1 mainshaft through center.
- 1. Use #46 locating pin to locate the Router Raizer access hole on the original subbase or router table. For detailed instructions see page 4. Drill original subbase hole to 3/4" (fig 9). For router table installation see 3/4" pocket or 8" X 8" black rubber spacer pages 4,5,6.
- **2.** See pages 4,5,6, for further instruction, #30 dust cover insert and #31 dust cover, are table insert only. Drill a 1/2" hole through insert plate at the Router Raizer access point and press #30 in from top until flush. # 31 sets in #30 and is removed during adjustments with magnet on back edge of # 29 speed handle. These components keep dust from entering the Router Raizer hex drive.



NOTE: This router requires a 3/4" pocket or use of 8" X 8" black rubber spacer for router table installation. Pages 4,5,6.

Additional Templates Available on Website



Note: Cross lines for locating and drilling holes are accurate. The illustration of subbase may vary slightly in size and design, but is accurate enough for cutting the rubber spacer if required.