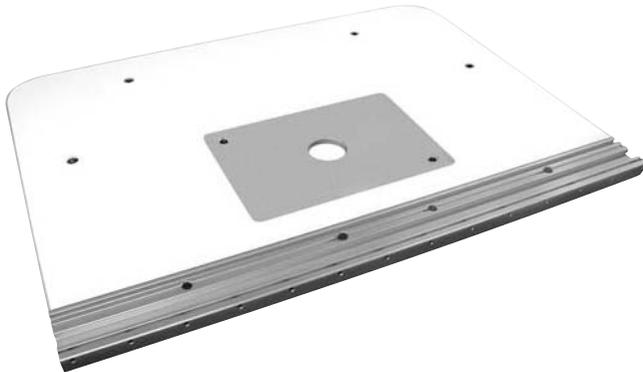# ProTop
S T A N D A R D ®

Owner's Manual

Keep this manual handy for
quick reference

Stock No. 40-032
(fomerly RT400)

Congratulations and thank you for buying our
ProTop Standard router top! If you have any
questions, please give us a call. This manual will
assist you during the assembly of your router table.
However, this manual is not intended as an
instructional manual for router table usage. Please
consult the widely available books, magazines, and
classes on router table techniques.

Thank you for choosing Bench Dog!

Contents of Box

1	router top
1	phenolic ProPlate
1	32" miter track

Hardware

12	7 x 40mm insert plate leveling screws
2	1/4-20 x 1" phil. flat head mach. screws
14	1/4-28 x 1/2" set screws
4	1/4-20 x 2" phil. flat head mach. screws
4	1/4-20 x 2" round head bolts
8	1/4-20 cross dowels
1	4mm hex wrench
2	trim strips
4	#6 x 1/2" screws

Requirements

Assembly
4mm hex wrench (supplied)

1/8" hex wrench (supplied)

screwdriver and power drill

Mounting Router
drill bit (sized to your router mounting screws)

countersink 82 degree

drill press (recommended)

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BENCH DOG TOOLS ®

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

**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.
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.

Assembly Instructions

1. Install the (12) leveling screws.
Remove the router insert plate from the routertop, and place the routertop face down, as shown. Using a power drill, drive the screws in until they just come through the other side. You will fine adjust them in **step 8.**

7 x 40mm
leveling
screw
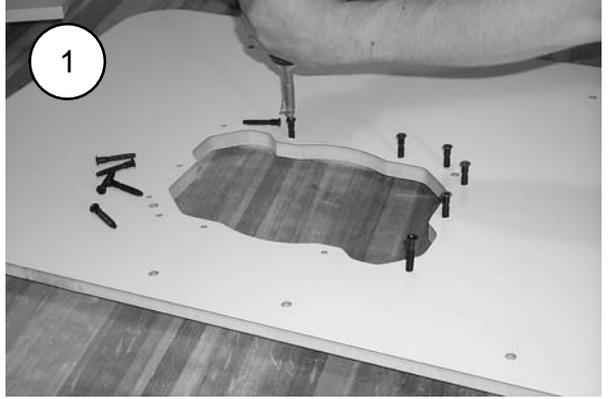
Install the leveling screws into the (12) small holes. Do not install them into the two larger holes near the other small holes.

2. Attach the (2) trim strips to the routertop.
Use the (4) small #6 x 1/2 screws. Use a Phillips screwdriver and install by hand. Be careful not to over tighten the screws. Do not use a power drill in this step! The trim strips are purely decorative. Position the trim strip as shown, and drive the screws into the bottom of the routertop.


! **Trim strips mount into the bottom of the routertop!**
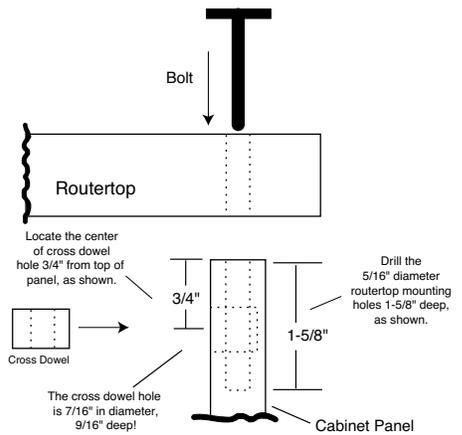
3. Attach the routertop to your ProTop Cabinet.

