



ProTop[®]

CONTRACTOR

PRO-BUILDER™
S E R I E S

Owner's Manual

Keep this manual handy for quick reference

Stock No. 40-001

Thank you for purchasing our ProTop Contractor router table! We are certain this made in USA router table, with its many exclusive features, will become one of your favorite tools.

Bench Dog offers a full line of tools and accessories that continue Bench Dog's commitment to solve common problems and ensure safe operation of a variety of woodworking and other tools.

If you have questions, please feel free to contact us at any time. Your comments are always welcome.



QUESTIONS?

1-800-786-8902

Be sure to check out our web site for all the latest and greatest accessories and tools.

www.benchdog.com

Tools Required

1/8" hex wrench (supplied)
5/32" hex wrench (supplied)
3/16" hex wrench (supplied)
7/16" wrench
7/16" socket wrench
Phillips screwdriver



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Read and understand the entire contents of this manual before attempting assembly or operation of this tool! Inspect contents for shipping damage and shortages. Report problems directly to Bench Dog, Inc.

General Conditions / Limited Two Year Warranty

LIMITED TWO-YEAR WARRANTY

We make every effort to assure that our products meet quality and durability standards, and warrant to the original retail purchaser that this product is free from defects in materials and workmanship for two years. Remedy shall be limited to Bench Dog's choice of repair, replacement or refund. This warranty does not provide remedy for consequential economic loss.

This is a limited two year warranty. It requires the purchaser to contact Bench Dog in writing within 30 days of discovering the defect. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations, or due to lack of maintenance. It excludes components and parts not manufactured by Bench Dog, defects caused by failure to provide a suitable installation environment, and damage caused by use for purposes other than those for which the product was designed. Bench Dog, Inc. reserves the right to make product changes without notice and without obligation to make these changes on products previously sold. It excludes warranties of fitness for a particular purpose.

If the product is defective, we reserve the right to fix it, replace it, or refund the cost of the product to you. Typically, this results in a refund. All claims are limited to the two-year claims period. We must receive the product before a credit or refund will be issued. The warranty language on the product or in the product's manual may contain additional limitations, which govern.

If you wish to return something, call the dealer where you purchased the product. If you wish to return something purchased from Bench Dog directly, call 1-800-786-8902 to receive an RMA number. Upon receipt and inspection of the goods, a credit or replacement will be issued for defective products. Return of nondefective items to Bench Dog are subject to a 7% restocking charge. This is necessary due to the cost of checking, repackaging, and inventorying the stock.

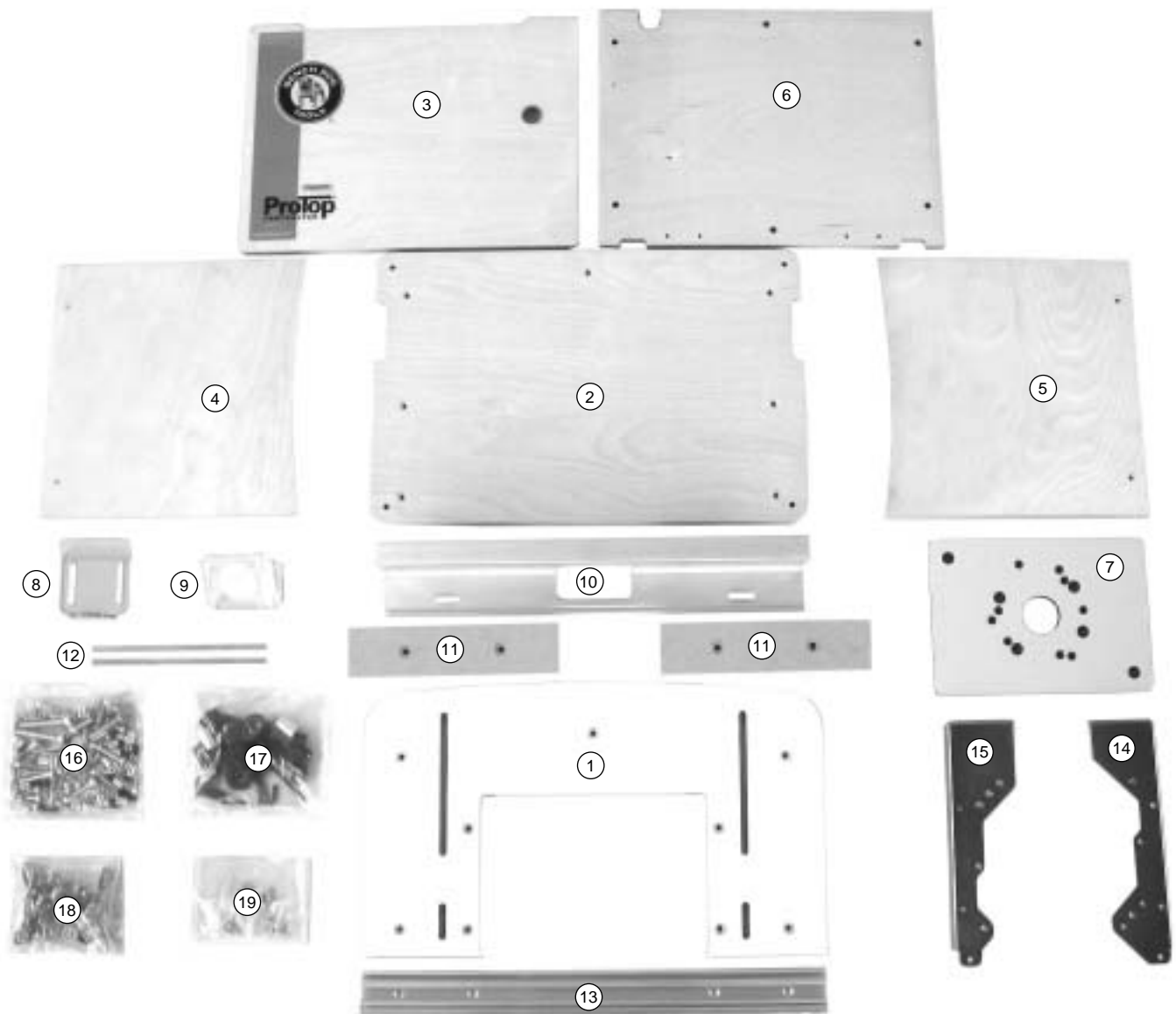
BENCH DOG DISCLAIMS AND BUYER EXPRESSLY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, IMPLIED CONDITIONS OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR ANY OTHER MATTER.

