

Notes



Stock No. 40-102

# ProMax™

## Cast Iron Router Table Extension

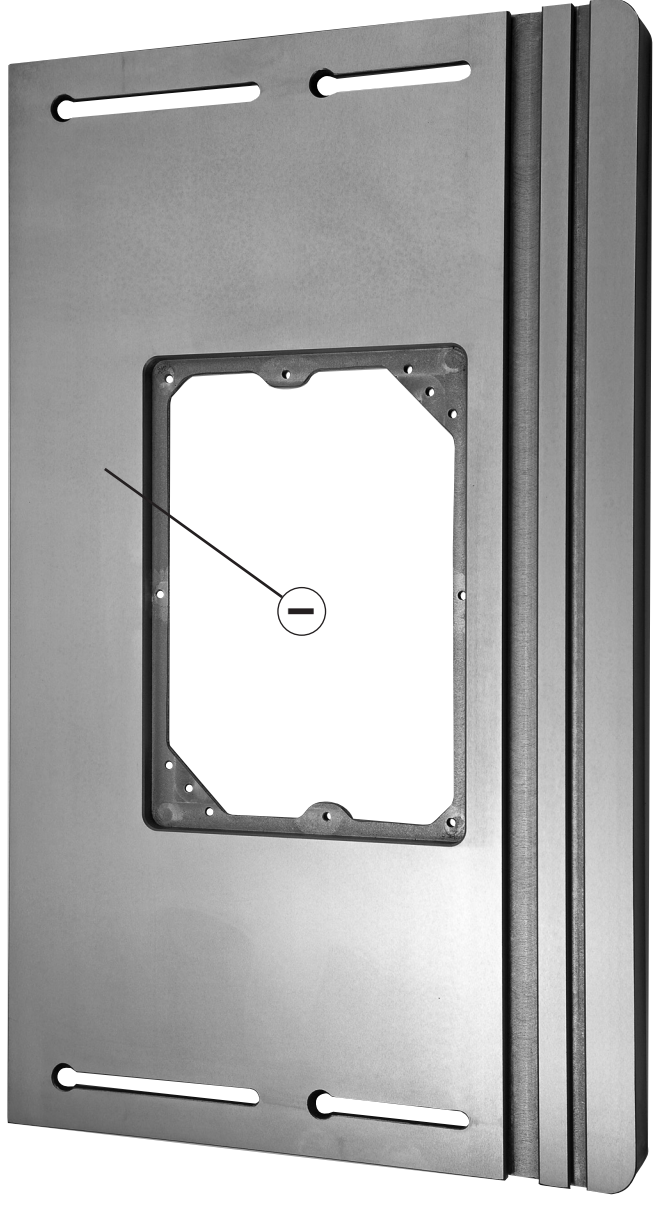


## INSTRUCTIONS

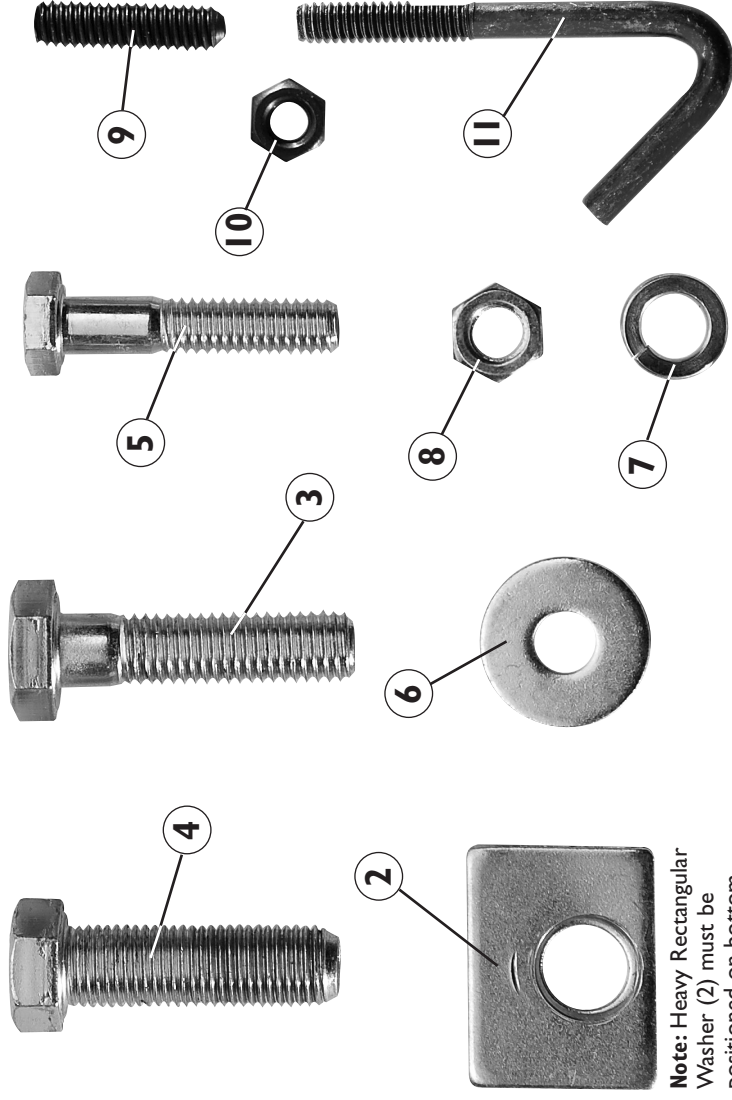
Congratulations on your purchase! ProMAX expands your table saw's versatility by adding an industrial grade router table in place of the extension wing. Soon, you will enjoy more workspace and capability than ever before! This unit includes the robust cast-iron table, ProFence, and all necessary mounting hardware. A router plate **must be purchased separately**. ProMAX accommodates all Bench Dog

**ProPlates. These insert plates, pre-drilled to fit your router, are available individually.**

**Note:** Please read these instructions completely before attaching the ProMax to your table saw. Familiarity with the process will make the steps easier to understand. Please follow all steps carefully.



Notes



Note: Heavy Rectangular Washer (2) must be positioned on bottom of table as shown.

**TABLE PARTS LIST**

	Quantity	Quantity
1 Cast Iron Router Top	1	7 5/16" Lock Washers
2 Heavy Rectangular Washers	3	8 5/16" Hex Nuts
3 M10 x 1 1/2 x 40mm Hex Bolts	3	9 1/4-20 x 1" Leveling Screws
4 7/16-20 x 1 1/2 Hex Bolts	3	10 1/4-20 Leveling Hex Nuts
5 5/16-18 x 1 1/2 Hex Bolts	4	11 J Hooks
6 5/16" Flat Washers	8	

## 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 must 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 router top 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 ProMAX
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.