Go to **step 4** if you are building your own cabinet.

Use the (4) 1/4" round head bolts and (4) 1/4" cross dowels. **Always install the cross dowels first!** The drawing below shows how these strong but simple fasteners fit together.
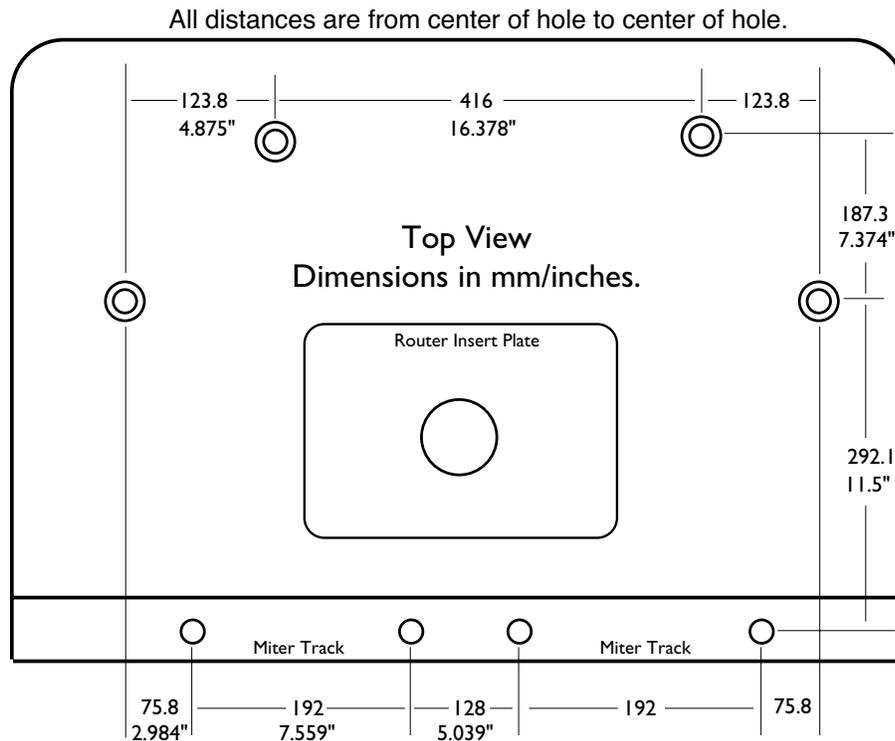

1/4-20"
cross dowel

1/4-20 x 2"
round head bolt

Bolt

Panel

Cross Dowel ⟶

Panel
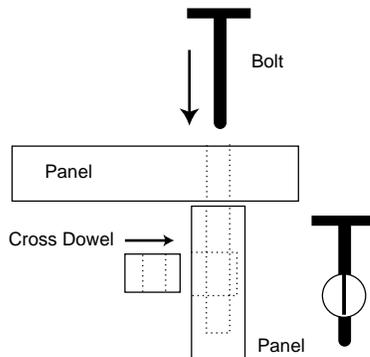
4. Mount routertop to your custom base.

When mounting the routertop to your own base or leg set, use the routertop's predrilled mounting holes with the bolts and cross dowels provided. Use of any other hardware or mounting method will void the warranty. You must locate and drill (8) mounting holes according to the drawing below. Furthermore, you must drill (8) cross dowel holes to intersect the mounting holes, as shown to the right.

Bolt

Routertop

Locate the center of cross dowel hole 3/4" from top of panel, as shown.

3/4"

Drill the 5/16" diameter routertop mounting holes 1-5/8" deep, as shown.

1-5/8"

Cross Dowel

The cross dowel hole is 7/16" in diameter, 9/16" deep!

Cabinet Panel

Skip step 4 if you purchased a Bench Dog ProTop Cabinet!

The above drawing is provided to assist you in locating the mounting holes for the base you build. It is your responsibility to design an adequately strong base to support the routertop, a router, and your work.

All distances are from center of hole to center of hole.

123.8
4.875"

416
16.378"

123.8

187.3
7.374"

Top View
Dimensions in mm/inches.

Router Insert Plate

292.1
11.5"

Miter Track

Miter Track

75.8
2.984"

192
7.559"

128
5.039"

192

75.8

5. Attach the miter track to the routertop.

First install (4) 1/4" cross dowels in the cabinet's front stretcher. Use the (4) 1/4-20 x 2" phil. flat head machine screws in track holes.

