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## FMT PRO CHAPTER 2

# Mounting the Router

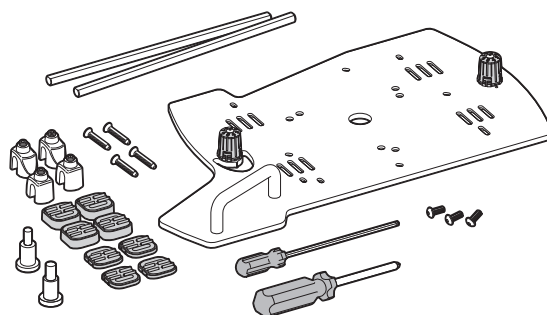
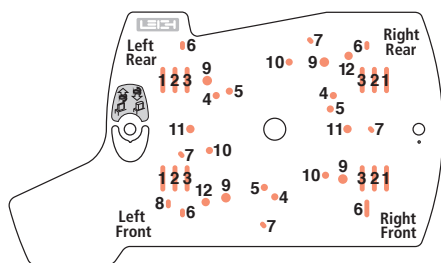
### Fence Rod Mounting Screw Mounting

**Foreword** The threaded sub-base mounting holes on many routers are not strong enough for the stresses produced when routing joints with the FMT Pro, so Leigh developed the Universal Fence Rod Mounting System. The Leigh FMT Pro sub-base provides great attachment strength and lateral anchoring. Depending on your router model, fitting the sub-base to your router may take up to an hour...**the first time only**. Once fitted, the router can be removed and reattached in about a minute. Mounting the Sub-Base correctly is critical to the accuracy of the jig, so take your time and get it right the first time. Here's how...

### Fence Rod Mounting

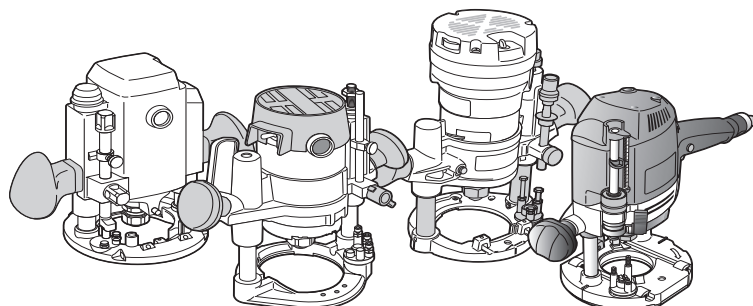


**⚠ The FMT Pro must only be used with a plunge router. Never, ever use a fixed base router!**



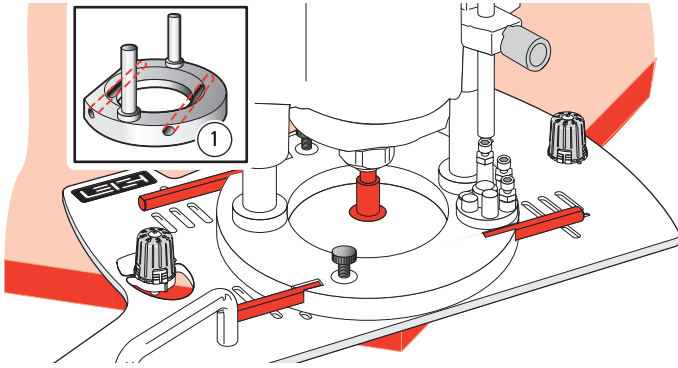
**2-1 The Leigh FMT Pro Sub-Base** Place your router, the FMT Pro Sub-Base and all the mounting parts on a clear bench. From the Sub-Base diagram and chart on this page, find the make and model of your router.

ROUTER MAKE	HOLES				NOTES
	LR	RR	LF	RF	
AEG OF5 50					2
BOSCH 1450, 1611EVS,1613EVS,1617EVS					2
BOSCH 1619EVS	1		*1	1	*File notch in U-Post if req'd to avoid Turret
BOSCH MRP23EVS					1
CRAFTSMAN					2
DEWALT 616/618					3
DEWALT 621	1	3	1	3	
DEWALT 625					2
ELU 97	1	3	1	3	Requires 1/16" packing shim. See 2-9
ELU MOF 131					2
ELU MOF 177/02					2
ELU 3304					3
ELU 3338					2
FESTOOL 900E, 1010					7
FESTOOL OF1400					11
FESTOOL OF2000					2
FESTOOL OF2200					12
FLEX OFT2926VV					5
FREUD FT2000E					2
HITACHI M12V					2
HITACHI M12VC					4
HITACHI TR12	2	**8		2	**To avoid Turret
MAKITA 3600B					1
MAKITA 3612BR				**6	**To avoid Turret
MAKITA 3612C					3
MAKITA RP 0910					4
MAKITA RP 1100 Series					4
MAKITA RP2301FC					2
METABO OFE728					3
METABO OFE1028					3
METABO OFE1229					3
MILWAUKEE 5616					4
RIDGID					10
RYOBI R-150					3
RYOBI RE180PL					2
RYOBI R-500					2
RYOBI R-E600					2
PORTER CABLE 693					4
PORTER CABLE 890					10
PORTER CABLE 893 Type I					10
PORTER CABLE 893 Type II					4
PORTER CABLE 893 Type III					4
PORTER CABLE 7529, 8529					5
PORTER CABLE 7539					*6
TRITON, TRC001 3 1/4hp					9
TRITON, MOF 001 2 1/4hp					9