## LIMITED TWO-YEAR WARRANTY

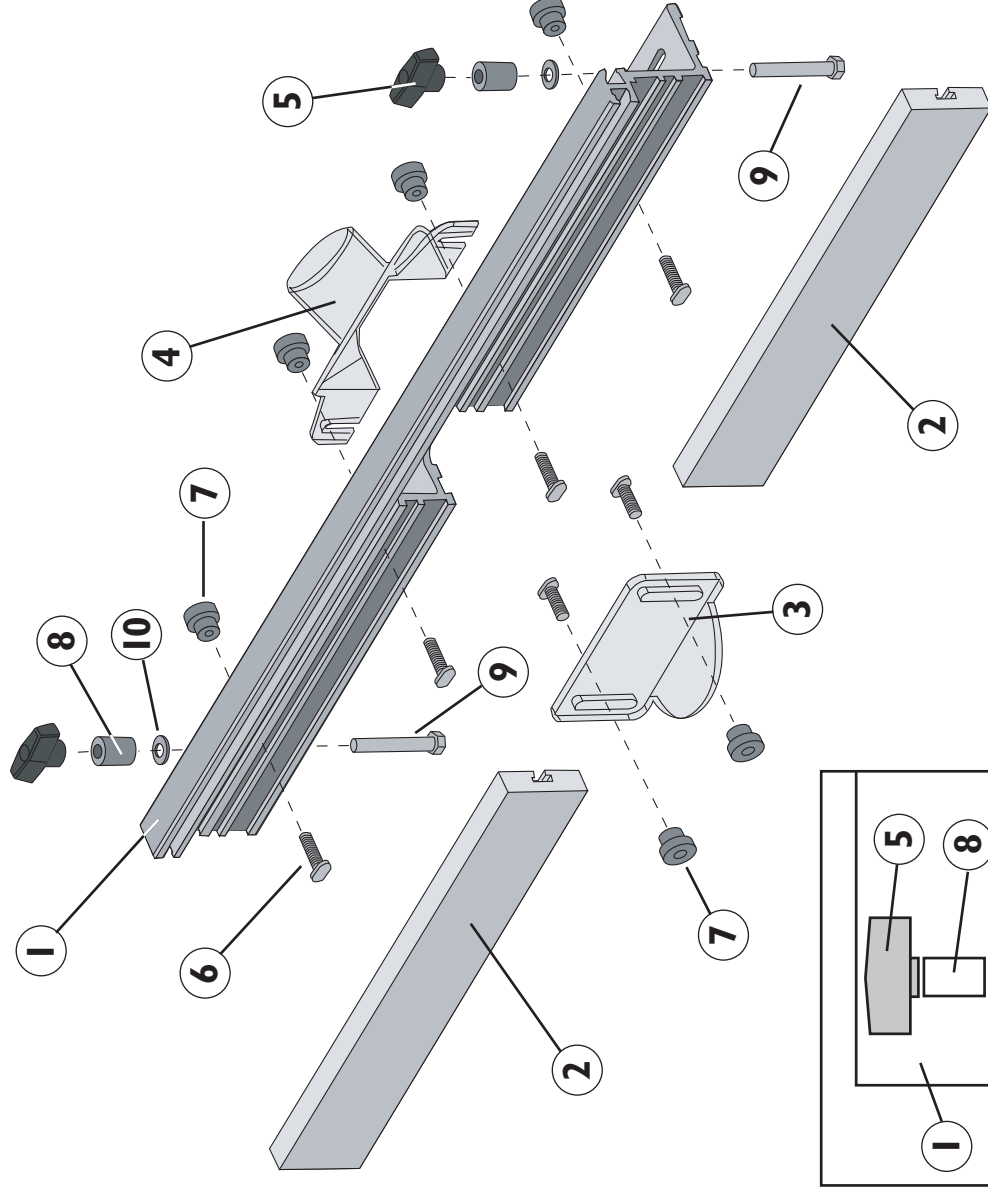
We make every effort to assure that our products meet quality and durability standards, and warrant to the original retail purchaser that this product is free from defects in materials and workmanship for two years. Remedy shall be limited to Bench Dog's choice of repair, replacement or refund. This 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.**



Follow this diagram to attach the fence to the table.

## PROFENCE PARTS LIST

	Quantity
1 Aluminum Fence	1
2 Adjustable MDF Fence Faces	2
3 Bit Safety Guard	1
4 Dust Port	1
5 3/8-16 T-Knobs	2
6 5/16-18 x 1/4" T-Bolts	6
7 1" Round Knobs	6
8 Knob Spacer	2
9 3/8-16 x 2 1/2" Hex Bolts	2
10 3/8" Nylon Washer	2



