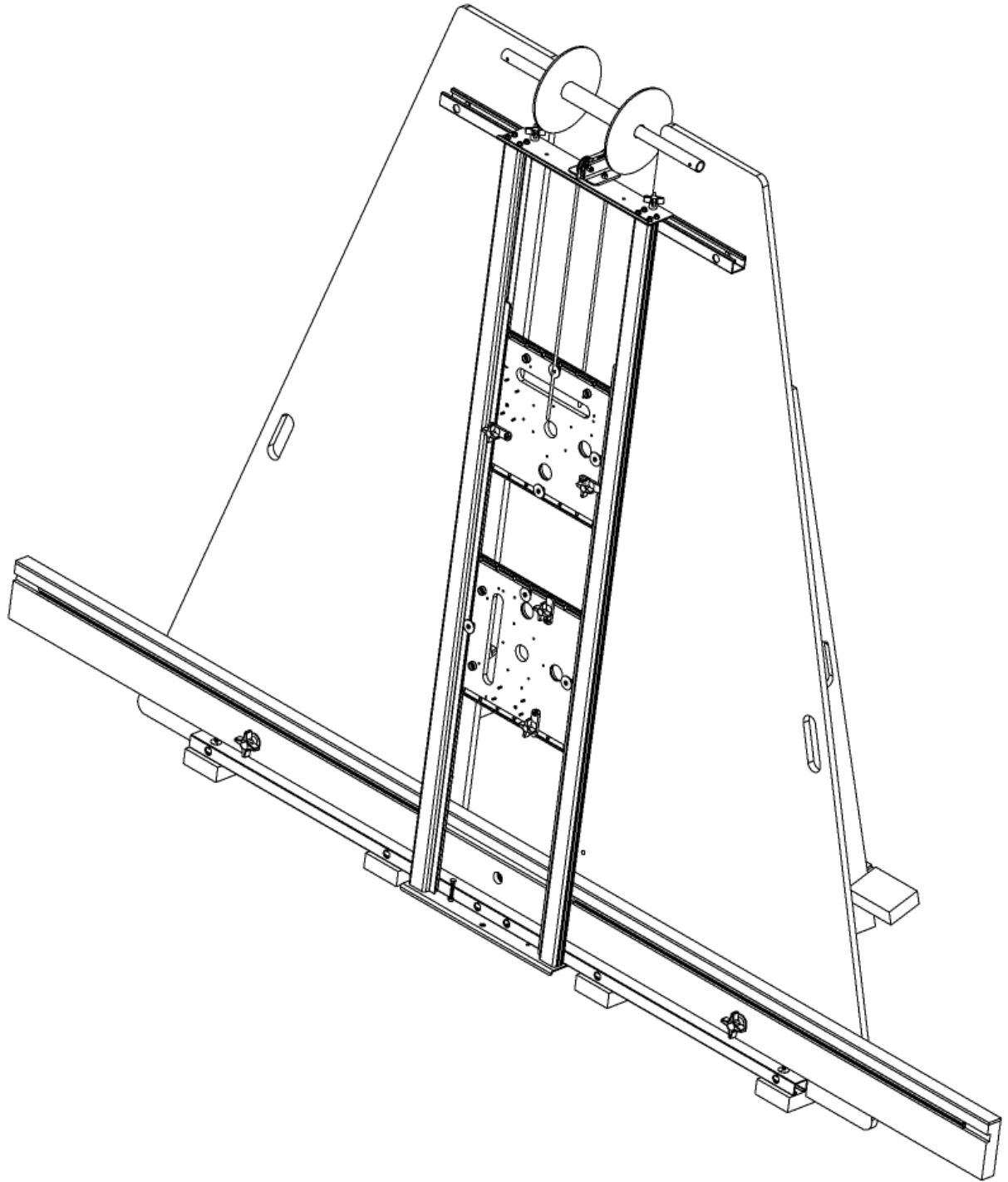


**Shop built Panel Saw  
From A2 Equipment LLC**



**Swap  Saw™**

[www.A2EQ.com](http://www.A2EQ.com)

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### ***Introduction:***

Congratulations on your purchase of the Swap Saw™ from A2 Equipment LLC, the world's first high quality affordable panel saw. If you have shopped for a panel saw hardware kit, you probably realize that most kits are cobbled together from materials that are not intended to be part of a panel saw. While these kits *do* work, there are always compromises. The A2 Equipment Swap Saw™ is custom designed to optimize performance and still be very affordable. This saw will give you years of reliable service with reasonable care. Your panel saw will enable you to make straight, accurate cuts in full size sheets of plywood without the aid of another person. You can use your Swap Saw™ with a circular saw and a router. The Swap Saw™ is protected by the following patents 10,596,644 & 10,058,941.

### ***Features:***

Swap Saw™ Panel Saw has many unique features.

1. Our patented gap guides allows for simple and quick tool changes. You can remove your saw and replace it with a router in seconds, not minutes or hours.
2. Polycarbonate carriages allow you to clearly see your work piece as you are cutting. This reduces costly errors and improves the quality of your hard work.
3. The guide channels slope toward the work piece (patent pending) locating the cutting tool closer to the work. This means that an ordinary 7 ¼" circular saw can cut through 2 by material. Easily cut dimensional lumber, 2x4s to 2x12s with your panel saw.
4. The plywood back panels are only ¾" thick making it very easy to clamp accessories to the saw (most of which can be easily built at home). With a miter fence one can easily cut miters. You can also add a mid-fence simply by bolting it to the back panels.

The creative wood worker will find many other tasks that can be easily performed with this equipment.

### ***Warranty:***

A2 Equipment LLC offers a two year limited warranty on your Swap Saw™.

**WHAT THIS WARRANTY COVERS:** This warranty covers all defects in workmanship and materials in your Swap Saw™ for a period of two years from the date of purchase, to the original purchaser.

**HOW TO GET SERVICE:** Contact A<sup>2</sup> Equipment LLC. Customer Service at (253) 391-6220 for an RMA (Return Merchandise Authorization) number and instructions. Return defective part(s) with RMA number, properly packaged and shipping prepaid, to: 2262 W 300 N, Provo, Utah 84601. Proof of purchase documentation, which includes the date of purchase (for example, a bill of sale or PayPal receipt) and RMA number must accompany your return. We will repair any faulty workmanship, and either repair or replace, at our option, any defective part. Repair/replacement will be completed within ninety (90) days. If the materials received are not covered by the warranty you will be billed appropriately for the work/materials and they will be returned to you upon receipt of payments.