Important Safety Points

Before operating your router table please read this manual thoroughly. **Safety and use tips are contained in the manual. This page is not the sole source of safety information.** Retain the manual for future reference. Refer to your router owner's manual for safety instructions regarding use of that tool. This manual is not an instruction book on how to do woodworking with a power tool. We encourage all woodworkers to continually seek improvement in their woodworking skills, regardless of their craftsmanship or years of experience. The router table, fence and accessories must only be used for their intended purpose: woodworking via normal routing operations. "Normal operations" means basic shaping of wood in conditions where grounded electricity, sharp tools, dust, and rapidly spinning parts can be used or encountered safely. The following instructions elaborate on this concept.

1. Do not use your router table as a step or seat.
2. The top and cabinet must be properly secured, and be level before use. Inspect your table and base for damage and levelness prior to each use.
3. Keep work area clean, dry and well lit.
4. The hardware affixing the insert to the routertop must be installed for safe use. Tighten insert hold-down screws before each use.
5. Safe operation requires a router table fence, bit guard, dust collection system, starting pin or fulcrum, and speed reducer for large diameter bits. We recommend reducing router speed for 1" or larger diameter bits. Consult your bit manufacturer for the exact speed.
6. Use the right tool for the job. Do not force a tool or attachment to do a job for which it was not designed.
7. Secure your work with a featherboard, clamps, or a vice when appropriate. The use of inappropriate accessories may cause injury.
8. Wear safety glasses, dust mask, face shield and ear protection. This is not an exhaustive list. Every-day eye glasses do not substitute for safety glasses.
9. Do not wear gloves or jewelry while using a power tool and ProTop Contractor.
10. Maintain your equipment and its accessories in good working condition. Look for wear, poor alignment of moving parts, binding of moving parts, breakage, poor mounting, or other conditions that may affect operation and safety. Repair or replace any damaged parts.
11. Disconnect the power before moving, adjusting, or repairing parts, or otherwise maintaining your router table and any accessories you may be using.
12. Keep children, pets, and those who may disregard safety away from work area, cords, sockets and tools.
13. Wear snug fitting clothes and keep long hair back to avoid catching in moving parts.
14. Do not overreach. Maintain balanced footing and stance.
15. Stay alert. Use common sense.

Contents of Box



Cabinet Panels

Item	Quantity	Part Number	Description
1	1	FP0100-01	Router top
2	1	FP0100-02	Base panel
3	1	FP0100-03	Door
4	1	FP0100-04	Side panel, left
5	1	FP0100-05	Side panel, right
6	1	FP0100-06	Back panel
7	1	FP0133	Router insert plate (Stock No. 40-042)
8	2	DECALS	Decals, side panel (not shown)

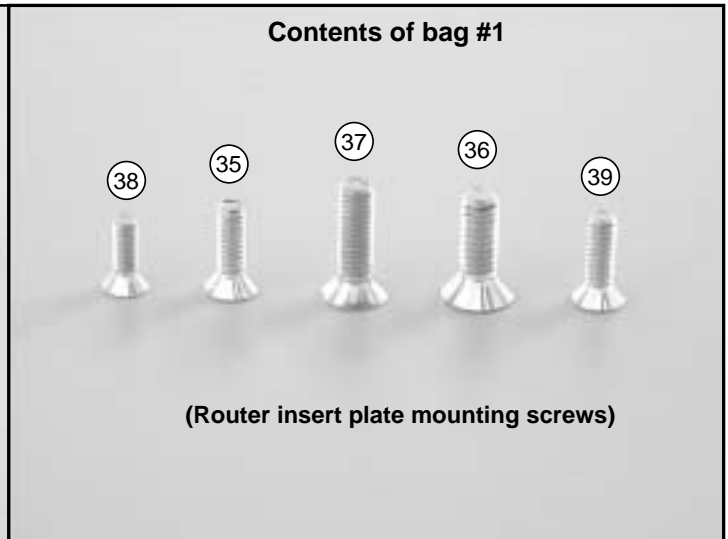
Fence Hardware/Accessories

Item	Quantity	Part Number	Description
8	1	FP0054	Bit guard
9	1	FP0059	Dust port
10	1	R0001	Aluminum fence
11	2	FP0053	Subfences
12	2	R0009	Jointer bars
13	1	R0049	Miter track, 24"
14	1	FP0106	Insert bracket, right
15	1	FP0105	Insert bracket, left
16	1	150-0020-01	Hardware bag # 1
17	1	150-0020-02	Hardware bag # 2
18	1	150-0001-03	Hardware bag # 3
19	1	150-0020-03	Hardware bag # 4

Contents of Box

Hardware bag #1

Item	Quantity	Part Number	Description
20	2	H0168	Bolt, 3/8-16 x 2-3/4" Carriage
21	6	H0004	Bolt, 1/4-20 x 3/4" Hex head
22	4	H0006	Bolt, 1/4-20 x 50mm (2") Round head
23	4	H0005	Bolt, 1/4-20 x 40mm (1-1/2") Round head shoulder
24	4	H0173	Cap screw, 1/4-20 x 1-1/4" Button head socket
25	18	H0017	Cross Dowel, 1/4-20
26	10	H0103	Nut, 1/4-20 Nylon insert lock
27	8	H0031	Nut, 1/4-20 Hex
28	4	H0174	T-Nut, 1/4-20
29	2	H0171	Screw, 1/4-20 x 5/8" Flat head socket cap
30	6	H0169	Screw, 1/4-20 x 1-1/4" Flat head socket cap
31	12	H0170	Screw, 1/4-20 x 1-3/4" Flat head socket cap
32	11	H0050	Screw, 1/4-28 x 1/2" Set-socket
33	8	H0172	Screw, 1/4-20 x 3/4" Socket head cap
34	2	H0045	Screw, 1/4-20 x 1" Flat head Phillips (black)
35	3	H0037	Screw, 10-24 x 5/8" Flat head Phillips
36	3	H0057	Screw, 5/16-18 x 3/4", Flat head Phillips
37	3	H0060	Screw, 6 x 20 mm, Flat head Phillips
38	3	H0163	Screw, 8-32 x 1/2", Flat head Phillips
39	3	H0198	Screw, 10-32 x 5/8", Flat head Phillips

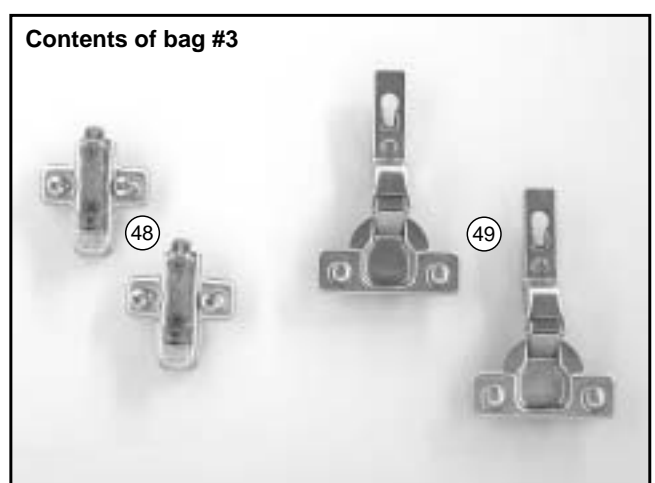


Hardware bag #2

Item	Quantity	Part Number	Description
40	2	H0014	T-Knob, 3/8-16 x 2"
41	6	H0012	T-Knob, 1/4-20 x 1-1/8"
42	2	H0067	Washer, 3/8" Nylon
43	2	R0010	Spacer, Alum. Knob
44	4	H0175	Rubber feet
45	1	H0019	Wrench, 1/8" hex
46	1	H0128	Wrench, 5/32" hex
47	1	H0129	Wrench, 3/16" hex