Fig. 1

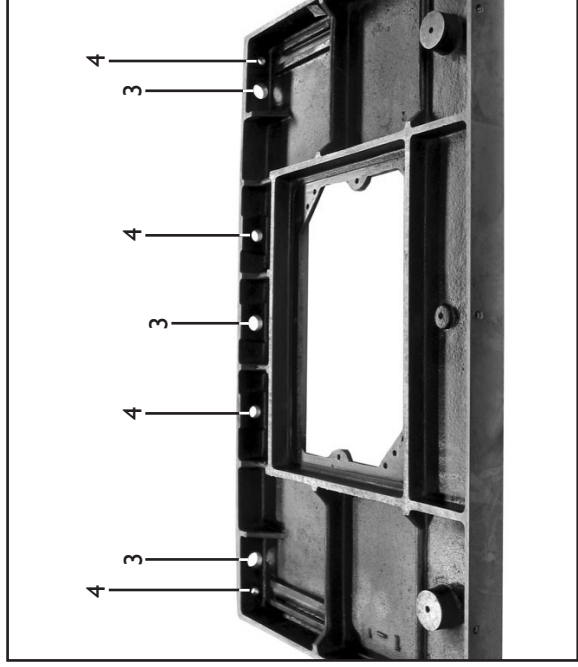


Fig. 2

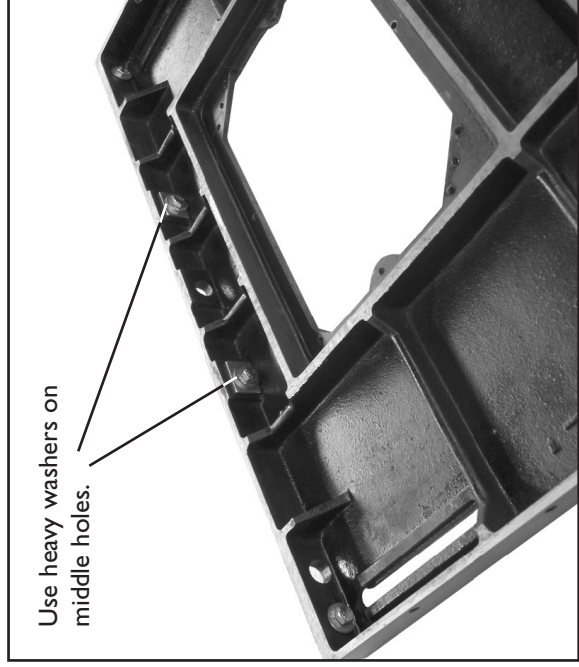


Fig. 3

## Attaching the Table

The following instructions only apply to mounting the ProMAX directly to a cast iron table saw. The pictures show a Delta brand table saw, but the ProMAX will fit on any cast iron table saw with at least 27" of depth. Tables deeper than 27" will require shims to fill the space between your fence rails and the ProMAX.

**Note:** ProMAX cannot be installed as a left extension replacement on left tilt "cabinet" grade table saws because the table saw's motor protrudes to the left. Nor can ProMAX be installed as a right extension replacement on right tilt "cabinet" grade table saws for the same reason. Mounting ProMAX to the far right will avoid the protruding motors, however, ProMAX must be supported with the two steel rails that also support your T-square style rip fence and legs.

### 1. Remove the factory left extension wing. Fig. 1.

Use the hardware that came with your ProMAX to install your router table. Do not use the factory bolts, as they may not be grade 5 or the proper length. If the necessary bolt size is not supplied with this router table you must purchase your own grade 5 bolts. In most cases the fence rails support the factory table extension wings. When bolted directly to your table saw, ProMAX requires no support from the fence rails. Therefore, fence rails do not need to be fastened to ProMAX.

**2. Determine your saw's bolt pattern.** Craftsman and Ridgid use a four bolt pattern. Almost all other saws use a three hole pattern. Fig. 2.

### 3. Four hole applications:

Most four hole patterns use 5/16 bolts. Use the heavy rectangle washers for the middle two holes as shown in Fig. 3. Each bolt receives two 5/16" flat washers, one lock washer, and one nut. Late model Ridgid saws use 5/16-18 tapped holes instead of through holes. If the bolt size is not 5/16-18, you must supply your own. Use grade 5 bolts.

## Adjusting the Subfences

The two 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. (Fig. 18) 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. (Fig. 19) 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.

3. Start router, and use dust collection. From the back of the fence, slightly loosen the subfence knobs and carefully slide the infed subfence into the spinning router bit. Hold onto the subfence knobs.