**WHAT'S NOT COVERED:** This warranty applies only to the original purchaser and is nontransferable. This warranty only covers defects arising under normal usage and does

not cover any malfunction, failure or defects resulting from misuse, abuse, neglect, alteration, modification, damage caused by the user or repairs by other than Authorized Service Centers. A2 Equipment LLC. makes no warranties, representations or promises as to the quality or performance of its tools other than those specifically stated in this warranty.

**ADDITIONAL LIMITATIONS:** Any implied warranties granted under state law, including warranties of merchantability or fitness for a particular purpose, are limited to one year from the date of purchase. A2 Equipment LLC. is not responsible for direct, indirect, or incidental damages, so the above limitations and exclusions may not apply in your state. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## *Safety Rules*

### **! Warning!**

**Read all instructions.** Failure to follow all the instructions included in this manual may result in serious injury including fire, electrical shock, or even death.

**Basic instructions: (following all instructions will reduce the risk of serious personal injury.)**

1. Follow all safety rules for the power tools you use with your Swap Saw™.
2. Never remove the carriage from the linear guides without disconnecting power first. We recommend that you install a switch (not included) on the panel saw to turn the power tool on and off. Also, plugging the power cord into a Ground Fault Circuit Interrupter (GFCI) outlet is highly recommended.
3. Never put your hands (or any other part of your body) on or under the carriage.
4. Always inspect your tool/carriage assembly before use to be certain your tool is properly secured to the carriage.
5. Hold power tools by insulated gripping surfaces when performing any operation. This is especially important with a circular saw mounted on a panel saw. It is very easy to accidentally touch the blade.
6. Do not cut used lumber on this equipment. Used lumber usually has nails, screws and other foreign objects embedded in it. Cutting these foreign objects could invalidate your warranty and can damage your equipment as well as cause personal injury.
7. Circular saws are designed to cut on the up stroke. Orient your saw in the guides so that the bottom of the blade is rotating up as you cross cut. When rip cutting, your saw will be mounted horizontally in the guides. Push the work piece into the saw from the side that will allow the saw to cut on the up stroke. (See pictures in the operation sections.)

Allow the blade to come to a complete stop, and disconnect from power before touching the blade for any reason.

Some people lock the saw trigger to the on position so the saw is energized only from the switch (not included) on the panel saw. If you do this, always remove the locking device from the saw if the saw is to be removed from the panel saw and used for non-panel saw purposes. Leaving a locking device, such as a zip tie, on the circular saw can lead to injury.

We do not advise the use of locking devices on any power tool. If you use such a device you do so at your own risk.

**Know your power tool.** Read operator's manual carefully. Learn its applications and limitations, as well as the specific potential hazards related to the power tool. Follow the individual instructions for each power tool.

**Always wear safety glasses.** Everyday eyeglasses have only impact-resistant lenses; they are NOT safety glasses. Safety glasses are built to different and high specifications.

**Protect your lungs.** Wear a face or dust mask if the operation is dusty. The use of a dust collection system and air filtration is highly recommended. Fine wood dust particles have been shown to cause cancer.

**Protect your hearing.** Wear hearing protection during extended periods of operation.

**Inspect power tool cords periodically** and, if damaged, have repaired at the nearest Authorized Service Center. Constantly remain aware of cord location.

**Check for damaged parts.** Before further use of the power tool all parts should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center.

**Make sure your extension cord is in good condition.** When using an extension cord, be sure to use one heavy enough to carry the electrical current your product will draw. Follow the recommendations of the manufacturer of your power tool. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

**Always disconnect your power tool from electrical power before removing from the guides on your panel saw.** There is a high probability of accidentally turning your power tool on, particularly with a circular saw if the tool is not disconnected from the power supply.

**Follow the safety instructions provided by the manufacturer of any power tool applied to the panel saw.**

**Save these instructions.** Refer to them frequently and use them to instruct others who may use this power tool. If you loan someone this power tool, loan them these instructions as well.

## Tools Required.

Circular Saw

Miter Saw (optional)

Drill Press

Tape Measure

3/8" Socket Set.

Power Hand Drill/Driver

Carpenters Square

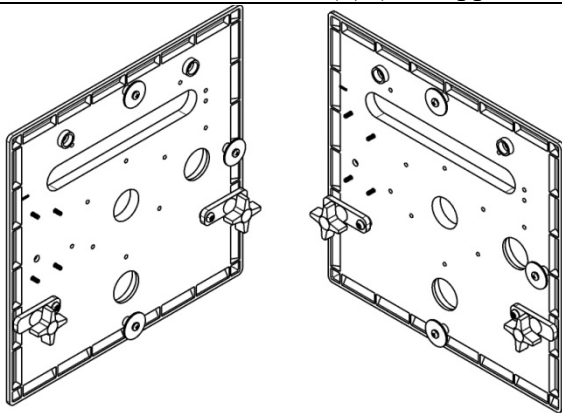
Forstner or spade drill bit, 1" diameter.

## Loose Parts:

Guide Rails (one left hand and one right hand rail)



End Plates (2) (The upper end plate has a nylon bushing installed.)



Carriage Assembly

The Saw Carriage is shown at left. This single carriage can accept either a saw (DeWalt DWE 575 or DW 575) or a variety of routers.

Note: At this printing the carriages were not available to photograph so this image was created from CAD files. The carriages are shipped without the knobs installed because the fully assembled carriage would not fit in the packaging.