1/4-20 x 2" phil. flat head machine screw

5
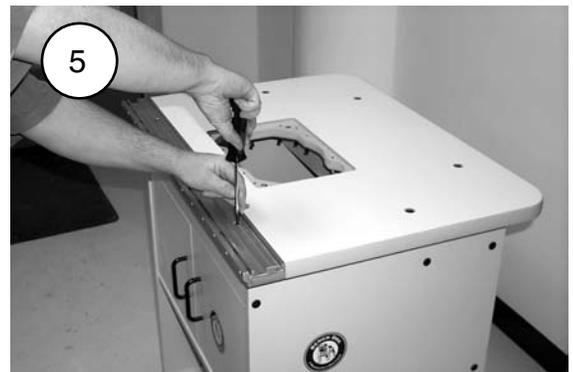
6. Adjust miter gauge track to fit your miter gauge.

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 (14) 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.

1/4-28 x 1/2"
set screw

SQUEEZE TO LOOSEN

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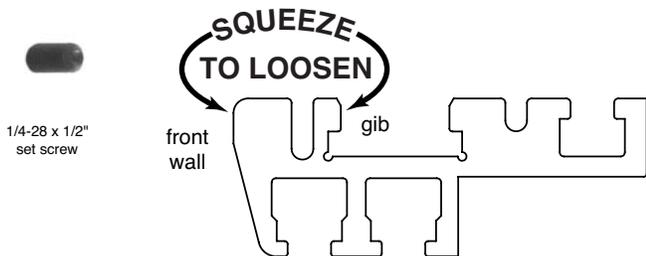
I   **This miter track ONLY fits standard 3/8" x 3/4" miter gauge bars. Wax the slot and bar to reduce wear.**

7. Mount your router to the phenolic insert plate.

This insert plate is undrilled. You must drill your own router mounting holes. Please reference the included template to complete this step.

Router not included!

8. Adjust the leveling screws until the insert is flush.

Install the insert plate and adjust the leveling screws until the plate is flush with router top. Fine adjust the six screws at the four corners of the insert opening first.

9. Install the (2) insert plate hold-down screws.

The (2) 1/4-20 x 1" phil. flat head machine screws prevent side to side movement, as well as keep the plate firmly seated. Readjust the plate flush if necessary. **Tighten the hold-down screws before every use, if necessary!**

1/4-20 x 1"
phil. flat head
machine screw

Operational Use Tips

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.

routertop (top view)

router bit rotation
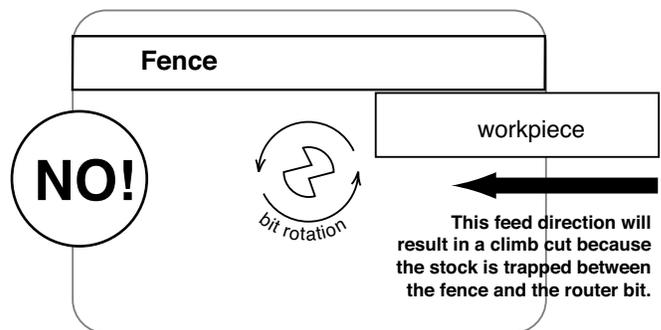
Fence

workpiece

Proper feed direction
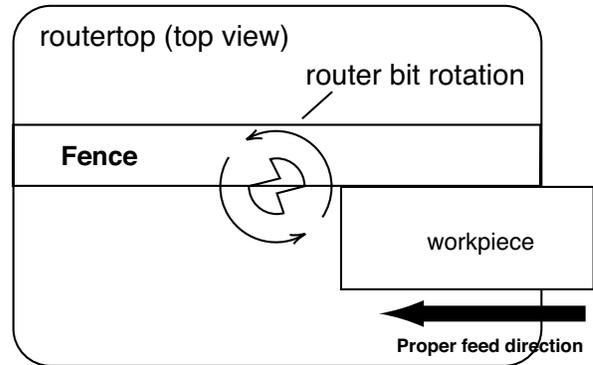
Avoiding Fence Traps

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!

Fence

workpiece

NO!

bit rotation

This feed direction will result in a climb cut because the stock is trapped between the fence and the router bit.

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

Fence

OK for dadoes only

workpiece

bit rotation

Here the feed direction is correct because the router bit does not cut all the way through the stock.