4. 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.**

### Important Notes:

The outfeed subfence is rarely set to zero clearance, because doing so has little performance benefit and

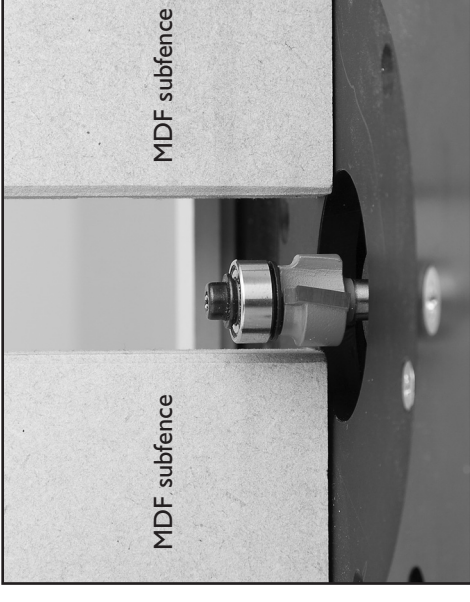


Fig. 18 - "Close" Setting

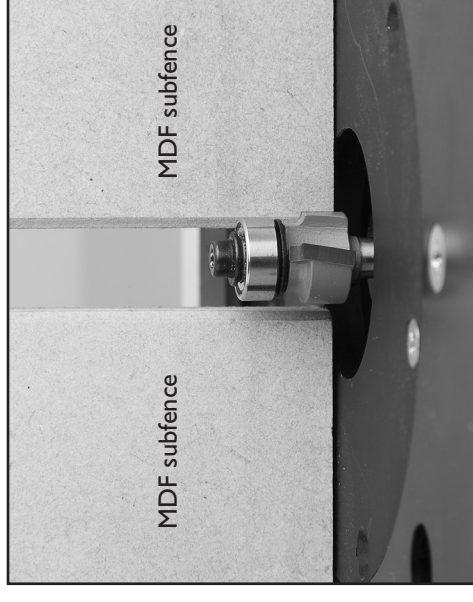
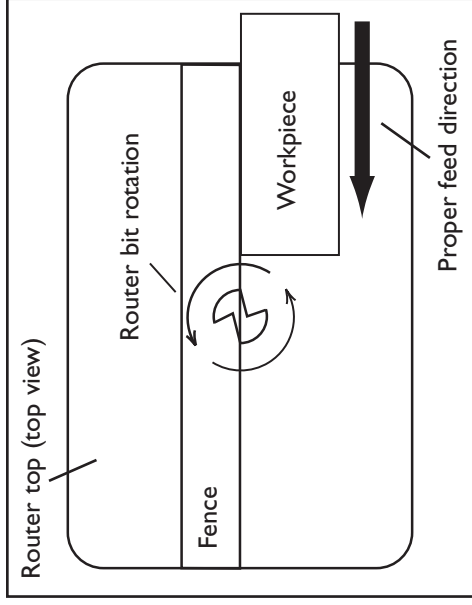


Fig. 19 - "Zero Clearance" Setting

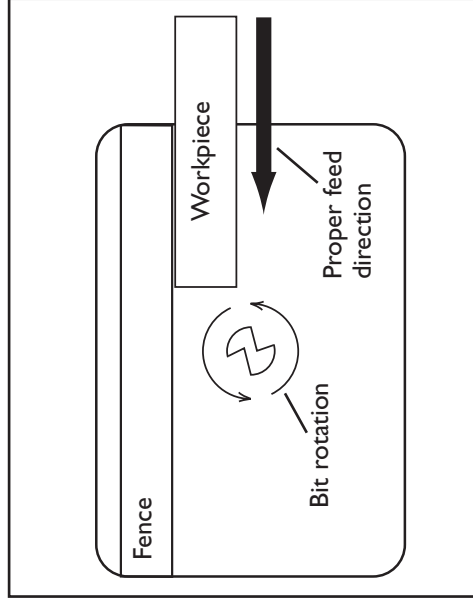
can damage the subfence. A "close" setting is more desirable for most applications. Setting the outfeed subfence to zero requires great care because the router bit can cause a portion of the subfence to chip or break. If an outfeed zero clearance is absolutely necessary, slide the outfeed subfence very 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.