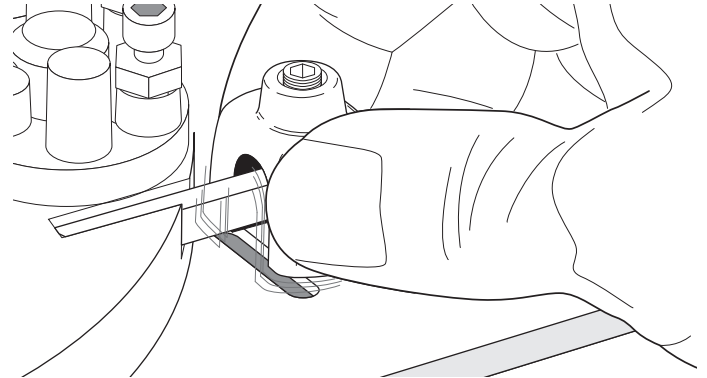


**2-2** Mark the appropriate mounting holes on the Sub-Base. Use a non permanent medium e.g. chalk, sticky tape (ink will permanently stain the anodized surface).

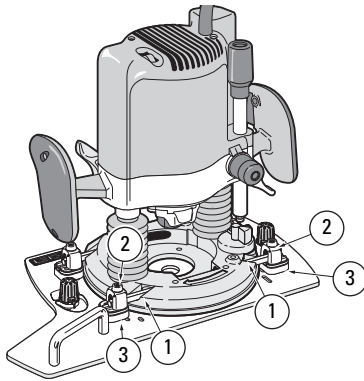
**Note:** If the chart at left indicates your router is a "Screw mount" (routers in shaded rows) go directly to 2-30. If your router is not listed here, proceed to 2-3. For the most up-to-date list of routers, go to [www.leightools.com](http://www.leightools.com)



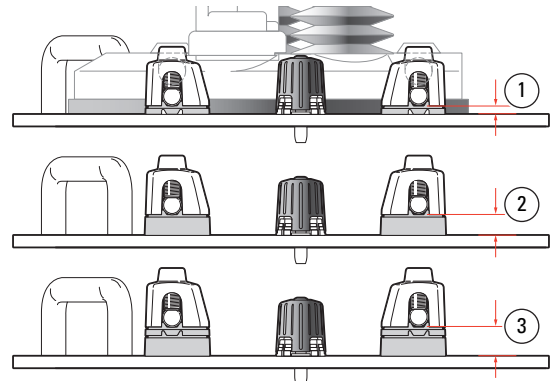
**2-3** If you have a plunge router that is not listed in the Sub-Base list, it is essential that your router have two parallel fence rod holes through the router base. These must be at least  $\frac{5}{16}$ " [8mm] in diameter ①. Fit the correct shank sized centering mandrel to your router, place it on the Sub-Base and plunge the mandrel into the base hole. Place the fence rods through the rod holes with an equal amount protruding at each end.



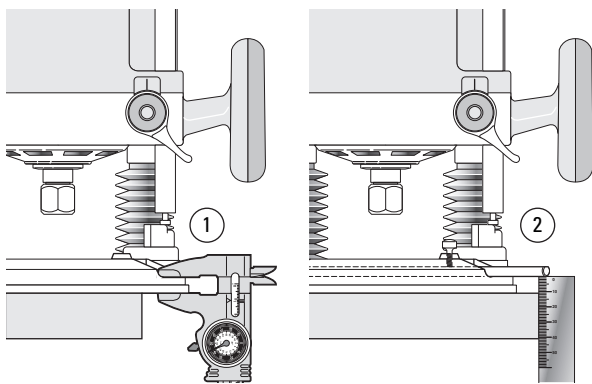
**2-4** Take the four U-Posts and by trial, establish which four Sub-Base slots or holes will serve to attach the U-Posts. Mark these with chalk or sticky tape and follow instructions 2-5 through 2-29.



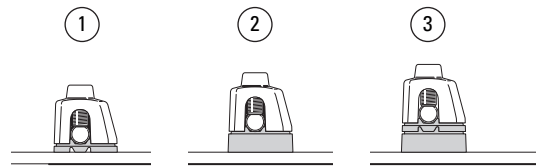
**2-5** Most plunge routers will be mounted to the Sub-Base like this, with rods through the fence rod holes ① and clamped down with the U-Posts ②, but it is essential that the correct shim spacers ③ are selected.