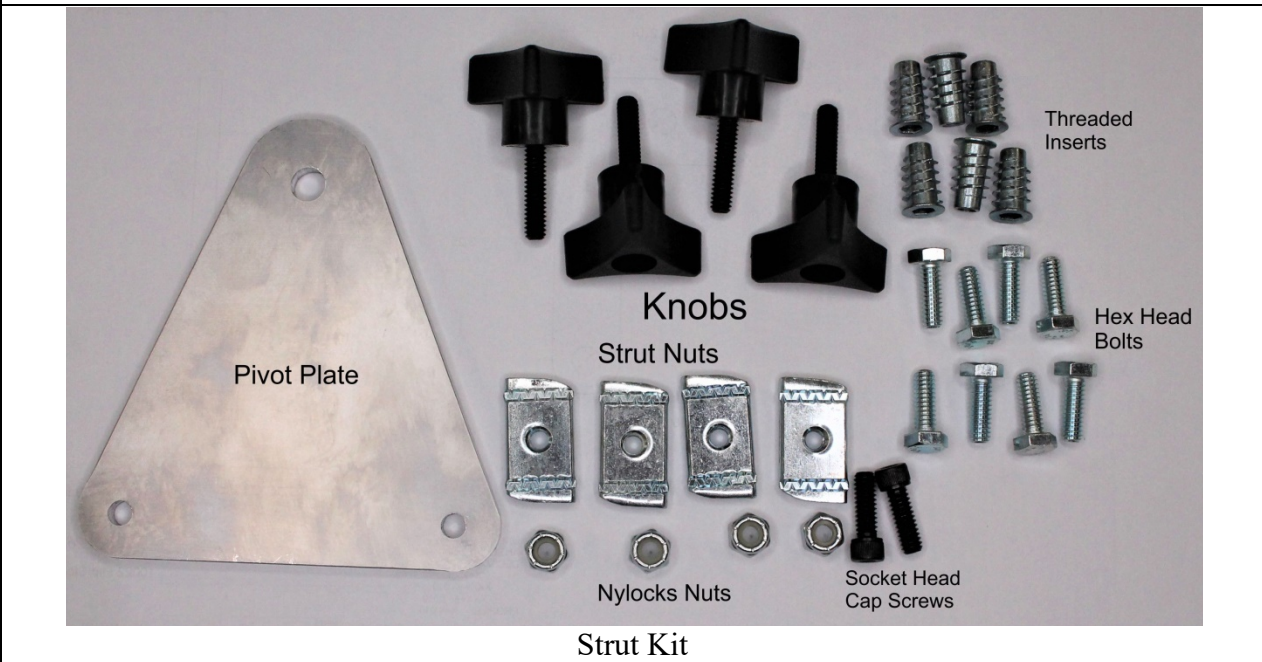
Hardware for Rail Assy



Hardware for Counter Balance Assy



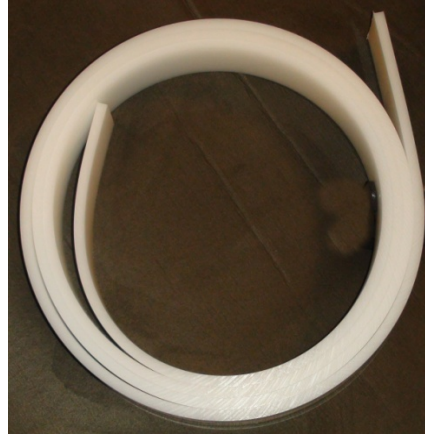
Hardware for Fence Assy



Strut Kit

Bearing – 3/16” x 1-7/16 x 60” HD Polyethylene (2)

These strips are shipped inside of the guide rails. These HDPE strips have a very low coefficient of friction. They are the ideal material to use in place of rollers on the fence of a panel saw. The old Swap Saw™ came with 8’ of this material. We now provide 10’ so you can enjoy the greater stability of a 10’ fence. If storage is a problem, you can always build an 8’ fence.



### Shopping List

Door Hinges (6)

Screws #8 Flat Head 5/8” long (36)

Screws #8 Flat Head 1/2” long (18)

3/4” Plywood (one sheet) as flat as possible.

1/2” OSB (or other suitable material) 2’ x 5’

2 x 4 x 96” (1)

2 x 6 x 8’ or 10’ (1) (As straight as possible) A 10’ fence will give you greater stability. An 8’ fence stores more easily.



## Swap Saw™ Build Instructions:

Please Note: A2 Equipment LLC has created a series of videos showing the complete build. These were created for our previous version (last sold in 2016). The current version of the Swap Saw™ is almost identical. The differences are as follows:

- The current version only works with the DeWalt DWE 575 circular saw.
- The current carriage accepts both the saw and a variety of routers. Attaching the saw is different. Attaching the router is the same.
- You no longer need to build the struts as they are supplied with the kit.
- The struts formerly were held onto the back panels with knobs. They are now held on with ¼-20 x .75" long hex head bolts.
- The locating blocks have changed and attach differently. The old method will still work but the new blocks are preferable.
- The knobs that hold the struts to the back panels used to go into t-nuts. These t-nuts have been replaced with threaded inserts.

New videos have been created showing how to attach the circular saw and the router and how to make the fence (using a new template that makes it much easier).



[Link to Videos](#)

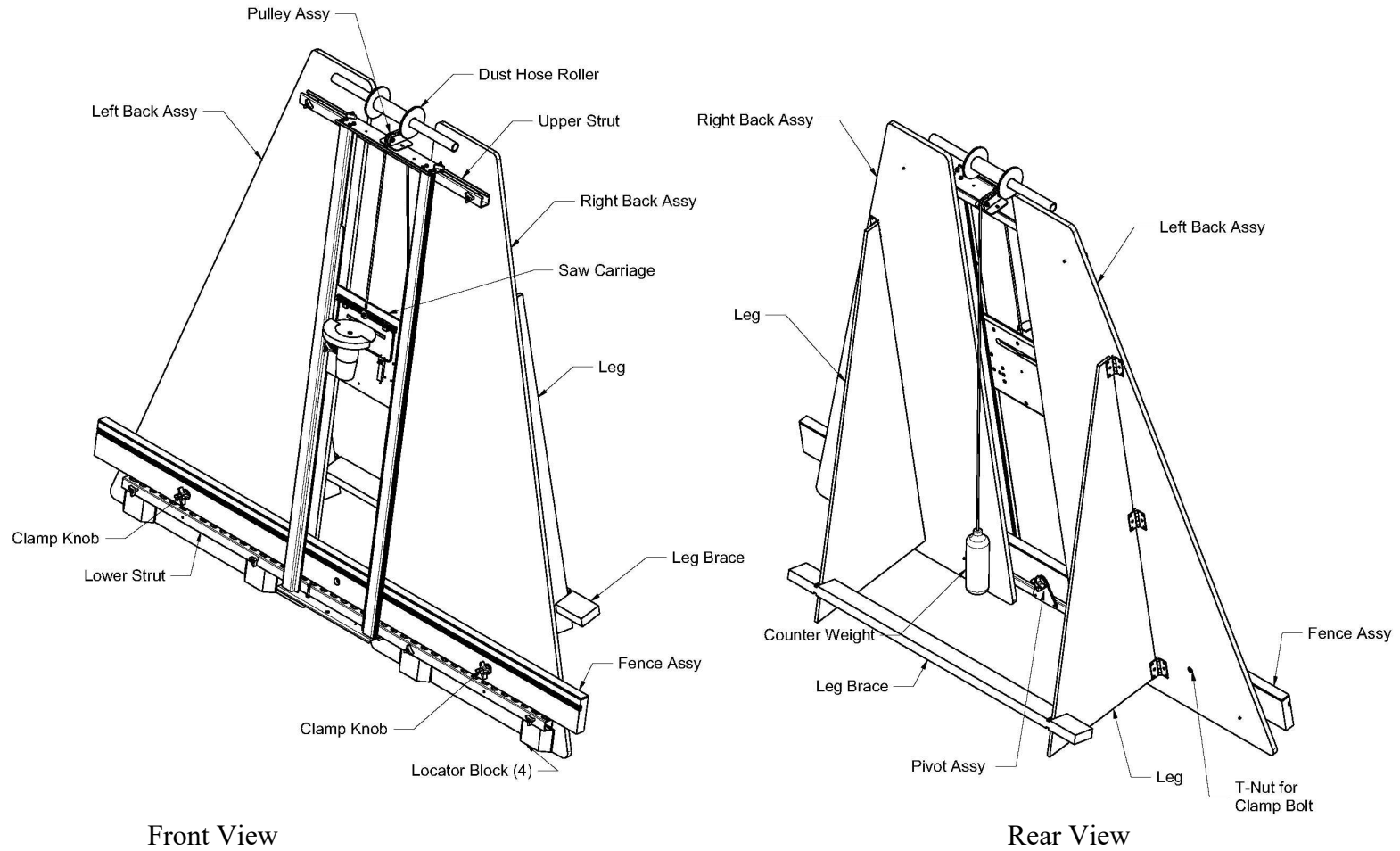
Your Swap Saw™ consists of the following major components:

1. Back Panel Assemblies
2. Upper Strut
3. Lower Strut
4. Leg Brace
5. The Guide Frame Assembly.
6. Fence assembly
7. Router and Saw Carriages

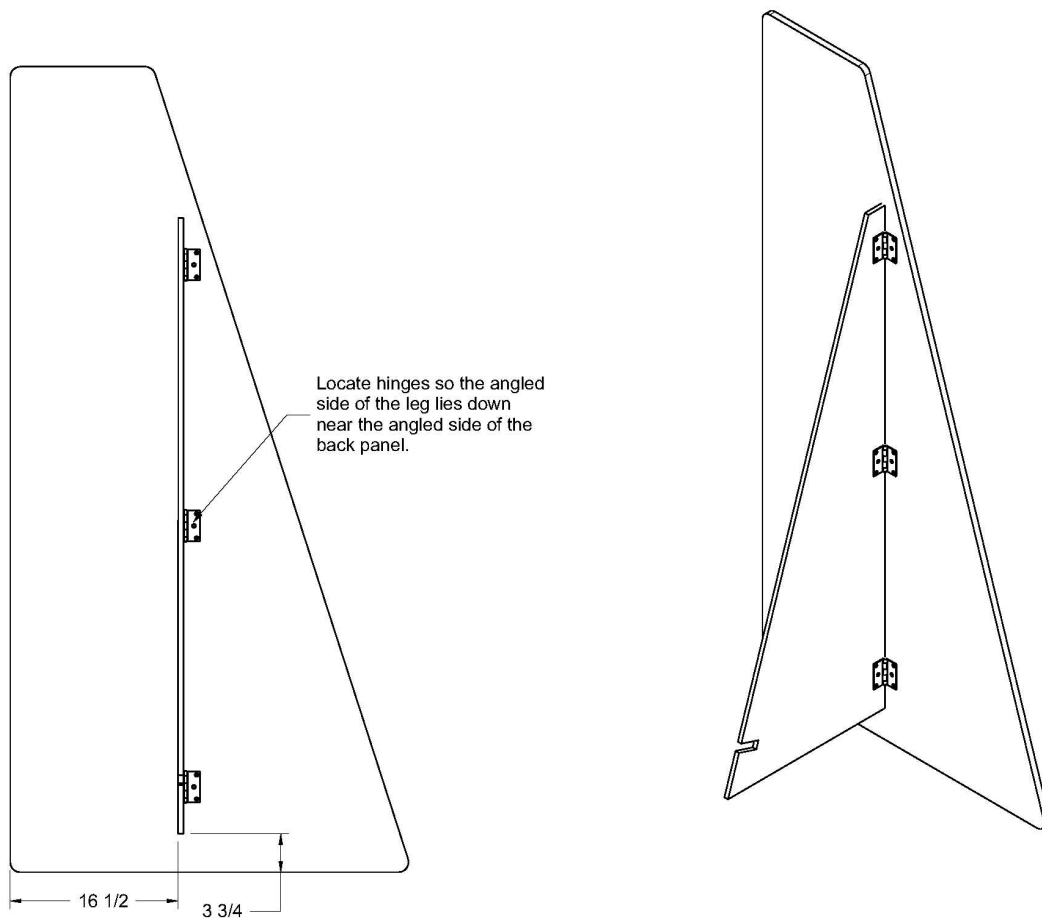
The image on the next page also shows a large roller for the dust hose to pass over. This roller does not come with the kit. These rollers are easy to obtain. Most hardware stores buy rope, chain, wire and other goods on spools. Most hardware stores are happy to give these to their customers. You may have to wait a few days before one becomes available. I personally use the spool that the rope (for the counter balance) came on. I also use ¾" PVC pipe as the axle for the spool to spin on.

The same image also shows a counter weight for the counter balance. This does not come with the kit. I used a 1 liter soda bottle filled with lead shot (hard to get these days). It is attached by drilling a ¼" hole in the center of the cap, passing the rope through the hole and a ¼" steel washer (customer supplied) and tying a knot to retain.

Overview:



## Back Panel Assemblies



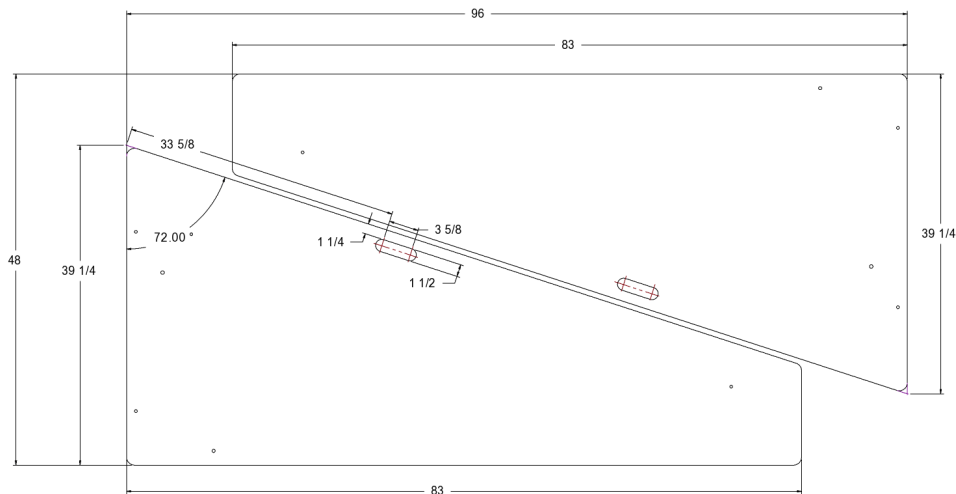
Assemble leg to back panel with door hinges as shown. The screws that come with most door hinges are too long. Make certain that the screws do not go all the way through the  $\frac{3}{4}$ " plywood back. The screws should be  $\frac{5}{8}$ " or shorter for the  $\frac{3}{4}$ " plywood. The screws for the legs should be no more than  $\frac{1}{2}$ " long.