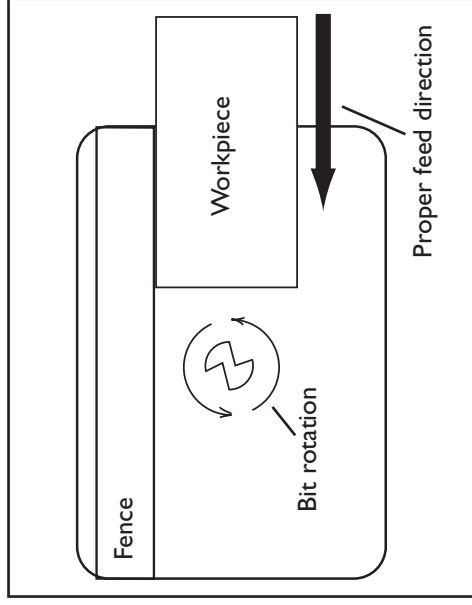
MDF works very well as a subfence because it is softer than most woods and is much less likely to damage expensive router bits. MDF also retains the shape of delicate profiles and thus allows proper support for zero clearance settings. When adjusting the fence, ensure that no part of the aluminum fence body could contact the router bit.



**Fig. 15 - A typical setup. Here, the fence is partially covering the router bit.**



**Fig. 16 - A classic trap resulting in a climb cut. Always avoid this set-up!**



**Fig. 17 - Not a trap as long as the router bit does not cut all the way through the stock.**

## Feed Direction

Always feed the workpiece against the cutter rotation, as shown in **Fig. 15**. 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.

## CAUTION: NEVER CLIMB CUT!

### 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!

**Figure 16** 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.

Whereas **Figure 17** 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.

## 4. Three bolt applications:

This pattern always uses the heavy rectangle washers on each bolt as shown in **Fig. 4**. Delta brand uses the 7/16-20 x 1 1/2" hex bolts. Most others (imports) use the M10 x 1.5 x 40mm hex bolts. If your bolt size was not mentioned you must purchase your own. Only use grade 5 bolts.

## 6. Lift the router table into position.

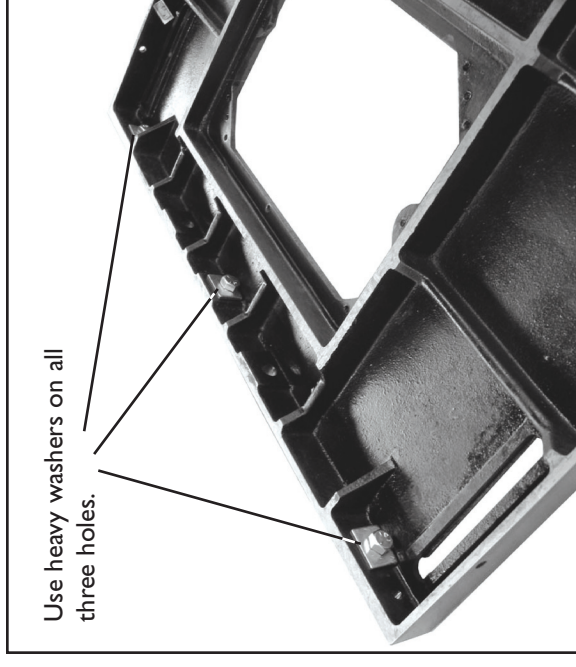
Install the bolts while a friend holds the table in position as shown in **Fig. 5**. Just snug the bolts for now.

Make absolutely certain both surfaces are smooth, flat, and free of burrs before mating the two tables together!

## 7. Tighten the router table.

Tighten the bolts gradually and evenly as shown in **Fig. 6**. Use a soft tipped mallet to lightly tap the table surfaces. If your router table is not flat with your table saw's table, you may need to shim it. Use paper or brass shims. The tolerances of your ProMAX are probably much higher than those of your table saw's. Slight inaccuracies in alignment rarely pose a significant problem.