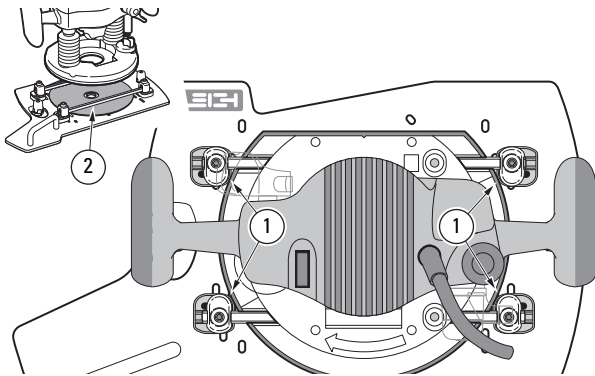
**2-6** Depending on the make and model of your router, the height between the underside of your router and the bottom of the rod hole ① will vary. This dimension will determine if you need to use low ① or high ② shim spacers, or possibly both together ③.



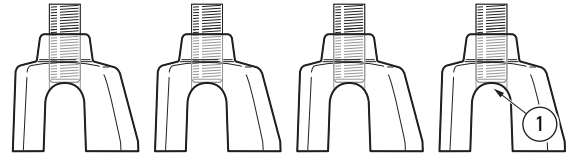
**2-7** To measure the "rod height", place the router on a bench. Either use a calliper ①, or insert a rod (flat side up) and use a good rule to measure between the bench top and the bottom of the rod ②.



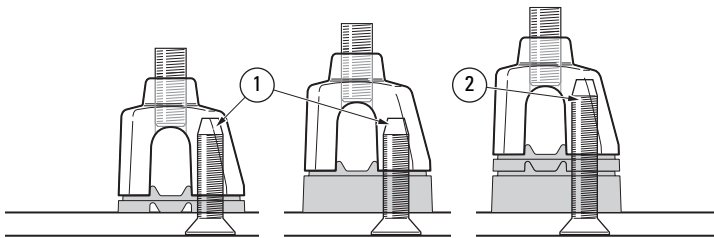
**2-8** If rod height is between  $\frac{3}{16}$ " [4,5mm] and  $\frac{3}{8}$ " [9,5mm], use low shim spacers ①. If rod height is between  $\frac{3}{8}$ " [9,5mm] and  $\frac{17}{32}$ " [13,5mm], use high shim spacers ②. If rod height is between  $\frac{17}{32}$ " [13,5mm] and  $\frac{3}{4}$ " [19,5mm], use both shim spacers ③, with the high one on the bottom. Note: If the rod height is less than  $\frac{3}{16}$ " [4,5mm], see 2-9.



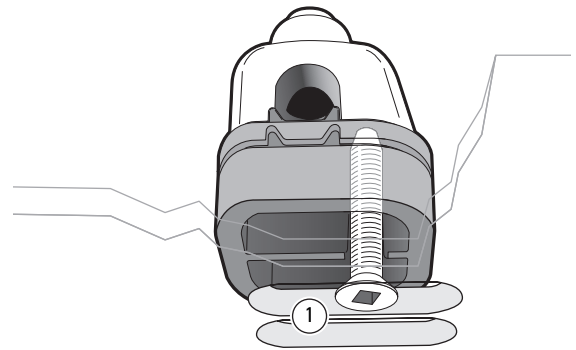
**2-9** Note: Use of the shim stops is essential, not only to provide the correct rod height but to also act as side-to-side stops for the router ①. If the rod height of your router is less than  $\frac{3}{16}$ " [4,5mm] you must provide a shop-made packing shim between the router and Sub-Base. We suggest one or more sheets of sandpaper ②, rough side up. Don't forget the center hole.



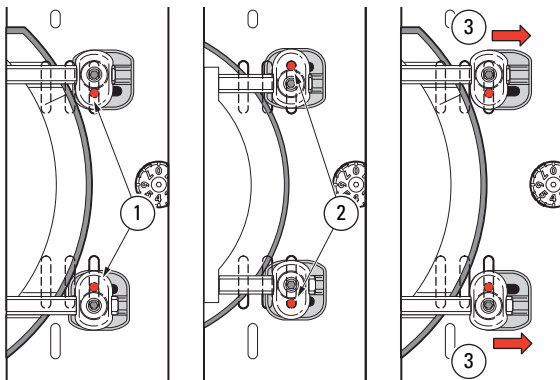
**2-10** Adjust the four U-Post set-screws with the set-screw end flush inside the arch of the posts ①.