Without the legs, the back panels have too much flex in them. The leg also acts to stiffen the back. The left back panel is shown. The right back panel is mirror image to this one.

## Back Panels

Cut your back panels from a single sheet of  $\frac{3}{4}$ " plywood as shown:

Note: Cutting both pieces from a single sheet of AC plywood will result in one back panel with a "A" finish and the other with a "C" finish. If you want an "A" finish on both panels you may need to purchase hardwood plywood (oak or birch). Additionally,  $\frac{3}{4}$ " plywood is actually  $\frac{23}{32}$ " thick. Many suppliers sell 18mm (.708") import plywood as  $\frac{3}{4}$ " and don't bother to mention the substitution. 18mm can work; however, the width of the dado in the locator block should be adjusted accordingly. Always use a plywood blade (60 teeth minimum on a  $7\text{-}\frac{1}{4}$ " blade) to cut plywood, otherwise you will get unsightly tearout. Both panels are identical. We have a CAD file on our downloads page that can be used to program this on a CNC router. If using a CNC router you may machine all the holes in the drawing below. If not, these holes should be drilled according to the instructions covered later in this manual.

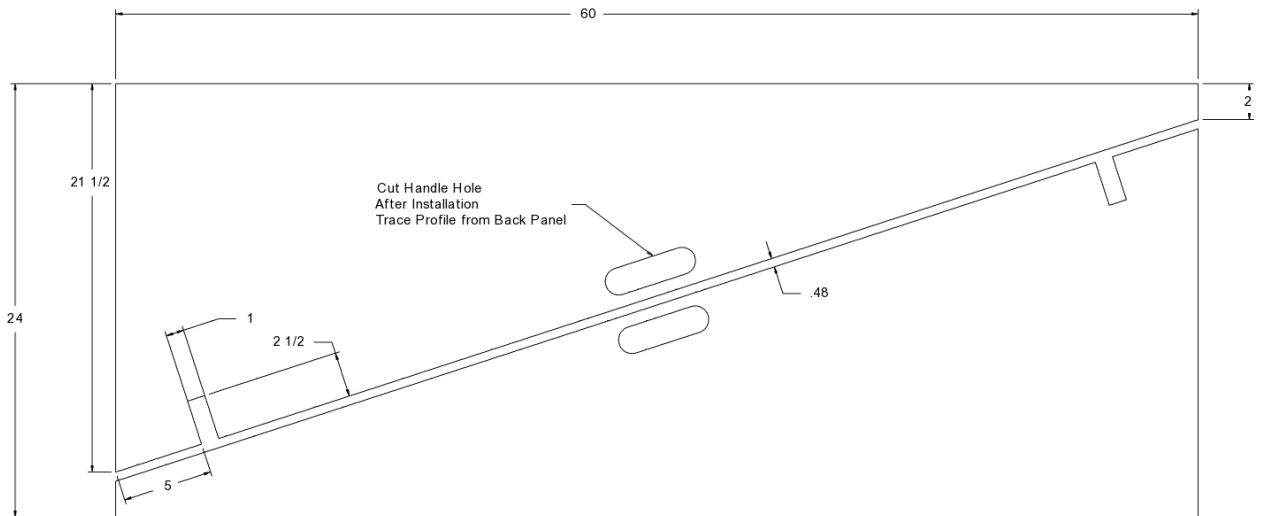


Measure 39.25 inches from one corner and make a mark. Repeat on the opposite corner. Cut on a line between the two marks and you will have your two back panels. Next, cut each panel at 83" tall as shown. Radius the corners to give it a clean, finished look. Spray paint cans are typically about  $2\ \frac{1}{2}$ " in diameter and make a convenient radius marking tool.

Tip!: The back can be any shape you want so long as it is wide enough to support your work piece. A full sheet on each side would work. Strut Channel comes in 10 foot lengths so you would need two pieces, one for the top and another for the bottom, to make that happen. You kit comes with two strut channels, a 74" piece for the bottom and a 36" piece for the top. A steel strut channel from Home Depot or Lowes would cost less than just the shipping costs for a second lower channel from us.

Note: You can mount a roller for your vacuum hose at the top of your Swap Saw™. We do not include the hardware for the roller. Hardware stores get wire, rope, chain, etc. on spools that make good rollers. Your local hardware store may be able to supply you with a suitable spool. Simply screw a piece of electrical conduit or PVC pipe to the back panels to hold the roller. You may have to put a spacer between the pipe and the back panels for optimum performance.