Hardware bag #3 (Hinges)

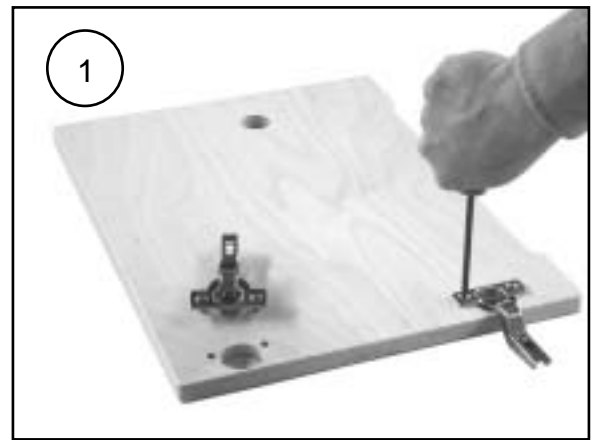
Item	Quantity	Part Number	Description
48	2	H0023	Mounting plate, hinge
49	2	H0027	Hinge, self closing Euro style



Assembly Instructions

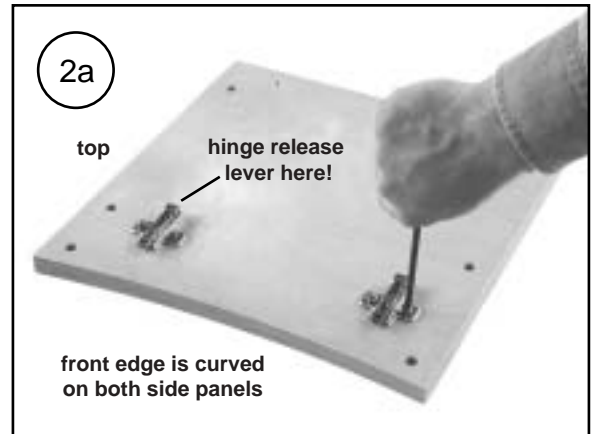
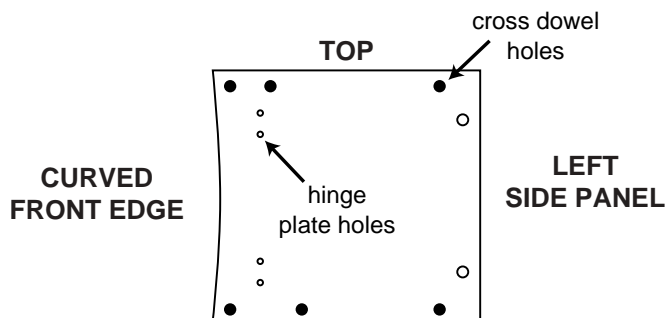
1. Attach the (2) hinges to the door.

Press the hinge "cups" into the large bore in the door. With a Phillips screwdriver tighten the integral hinge cams clockwise approximately 1/4 turn. Do not over tighten the cams.



2a. Attach the (2) hinge mounting plates to the left side panel.

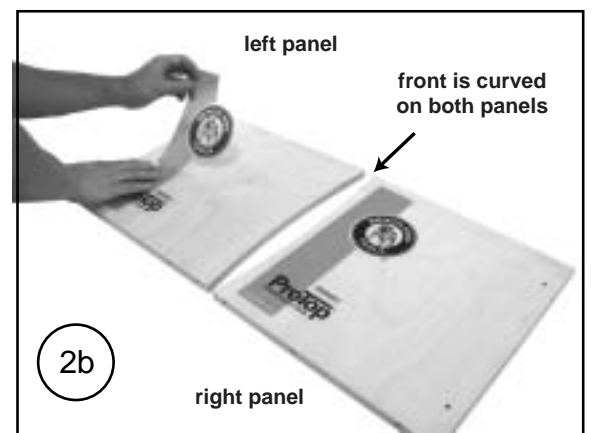
Carefully study the orientation in Fig. 2. The hinge mounting plates resemble a cross. Locate the top of the cross nearest the curved front edge of the left side panel, as shown. On the bottom of the cross you will find the hinge release lever. All cross dowel holes are located inside the cabinet.



2b. Attach the (2) decals to the side panels.

The decals go on the outside of the left and right side panels. The right side panel decal is positioned near the front curved edge, as shown. In this photo the person is installing the decal on the left side panel, about two inches from the back edge. If you find it easier, attach the decals AFTER your router table is fully assembled.

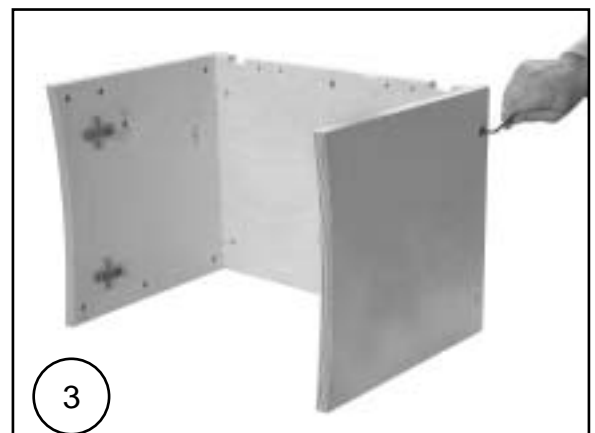
CROSS DOWEL HOLES ARE LOCATED INSIDE THE CABINET!



3. Attach side panels to the back panel.

The back panel has two notches that identify the top of the panel, as shown. The left panel has the hinges. Align the two holes in side panels with the corresponding holes in the back panel. Use 1/4-20 x 2" round head bolts and 1/4-20 cross dowels. The cross dowels go in the back panel. Tighten with the included 5/32" hex wrench. Repeat this step for the right panel. Do not fully tighten the bolts at this time.

Note: Check that the cross dowel holes are free of debris prior to inserting the cross dowels.