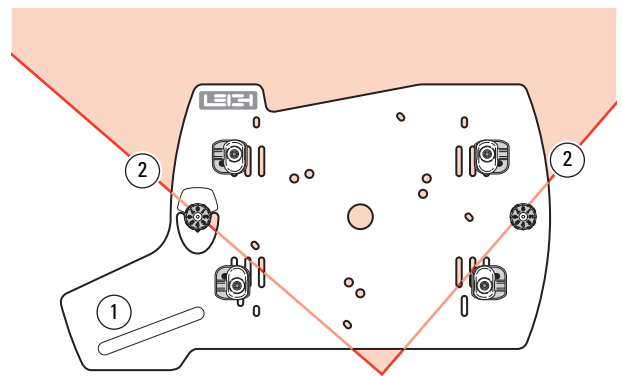
**2-11** There are two lengths of U-Post screws;  $\frac{3}{4}$ " [19mm] and 1" [25mm]. The  $\frac{3}{4}$ " [19mm] are factory fitted as a quality control measure. Use these for either the low or high shim spacers ①. Change them for the 1" [25mm] screws if both shim spacers are used ②.



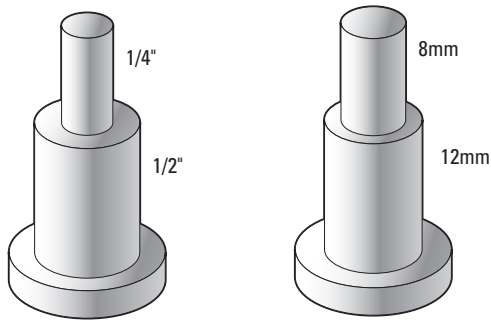
**2-12** Using the four selected screws, lightly attach the four U-Posts and correct shim-stop combination through the previously marked slots or holes in the Sub-Base. The screws must enter from below ①. **Only very lightly tighten; you will need to move the U-Posts and the shim-stops during setup.**



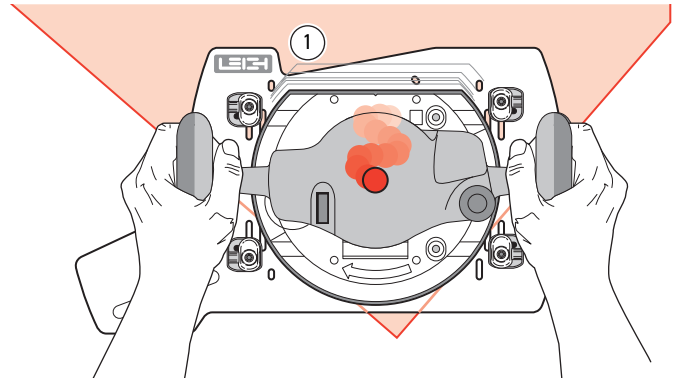
**2-13** In most cases, position the U-Post screw leg to the inside of the rod ① or depending on the size and shape of the router base, to the outside ②. Slide the shim-stops away from the router position ③. These will be repositioned against the router later.



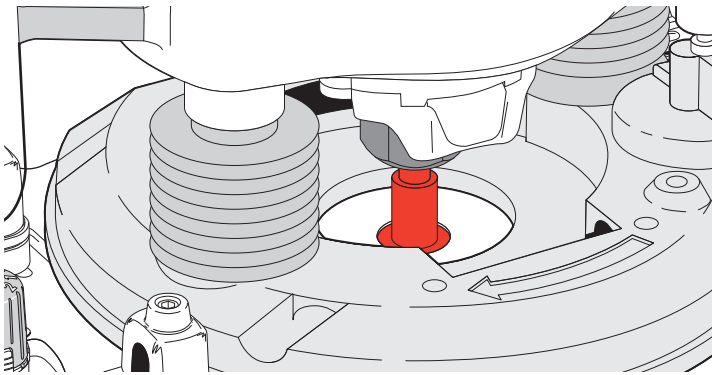
**2-14** Place the Sub-Base flat down on the corner of a smooth bench, **the handle to your near left** ① and the guide pins touching the adjacent edges of the bench ②.



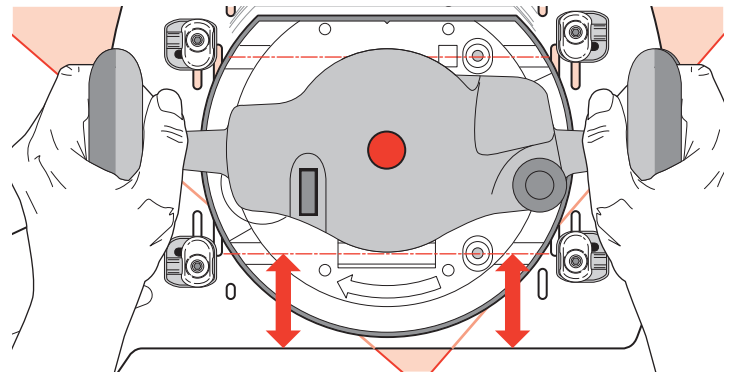
**2-15** Unplug the router. Note the collet size of the router. Choose the matching size centering mandrel and fit it into the router collet.