## Legs

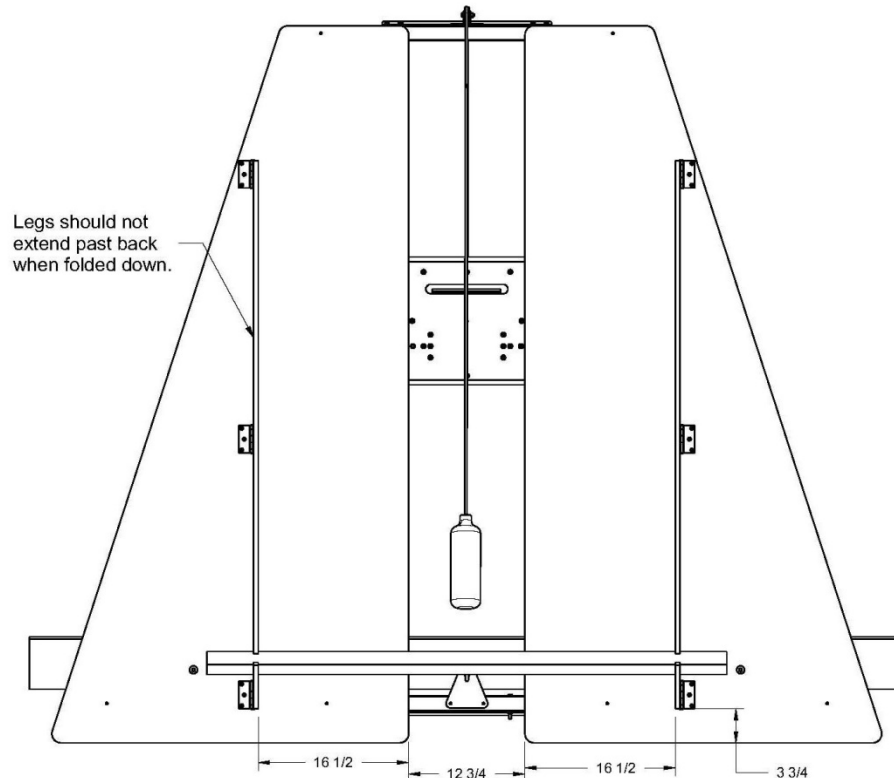
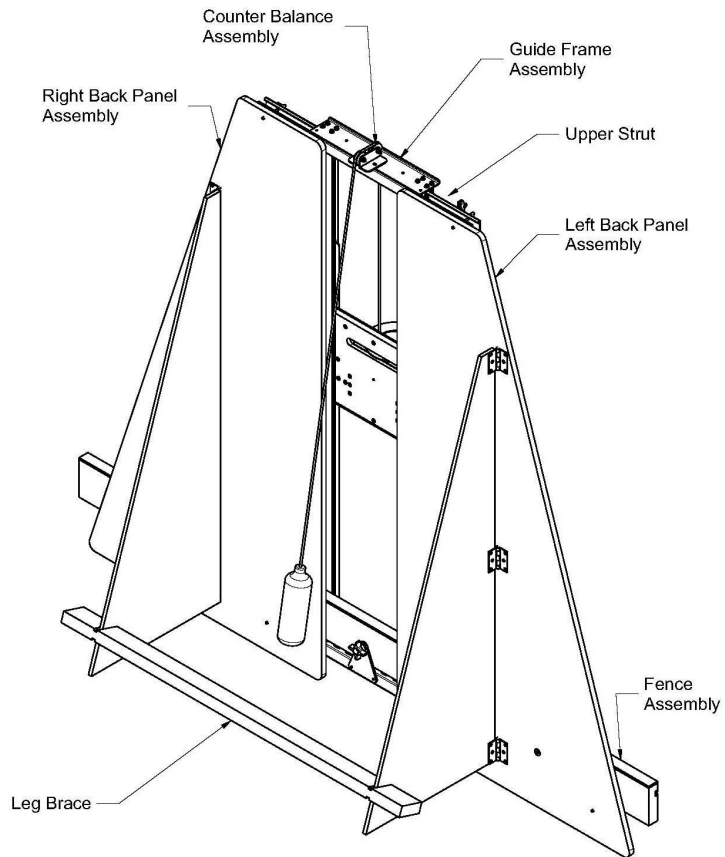


Cut both legs from a single piece of  $\frac{1}{2}$ " OSB measuring 5 feet by 2 feet. Of course you can substitute with any  $\frac{1}{2}$ " plywood.

Cut each leg as shown. The notch is for the leg brace. It was located as shown to ensure that the leg brace would not interfere with the counterweight. If you move the notch higher the leg brace may interfere with the counter weight.

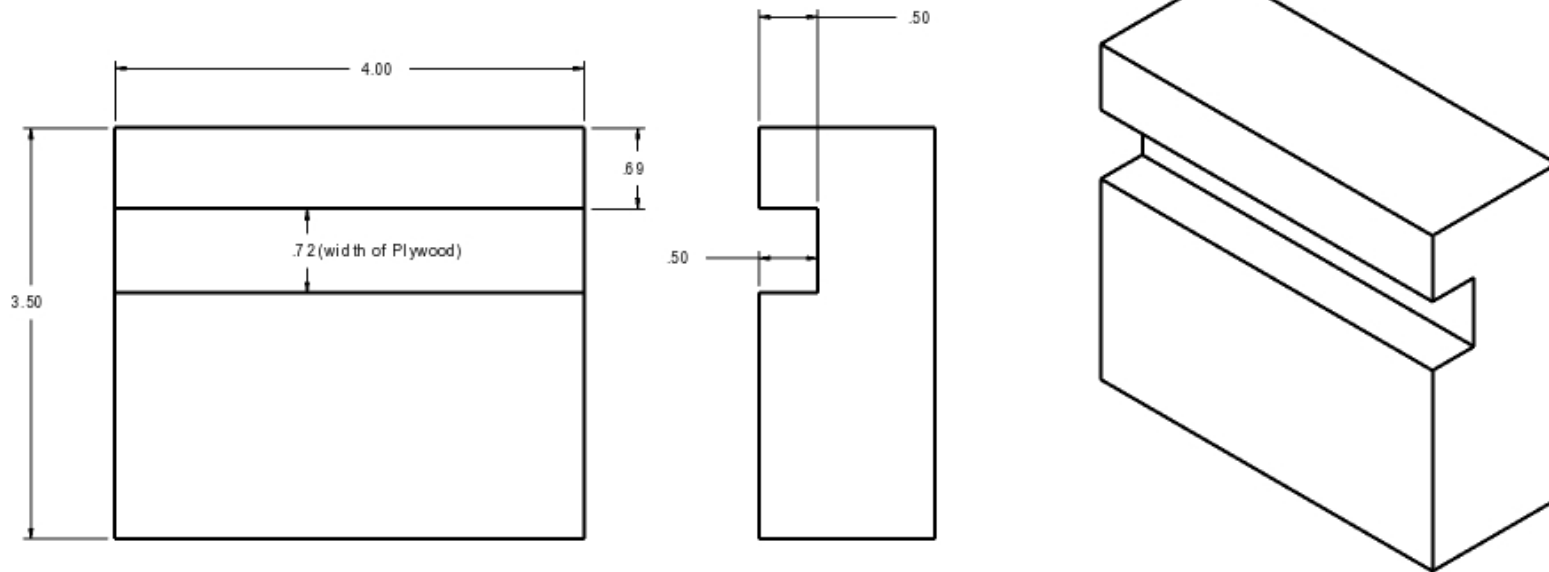
If desired a handle (oblong hole) can be added. This should be done after the leg is assembled to the back panels. Locate the handle hole by tracing its outline from the back panel insuring an exact match. Be sure to sand all edges to reduce the possibility of splinters.

Both legs are identical.



The legs must be perpendicular to the bottom of the back panels or the leg brace will not fit in the slots. The leg is located 3-3/4" above the bottom of the back panel. Lowering the leg will make the saw stand more vertical. Raising the leg will make it lean back at more of an angle. You can remove material at the contact point of the leg to make it lean back more if desired. Note the hinges are located on the outside of the legs. Use inexpensive door hinges. Home Depot has some very inexpensive hinges.