1/4-20 x 2"
round head bolt



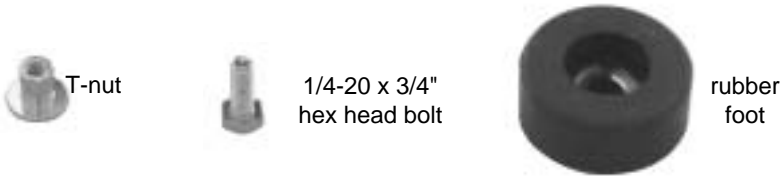
1/4-20
cross dowel

4. Attach the (4) rubber feet to base panel.

Insert the "T" nuts into the four large holes in the base panel. Locate the head of the "T" nut on the top side of the base panel. The bottom of the base panel has countersinks, the top does not. Insert a 1/4-20 x 3/4" hex head bolt through the rubber feet, and thread into "T" nut, as shown. Tighten using the 3/16" hex wrench and a 7/16" socket. Do not overtighten.

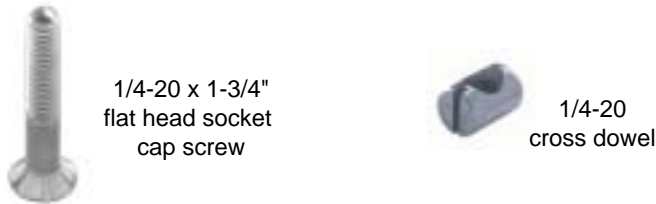


I The bottom side of the base panel has countersunk holes to accept other fasteners.



5. Attach base panel to cabinet assembly.

Flip the cabinet assembly upside down, as shown. Use the 1/4-20 x 1-3/4" flat head socket cap screws and 1/4-20 cross dowels. Tighten securely. Flip the cabinet assembly right side up when done.



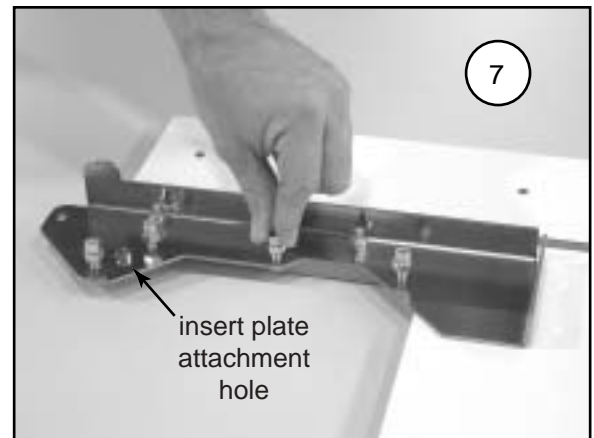
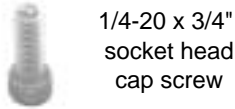
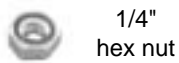
6. Attach insert brackets to routertop.

Position insert brackets as shown. Be sure to mount the brackets to the underside of the routertop. The routertop surface has countersinks, the underside does not. Do not fully tighten the bolts.



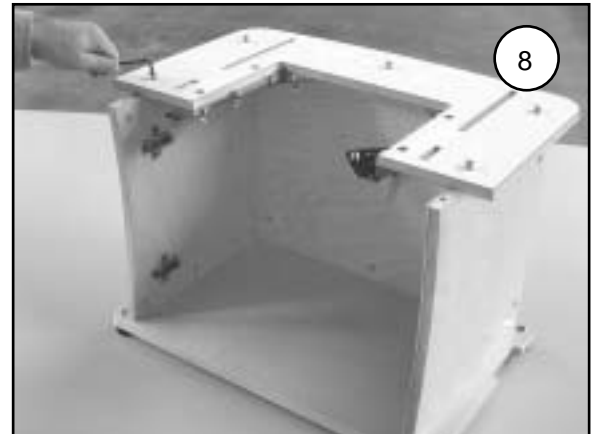
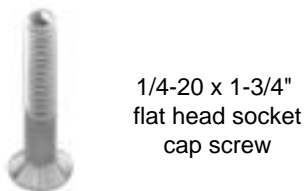
7. Install the (8) leveling screws.

Fully thread a 1/4" hex nut on each of the (8) 1/4-20 x 3/4" socket head cap screws. Install these bolt assemblies into the (8) leveling holes in the insert brackets. DO NOT use the two insert plate attachment holes. These holes have protruding round nuts on the underside of the insert brackets. You will adjust these leveling screws in step 13.



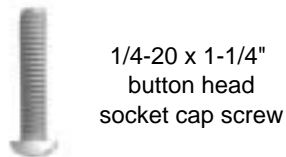
8. Attach routertop to cabinet assembly.

Attach using 1/4-20 x 1-3/4" flat head socket cap screws and 1/4-20 cross dowels. Do not fully tighten at this time.



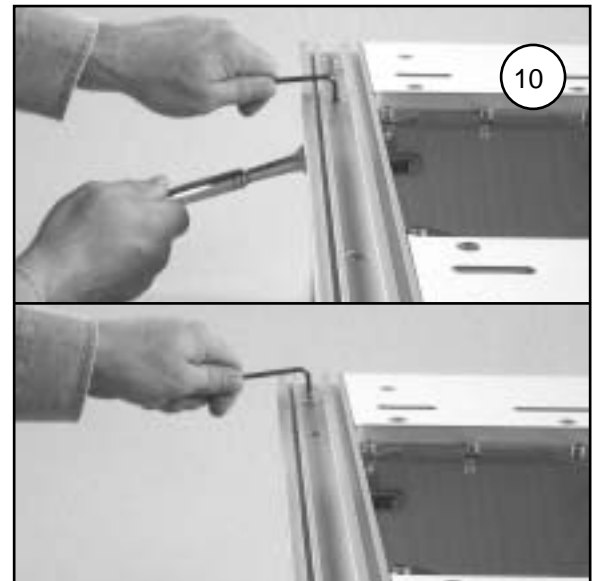
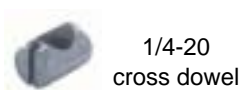
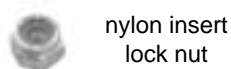
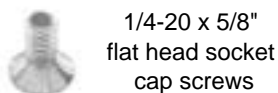
9. Connect insert brackets to the back panel.

Attach using 1/4-20 x 1-1/4" button head screws and 1/4" nylon insert lock nuts, as shown. Locate the nuts to the inside of the cabinet. Do not fully tighten at this time.



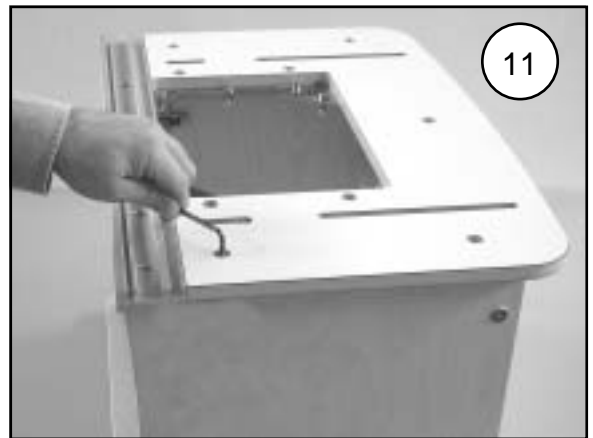
10. Attach the miter track to routertop.