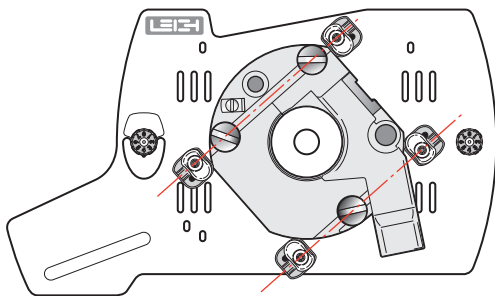
**2-16** Holding the router as you would in normal use, place it base down onto the Sub-Base; the rear of the router toward the rear of the Sub-Base and large notch ①. Plunge and move the router so that the large diameter of the centering mandrel fits through the Sub-Base center hole...



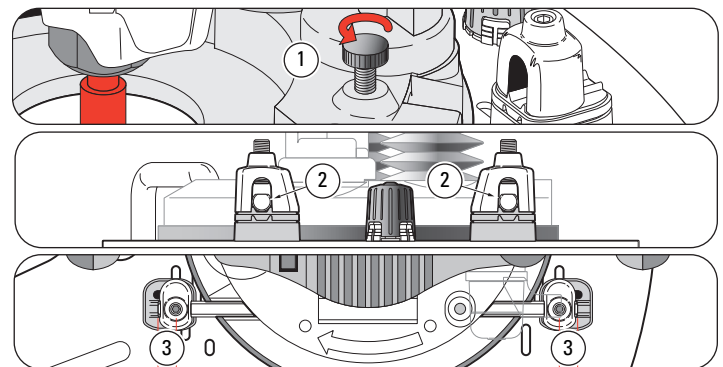
**2-17** ...and touches flush to the bench. Lock the plunge. **⚠** Concentricity of bit to Sub-Base bit hole is essential to FMT Pro accuracy, so never mount the router without using the centering mandrel.



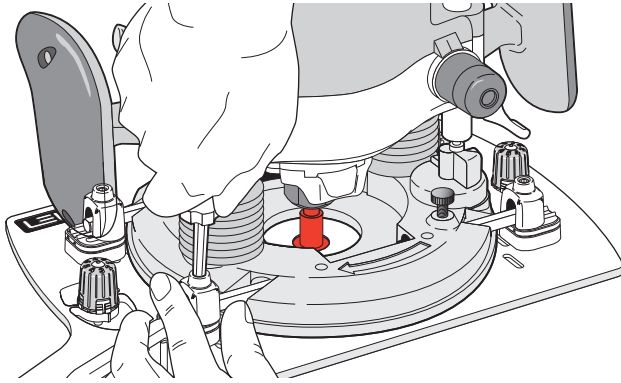
**2-18** Align the router so that the fence rod holes are parallel to the front edge of the Sub-Base (except Festool 900 and 1000 Series, see 2-19).



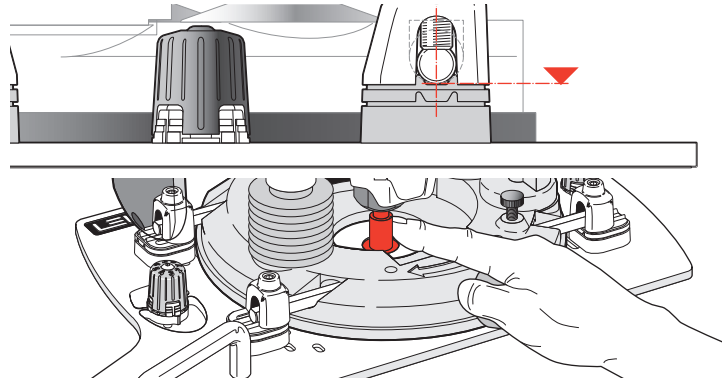
**2-19** Festool 900 and 1000 Series: Align the fence rod holes to the previously positioned U-Posts.



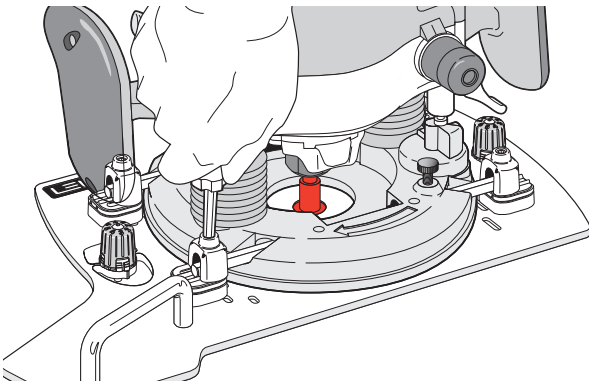
**2-20** Loosen and raise any router fence rod knobs ①. Move the U-Posts and adjust as necessary to slide the two hold-down rods through the U-Posts and router fence rod holes, **flat side of rods on top** ②. Leave an equal amount of rod projecting through each U-Post ③. **⚠** Never use the router's fence rod knobs ① to "help" secure the router. This places uneven pressure and could damage the router base.