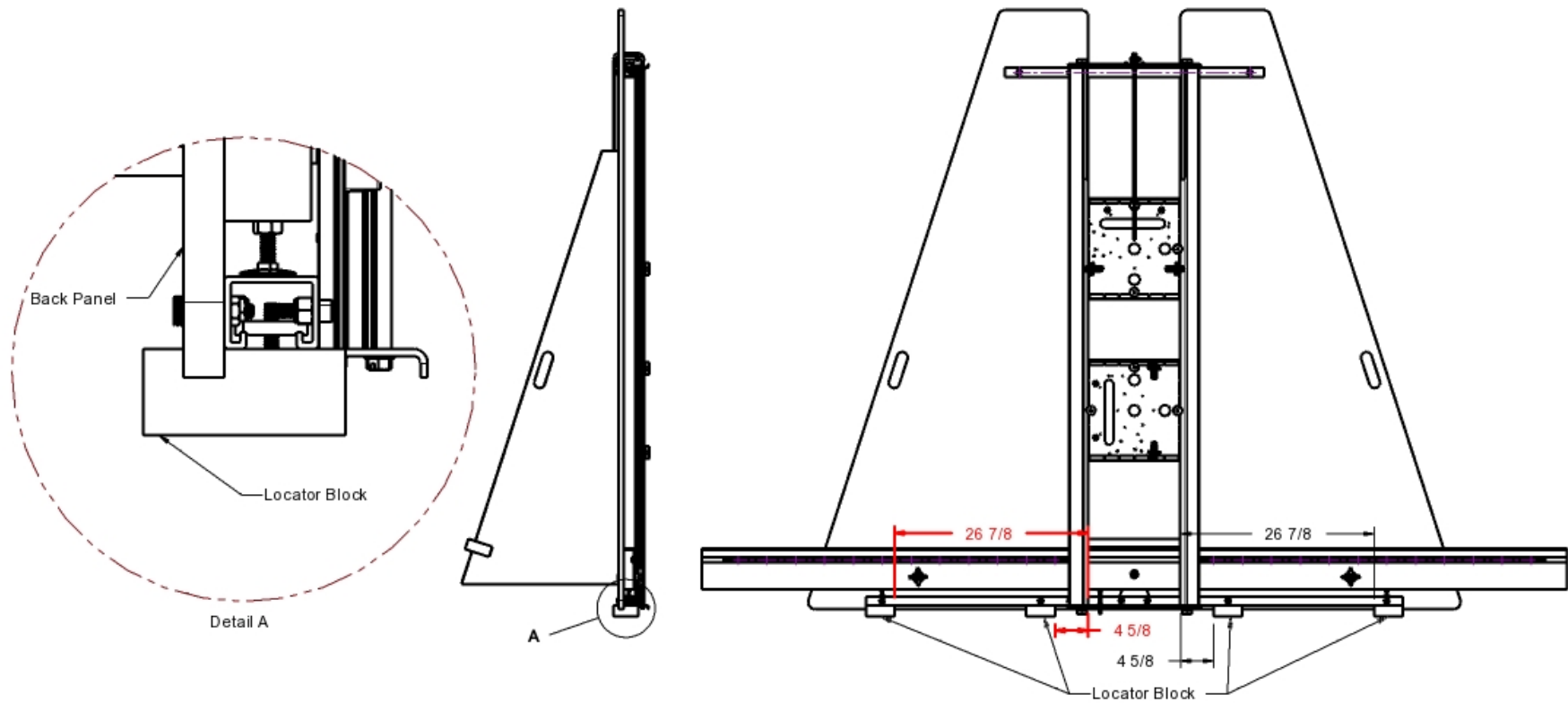
### Locator Blocks



### Locator Blocks

The locator blocks (above) are made from a simple 2 x 4. They provide a convenient shelf for the lower strut to sit on while you assemble the rails and struts to the back assembly. In the USA  $\frac{3}{4}$ " plywood is  $\frac{1}{32}$ " undersized or .718" thick. Many suppliers supply 18mm plywood as  $\frac{3}{4}$ " plywood without even telling you what they did.

It is very important that the dados be a consistent depth and the thickness of the part be 1.5", especially if you download the CAD files from [www.a2eq.com](http://www.a2eq.com) and make the back panels with a CNC machine like a router. If the dado is not  $\frac{1}{2}$ " deep then the holes machined by the router in the back panel for the fasteners will not line up. You can recover from this, just plug the holes by gluing dowels into the back panels and drill new holes.

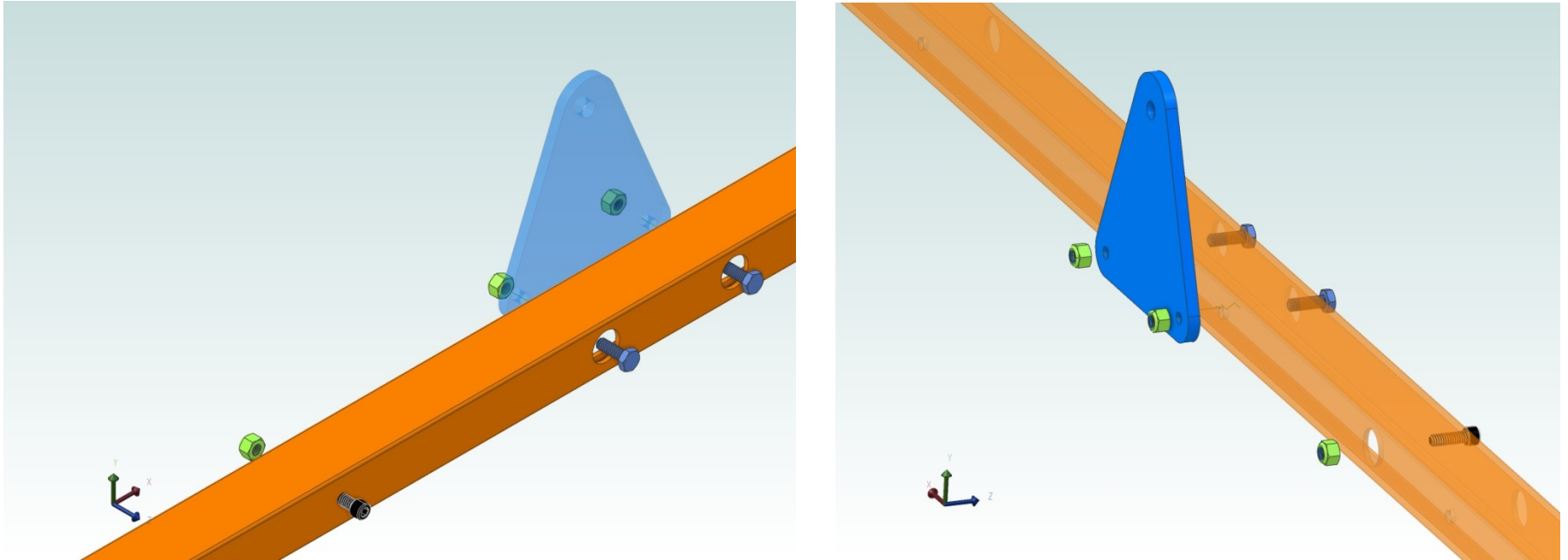


### Locator Block Placement

The locator blocks are placed as shown above. The lateral placement is not critical. If they are within  $\frac{1}{2}$ " you are good. Also note that if you are cutting the back panels on a CNC router it is critical that the dados in the locator blocks be within  $\frac{1}{32}$ " of  $\frac{1}{2}$ " deep, otherwise the holes for the lower struts will not match. If they do not match, the offending holes will need to be plugged and drilled in the correct location.