Use (2) 1/4-20 x 5/8" flat head socket cap screws and 1/4" nylon insert lock nuts to fasten the miter track to the insert brackets. Use (2) 1/4-20 x 1-1/4" flat head socket cap screws and 1/4-20 cross dowels to fasten the miter track to the cabinet side panels. Eliminate any gap between the miter track and routertop before tightening the bolts.



11. Fully tighten all bolts and screws.

Correct any misalignments at this time.

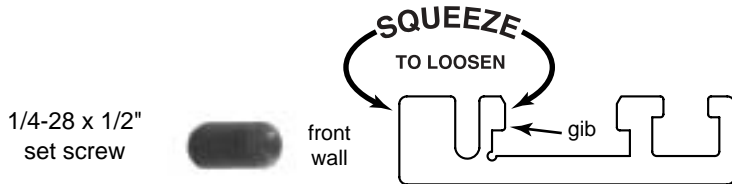


12. Adjust miter gauge track to fit your miter gauge.

First test fit your miter gauge into the track. If it's too tight, squeeze the gib against the front wall of the miter track with a pair of Channel Locks, use a shop towel to prevent marring. Next, install the (11) 1/4-28 x 1/2" set screws. Tightening the screws will deflect the gib into your miter gauge. Tighten all screws uniformly and gradually until the desired fit is achieved.



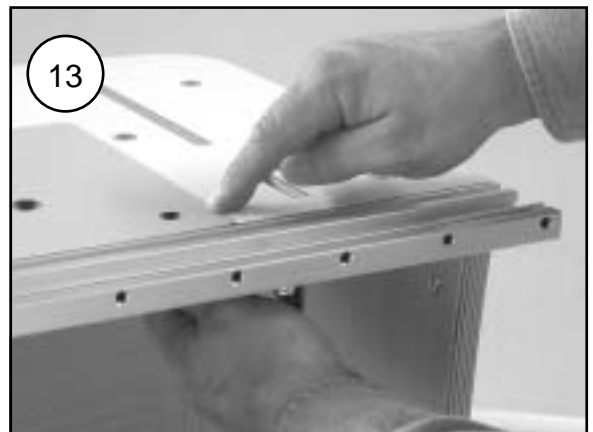
***Miter Gauge NOT INCLUDED!**



I This miter track **ONLY** fits standard 3/8" x 3/4" miter gauge bars. Wax the slot and bar to reduce wear.

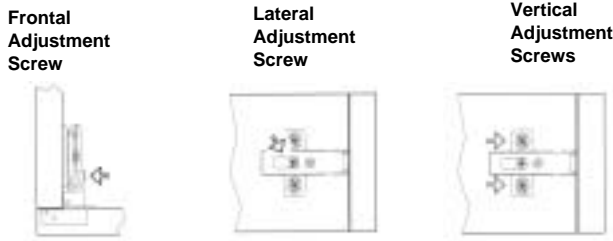
13. Adjust leveling screws until insert plate is flush.

Install the insert plate into the routertop. Adjust leveling screws until the plate is flush with routertop. To tighten, hold the socket head cap screw with the 3/16" hex wrench, and use your 7/16" open end wrench to tighten the nuts, as shown. Note: it may be necessary to fine tune the adjustment after installing router.

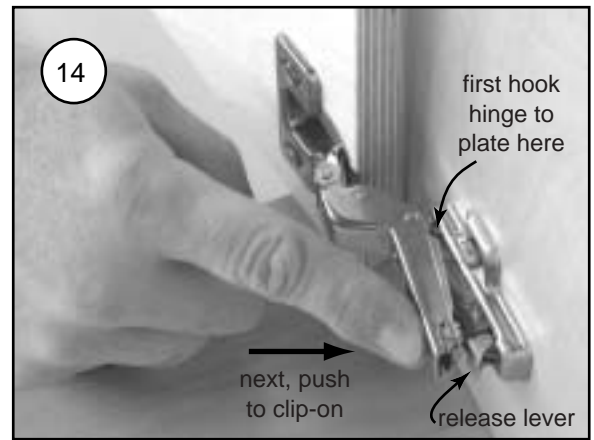


14. Attach door.

Clip on door by "hooking" front of hinge onto hinge mounting plate first. Then push on back edge of hinge until it locks into place. If door does not clip on, check hinge mounting plates for proper installation. To remove door, push down on release levers.

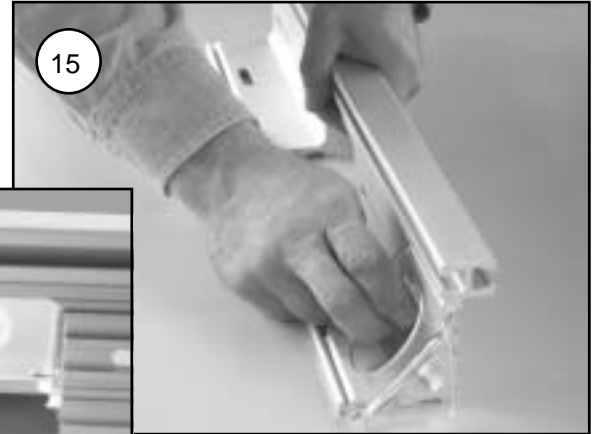


Don't force the hinges onto the mounting plates!



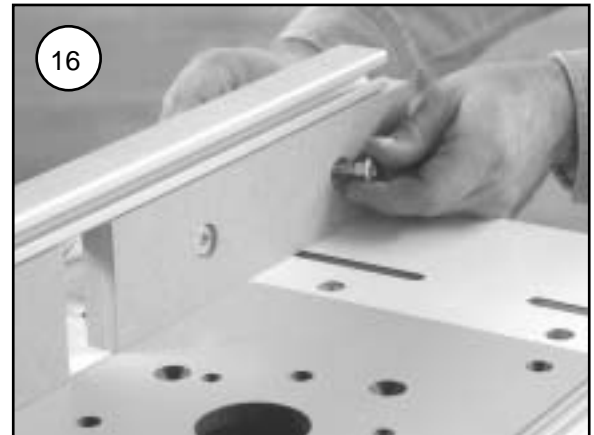
15. Install dust port.

Pull the dust port along the two 45° grooves in the back of the fence until it snaps into place (at the center of the open area). The dust port fits tightly.