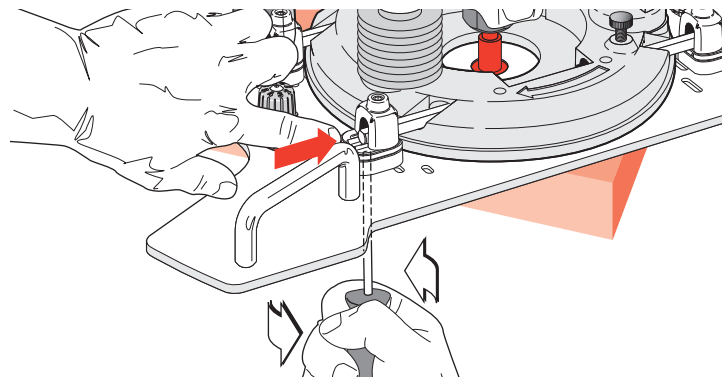
**2-21** Using the hex screwdriver, turn down the four U-Post set-screws **until there is only very slight and even pressure** on each end of both rods. Leave the shim stops in the outer position.



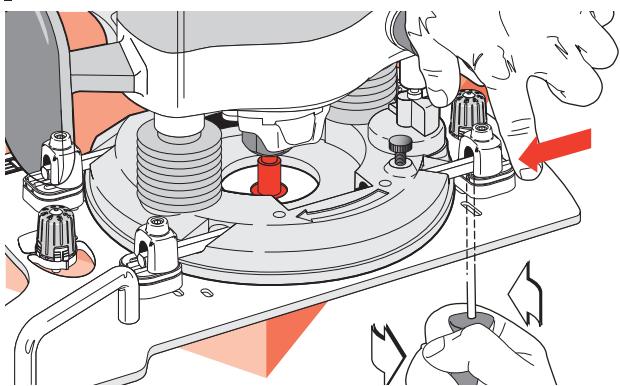
**2-22** Check that the rods are still centered in the rod holes ① and check that the router collet can rotate without excessive binding in the Sub-Base hole. Mandrel touching side of hole is OK; mandrel binding tight is not! Move the router if required to allow mandrel to rotate.



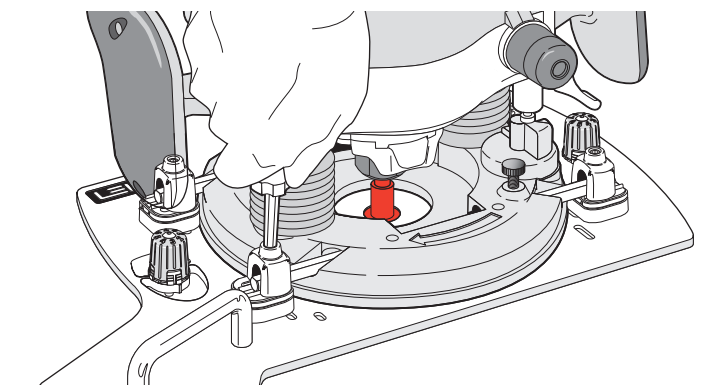
**2-23** Tighten the top U-Post set-screws a little more securely to hold the bars and router.



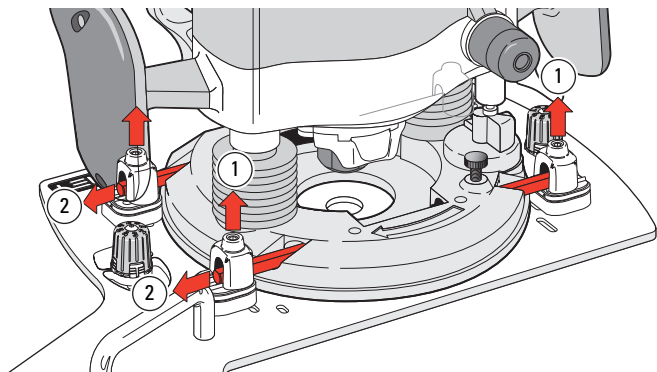
**2-24** Slide the router/Sub-Base assembly on the corner of the bench so that one U-Post bottom screw is overhanging the edge. Loosen this screw just slightly (if necessary) to take any pressure off the shim spacer above. Push the Shim spacer in to touch the router base and, holding it in position against the router base, firmly tighten this bottom screw.