**Note:** The plate opening on your ProMAX is sized to accommodate a Bench Dog ProPlate (sold separately). Drop the ProPlate into the opening and adjust the included leveling screws until the plate is flush with the router top. Tighten the levelers.



**Fig. 4**



**Fig. 5**



**Fig. 6**



Fig. 7



Fig. 8

### Installing the Fence

- 1. Attach the dust port.**  
Connect the dust port to the fence using two 5/16-18 x 1/4" T-bolts and two round knobs.
- 2. Install the two MDF subfences.**  
Insert two 5/16-18 x 1/4" T-bolts into the fence's remaining pre-drilled holes and slide the subfences over the bolt heads as shown in Fig. 7. (This will require loosening the knobs on the dust port). Attach two round knobs and tighten.  
**Note:** The subfences have no specific left/right or up/down orientation.
- 3. Attach the fence to the table.**  
Use the two 3/8-16 x 2 1/2" hex bolts, two aluminum knob spacers, two 3/8" nylon washers and two 3/8" (large) T-knobs. Fig. 8.



Fig. 9



Fig. 10

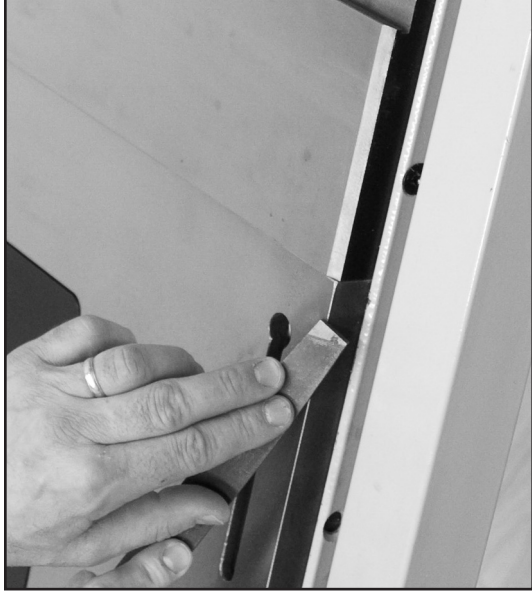


Fig. 11



Fig. 12

### Operational Tips

#### File Sharp Edges

Some table saws have a bevel on the leading edge. You can file your router table to match, if so desired. Fig. 11.

#### 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. Fig. 12. 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.

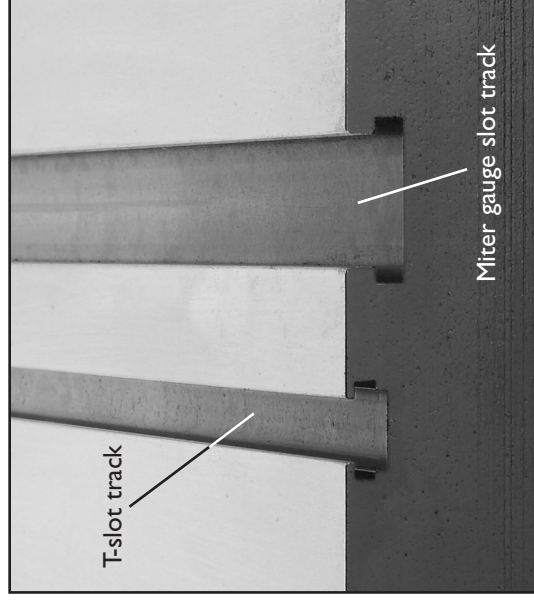


Fig. 13

### DO NOT USE YOUR ROUTER TABLE WITHOUT DUST COLLECTION!

#### Using Your Miter Gauge

The miter track has two slots: an accessory T-slot and a T-bar compatible miter gauge slot. Fig. 13. The accessory T-slot is the narrower of the two. It accepts 1/4" hex bolts for attaching Feather-Loc featherboards. 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. Loosen the fence's T-knobs and align the miter gauge to fence using a square, as shown in Fig. 14.



Fig. 14