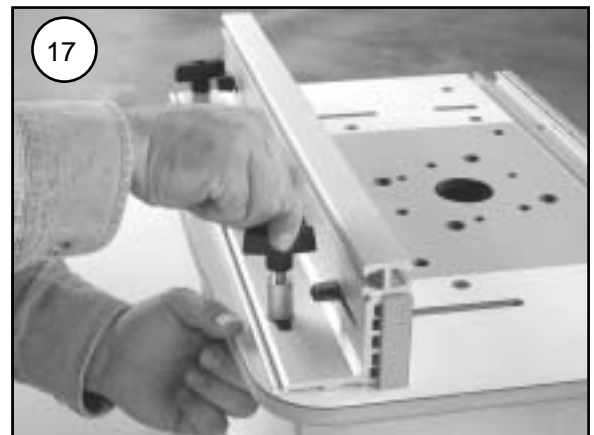
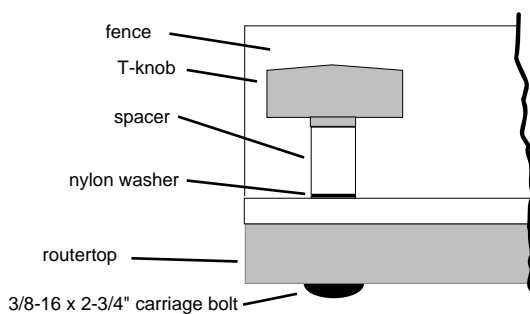
16. Install the (2) MDF subfences onto the fence.

Insert (4) 1/4-20 x 40mm shoulder bolts into the counter-bored recess on the subfences. Light pressure may be required to seat bolts properly. The bolts are designed to fit snugly to prevent spinning. Note: the subfences have no specific left/right or up/down orientation.



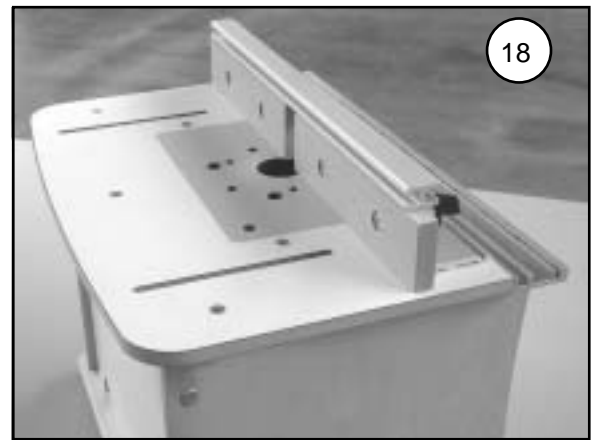
17. Attach fence to routertop (standard mounting).

Use the (2) 3/8-16 x 3" carriage bolts, (2) aluminum knob spacers, (2) 3/8" nylon washers and (2) 3/8" (large) T-knobs. For standard mounting, position fence to "rear" of the routertop, as shown. The bolts enter from under the routertop.



18. Attaching fence to routertop (reverse mounting).

For more workpiece support, the fence can be reversed and positioned on the "front" of router table, as shown. Install the bolts from inside the cabinet.



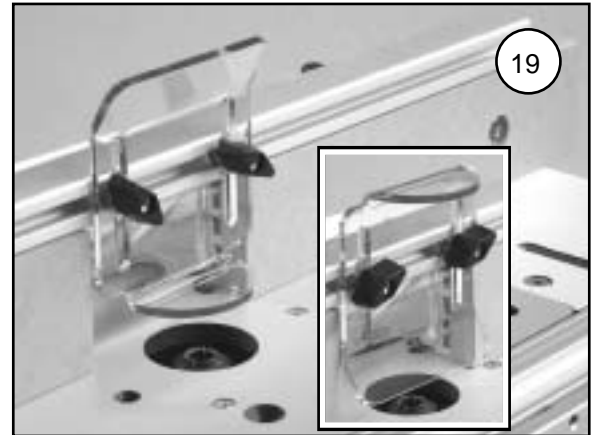
19. Attach the dual position bit guard to fence.

Pre-assemble the guard with the (2) 1/4-20 x 3/4" hex bolts and (2) knobs. Slide both bolt heads into the fence's T-slot to attach to fence.

Note: The bit guard is designed for dual positioning. The larger, curved side is used for general routing of small and medium sized bits. The smaller angled side is intended for edge jointing and small diameter bits.

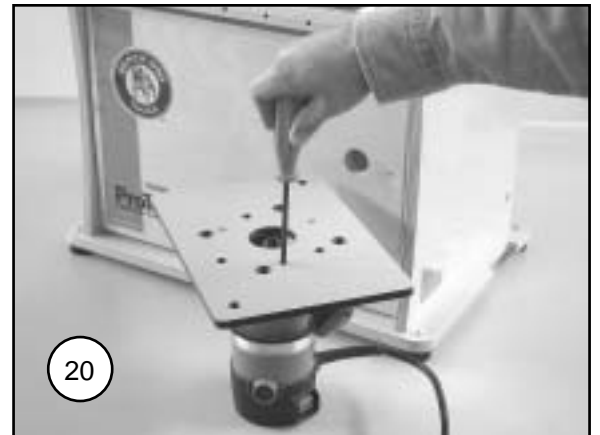


Always use the bit guard!



20. Mount router to the insert plate.

This insert plate is predrilled to fit most popular routers, and comes with proper mounting screws for these routers. In some cases, you must drill your own holes and purchase your own mounting screws. Please refer to the included template to complete this step.



21. Install router and plate into the routertop.

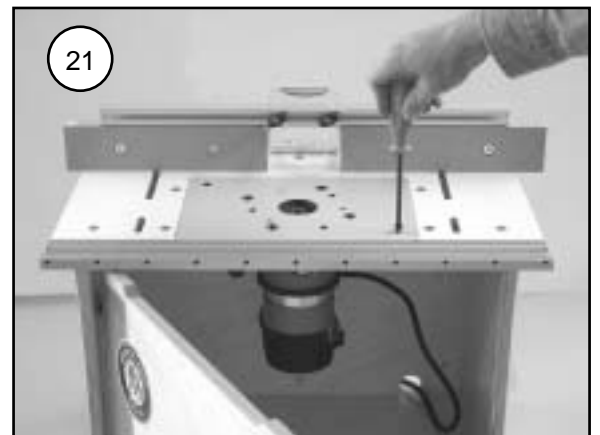
Re-adjust the insert plate flush if necessary (see step 13). Install the (2) 1/4-20 x 1" flat head phillips screws into the two corners of the insert plate. These screws prevent side-to-side movement and keep the insert plate firmly seated, preventing excessive vibration. Do not overtighten as this could damage the insert plate.



1/4-20 x 1" (black)
flat head phillips
machine screw



Check the tightness of the hold-down screws before each use!