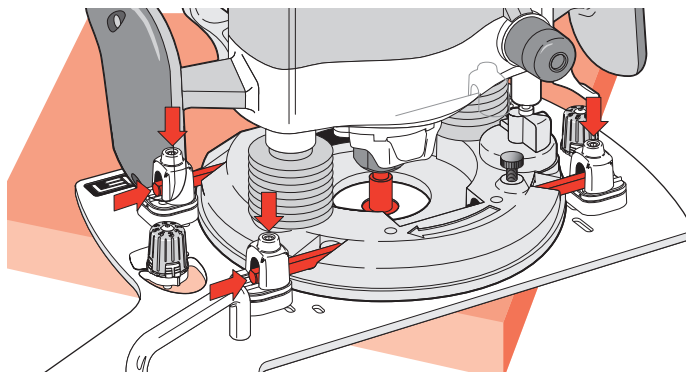
**2-25** Repeat this procedure at the other end of the same rod to position the shim stop against the router base. Re-check the collet/mandrel for relatively free rotation. Turn the router around on the corner of the bench and repeat this procedure on the two U-Post assemblies on the second rod.



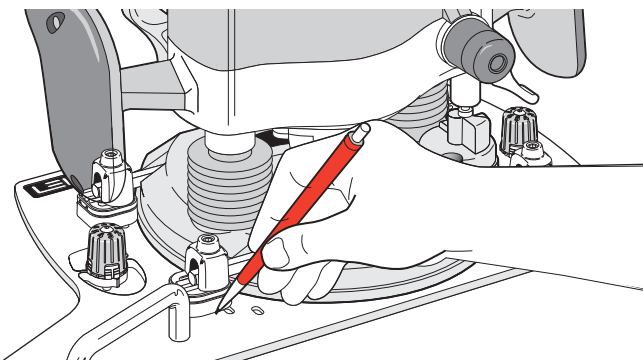
**2-26** Tighten the four U-Post set-screws to the rods. The hex driver has high leverage so use common sense when tightening. The rods will bow slightly. Objective: have the collet concentric to the bit hole; the four shim stops providing secure side thrust security, and the U-Posts clamping the rods which hold the router against the Leigh Sub-Base. Router /Sub-Base are now a unit. Release the plunge; remove and store the mandrel. You're set to go.



**2-27** Here's how to remove the router for use elsewhere: Loosen the four top U-Post set-screws ① Slide out the two rods ②. **Do not remove the U-Posts.** In about a minute, the router is free to be used for other tasks.

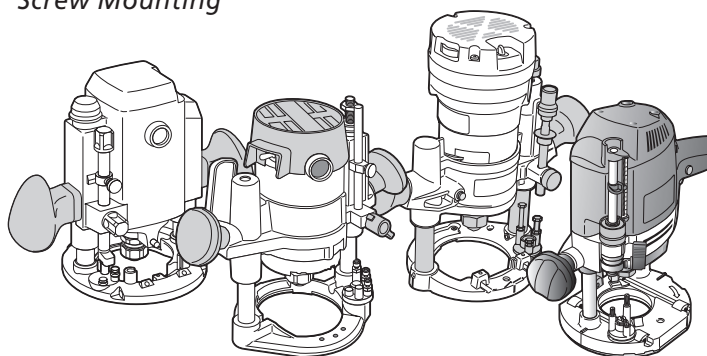


**2-28** To re-mount the router: place the Sub-Base over the corner of the bench. Make sure surfaces are clean. Place the router on the Sub-Base with the centering mandrel in the center hole. Insert the fence rods. Evenly tighten the four U-Post set-screws. Check that the mandrel rotates freely. In about two minutes the router/Sub-Base assembly is ready for making mortises and tenons.

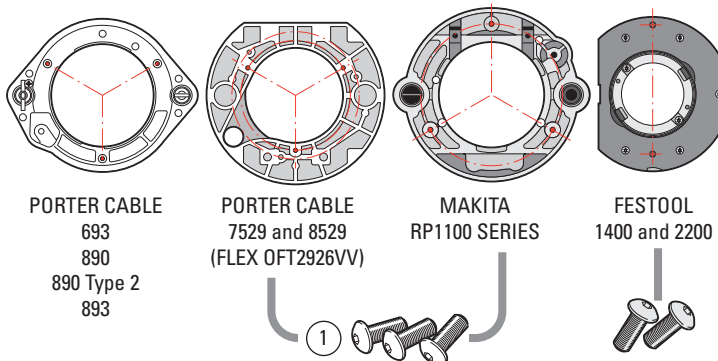


**2-29** Hint: If you plan to fit a different make/model router and later use the current one again, you can greatly speed up the re-installation of the first router by marking around the original four U-Post/shim-stop positions. ■

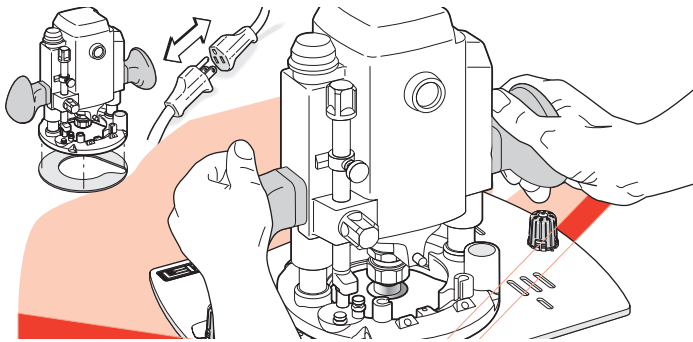
**Screw Mounting**



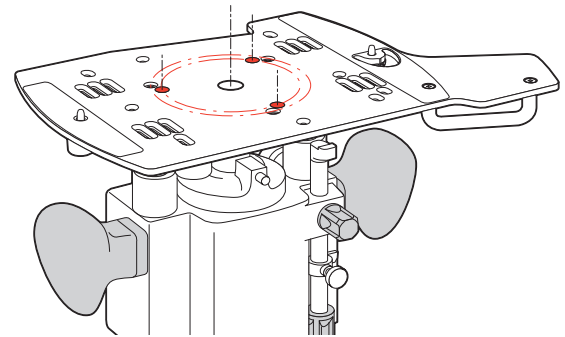
**2-30** These routers do not have suitable through fence rod holes: Porter Cable 693, 890, 890 Type 2, 893, 7529, 8529; Flex OFT 2926VV; Festool 1400, 2200; Makita RP0910, Makita RP1100 series; Triton TRC001, MOF001. We've provided Sub-Base holes and screws to mount these directly to the Sub-Base. Using Porter Cable 7529 and 8529 as examples, here's how.



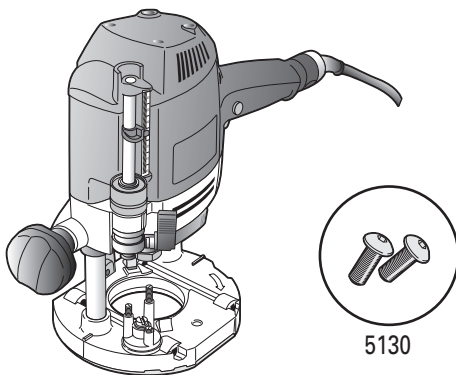
**2-31** Note: Porter Cable 7529 & 8529 (Flex OFT2926VV) have two sets of 3 threaded holes. Use the inner circle of FMT Pro Sub-Base holes. The outer circle holes align with threaded holes, but are not deep enough for the screws. For Porter Cable (Flex) 693 & Makita RP1100 series routers use the outer circle of Sub-Base holes. Firmly attach the Sub-Base using the three 6410 hex socket button head screws provided ①. Do not use the router's Sub-Base screws. See 2-32.



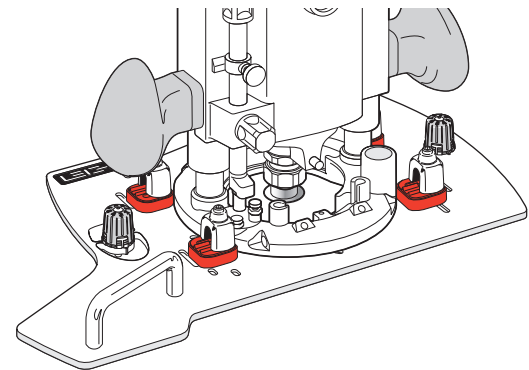
**2-32** Unplug the router. Remove the router's plastic Sub-Base (except Festool 1400) and template guidebush adaptor from 7529 or 8529. Remove the clear plastic dust cover from 8529 router base top (screw holes are used to attach Leigh FMT Pro Sub Base). Store removed parts for future use. Fit the correct shank sized centering mandrel to collet. With the Leigh Sub-Base on a flat bench corner, place router on top and plunge mandrel through to bench and **lock the plunge**.




**2-33** Remove the router and stand it upside down on the bench. Depending on the router design, you may need to support it in a soft-padded vise. Place the Sub-Base upside down onto the router's metal base with the mandrel centering the router to the base through the bit hole. Rotate the Sub-Base until the correct threaded screw holes in the router base align with the counter-bored holes in the Sub-Base.



**2-34** Festool 1400 series routers attach using the two No. 5130 screws provided, through base holes No. 11. Festool 2200 series routers attach using the two No. 5130 screws in the No. 12 holes.



**2-35**  In addition to the base screws it is vital to attach the four U-Posts and four of the shim stops (either size) and position and tighten these against the edge of the router base to prevent lateral router movement. **Note:** You do not use the fence rods. For correct positioning, see 2-16 through 2-18, 2-24 and 2-25. **Note:** Porter Cable 7529 and 8529 handles will be slightly angled (not parallel) to the FMT Pro Sub-Base. ■