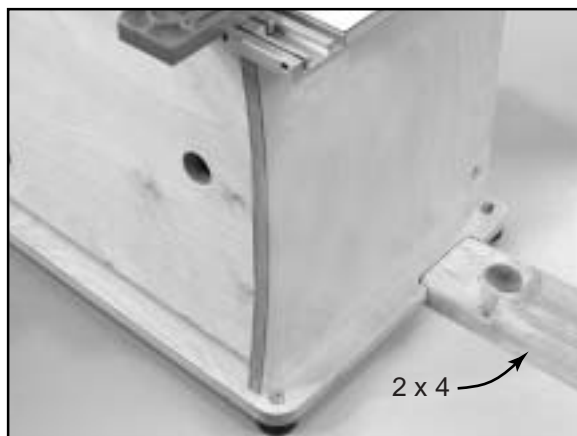


*Router not included.

Operational Tips

Securing the router table

The base has rubber feet to reduce vibration and slippage of the base on a smooth surface. For permanent mounting, the base can be bolted through the rubber feet to a workstation or bench. For a secure yet portable mounting, the base is equipped with two special recesses that accept scrap 2 x 4 dimensional lumber. Fasten the scrap 2 x 4 pieces to your bench using clamps or screws.



Using Your Miter Gauge

The miter track has two slots: an accessory T-slot and a T-bar compatible miter gauge slot. The accessory T-slot is the narrower of the two. It accepts 1/4" hex bolts for attaching Feather-Loc featherboards (see Bench Dog accessories) and other fence accessories like Panel-Loc and Power-Loc. The miter gauge slot is used in conjunction with a miter gauge, and fits standard 3/8" x 3/4" miter bars (with or without the T-bar). The miter gauge is not included.



To adjust fence perpendicular to miter gauge, set miter gauge to 90°, and place in slot (make sure miter track is adjusted, see step 12). Loosen the fence's lock knobs and align the miter gauge to fence using a square, as shown.

Dust Collection

The integral dust collection port is designed to accept a standard 2-1/2" fitting, typical on most shop vacs. Most of these fittings actually measure 2-1/4" (outside diameter). Bench Dog recommends 2-1/2" hose, or larger, because it is more effective at evacuating dust and chips, and provides proper air flow over the router motor. Any hose larger or smaller than 2-1/2" requires an adapter you must provide. If additional dust collection is needed, a dust port can be added to your cabinet or motor area. **DO NOT USE YOUR ROUTER TABLE WITHOUT DUST COLLECTION!**



Temperature Regulation

To prevent router overheating periodically open the cabinet door during use, and never let dust and debris collect inside the cabinet. Always use a vacuum at the fence mounted dust port. For extended operation you must install a dust port in the cabinet or remove the door during operation.



Immediately clean the dust and debris from the inside of your cabinet after each and every use.

Feed Direction

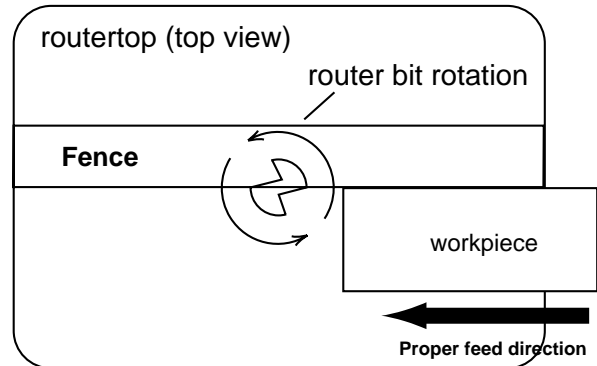
Always feed the workpiece *against* the cutter rotation, as shown. Feeding the workpiece *with* the cutter rotation is called "climb cutting". Climb cutting is **very dangerous**, because the cutter will grab the workpiece and thrust it the same direction as the cutter rotation. Even small router bits will overpower your ability to hold onto the workpiece during a climb cut.

Do not use this router table until you understand proper feed direction and bit rotation. If climb cutting is still unclear, ask your retailer for help, give us a call, or reference a book on router table usage.



Never Climb Cut!

A typical set-up. Here, the fence is partially covering the router bit.



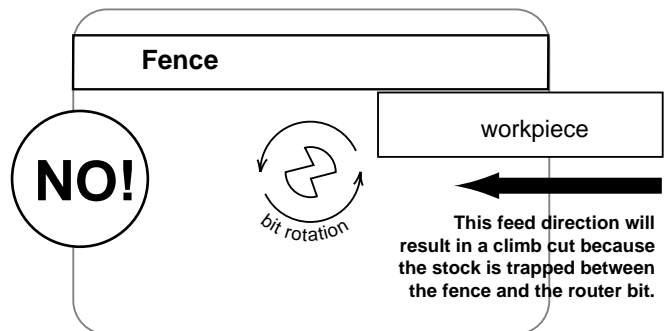
Avoiding Fence Traps

Fence traps occur when the work piece is fully "trapped" between the router bit and fence. Fence traps pose two real concerns: the possibility of climb feeding, and human exposure to the router bit. As stated earlier, climb cutting should be avoided as loss of control of the operation is a possibility!

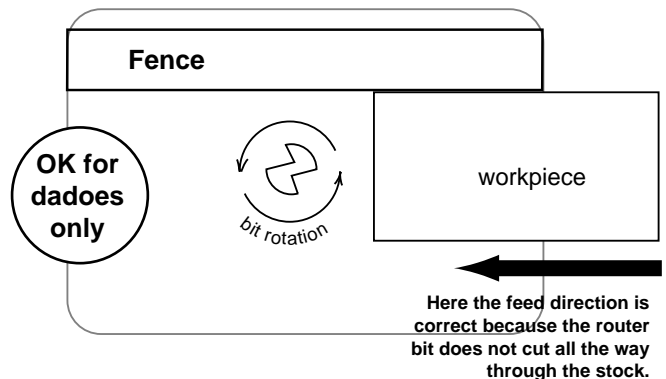
The top drawing shows a classic trap to be avoided. What appears as a normal feed direction (working from right to left) is wrong, and will instead produce a climb cut. Because the work piece is trapped it can easily be pulled from one's grip and thrown with great velocity. Feeding the stock from left to right will eliminate the climb cut but not the danger. It will be difficult to keep the stock tight against the fence as the bit's rotation will thrust the stock away from the fence. Also, your body will be dangerously exposed to the spinning router bit. The bit guard will not protect you against flying stock, nor guard against this level of exposure.

The second drawing is not a trap, as long as the router bit cuts only partially into the stock. In other words, the router bit must not completely cut through the workpiece. In this cut, the bit will grab and push the stock toward the fence. This is good, as the fence will control the workpiece better than your hands. Typical dado cuts resemble this set-up, and are commonly performed on router tables. If the dado is to be widened with two (or more) passes, be careful not to set a classic trap or climb cut.

A classic trap resulting in a climb cut. Always avoid this set-up!



Not a trap as long as the router bit does not cut all the way through the stock.



Adjusting the Subfences

The (2) MDF (medium density fiberboard) subfences are designed to slide along the fence approximately 2". This results in a router bit opening from 0 to 4".

A. "Close" Setting

Many applications require adjusting the subfences close to the router bit. This accomplishes nearly the same benefits of a true "zero clearance" setting (see "B") without cutting the subfences. Before the router is turned on, and after the fence and router bit height are properly adjusted, slide the subfences toward the bit to reduce the gap. **Confirm that the router bit can freely rotate without touching the subfences!**

B. "Zero Clearance" Setting

Cutting the subfences into the router bit profile produces "zero clearance". Zero clearance eliminates the gap between the fence and router bit. This prevents the workpiece from getting pulled into the fence just before the router bit. Moreover, a zero clearance setting achieves a cleaner cut because the subfence supports the workpiece fibers. If a true zero clearance setting is desired, follow these steps:

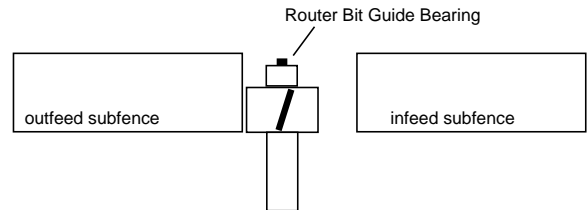
1. Adjust the bit height and fence position. Note: the subfences must NOT contact the router bit at this time.
2. Install the bit guard and secure.
4. Start router, and use dust collection. From the back of the fence, slightly loosen the subfence knobs and carefully slide the infeed subfence into the spinning router bit. Hold onto the subfence knobs.
5. After the subfence has reached the guide bearing of the router bit, fully tighten the knobs on the subfence. Note: If the bit does not have a guide bearing (i.e. vertical raised panel bits), slide the subfence half-way into the bit, then tighten the subfence knobs.



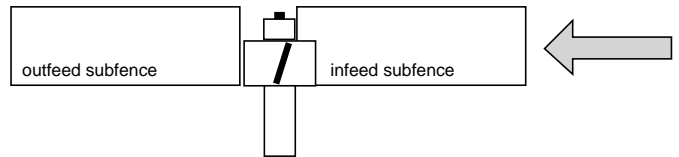
Caution: Never adjust or slide the subfences from the front! Always work from the back with both hands on the adjustment knobs.



The infeed subfence is wide open, and the outfeed subfence is set to "close".



Here the infeed subfence has been adjusted to zero clearance.



Important Notes:

The outfeed subfence is rarely set to zero clearance, because doing so has little performance benefit and can damage the subfence. A "close" setting is more desirable for most applications. Setting the outfeed subfence to zero requires great care because the router bit can cause a portion of the subfence to chip or break. If an outfeed zero clearance is absolutely necessary, slide the outfeed subfence very slowly into the bit to minimize the chipping and tearing.

The subfences can be flipped when changing profiles or bit heights. New, replacement subfences are available when a new profile is to be created or if the subfence cannot be trimmed to provide a fresh edge.

MDF works very well as a subfence because it is softer than most woods and is much less likely to damage expensive router bits. MDF also retains the shape of delicate profiles and thus allows proper support for zero clearance settings.

When adjusting the fence, ensure that no part of the aluminum fence body could contact the router bit.

Jointing

Jointing is the process of making flat, square and straight mating edges. Jointing is necessary when two boards are edge glued to create a larger panel. It is also used to "fit" pieces together, as well as to trim stock to size.

Note: Jointing on a router table is not intended to replace a free-standing power jointer, especially for stock wider than 1.25". However, jointing with the router table does have advantages over the jointer. First, small and short pieces of wood can be safely jointed because the opening of the fence can be made very small: about 1/2". Second, the quality of the cut is usually better because the router bit spins much faster than the jointer's cutter head. A faster cutter speed is especially useful on woods prone to tear-out, like bird's eye maple and quilted cherry. Be sure not to move too slowly, as this will leave burn marks in your workpiece.

Your fence has built-in jointing slots to accept the (2) small aluminum jointer bars that shipped with your router table. Installed in pairs, these bars "shim out" the out feed subfence either 1/32" or 5/64" (2mm).

Set-up the Fence

Unplug router and install a 1/2" diameter straight or spiral up-cut router bit.

Caution: Use only 1/2" shank bits for jointing. The bit's cutting length must not exceed 1.25". Set the bit height to 1.25" or less.

Loosen the outfeed subfence mounting knobs and slide both aluminum jointer bars (always installed in pairs!) under the outfeed subfence in either the 2nd and 4th slots, or the 1st and 3rd slots (see illustration).

Use a straight edge to adjust the router bit and outfeed subfence to the same plane (see illustration below). Readjust if necessary. Remove straight edge when done.

Slide both subfences toward the bit to decrease the amount of gap around the router bit. Be sure the subfences are not touching the router bit. Also be sure the router bit is not touching the fence's aluminum body. Tighten the subfence knobs and place the bit guard in position.

First make a test cut in scrap stock. Readjust if necessary.

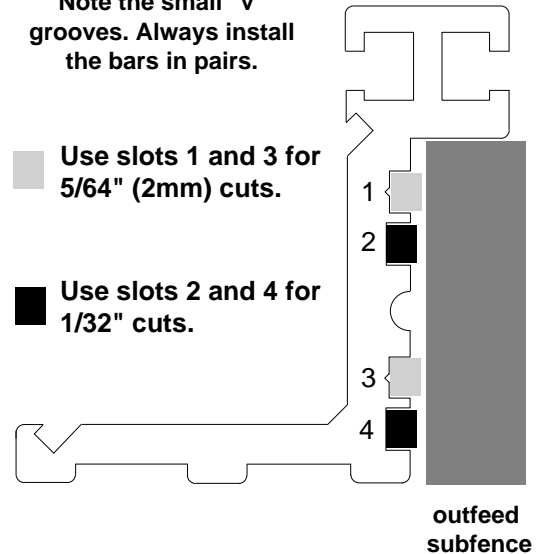


In this photo, the user is sliding the second bar into position. Be sure to tighten the subfence knobs when done!

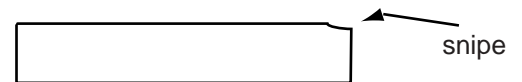
Note the small "v" grooves. Always install the bars in pairs.

Use slots 1 and 3 for 5/64" (2mm) cuts.

Use slots 2 and 4 for 1/32" cuts.



If board "snipe" occurs, realign the out-feed subfence to the router bit. Don't be surprised if it takes a few tries to master this operation.



(Bit guard not shown for clarity, only!)