## Assembling Pivot Plate to Lower Strut

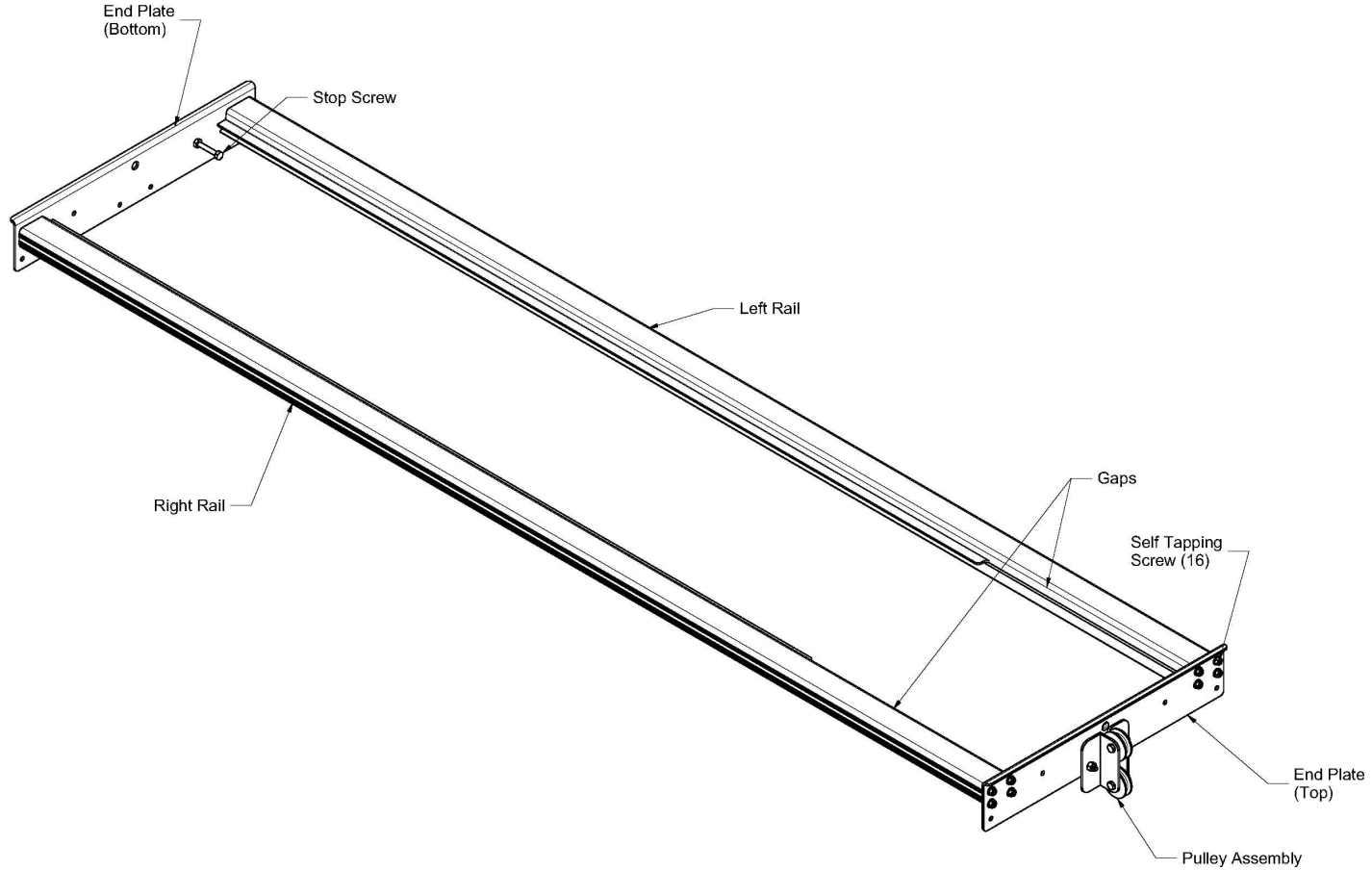


## Installing Pivot Plate and Index Screw

Assemble the pivot plate to the lower strut as shown. The pivot plate has been made translucent for your clarity. There is a large access hole on the far side of the strut making it far easier to install the bolts.

Assemble the Socket Head Cap Screw (Index Screw) as shown.

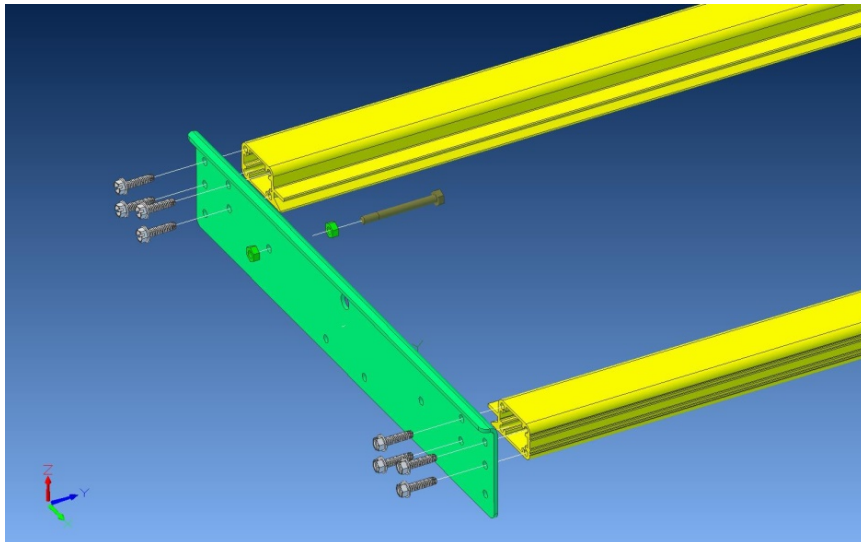
Note: The pivot plate extends away (up) from the open side of the channel, which is open on the bottom side. The pivot plate and the Index Screw are located on opposite sides of the strut.



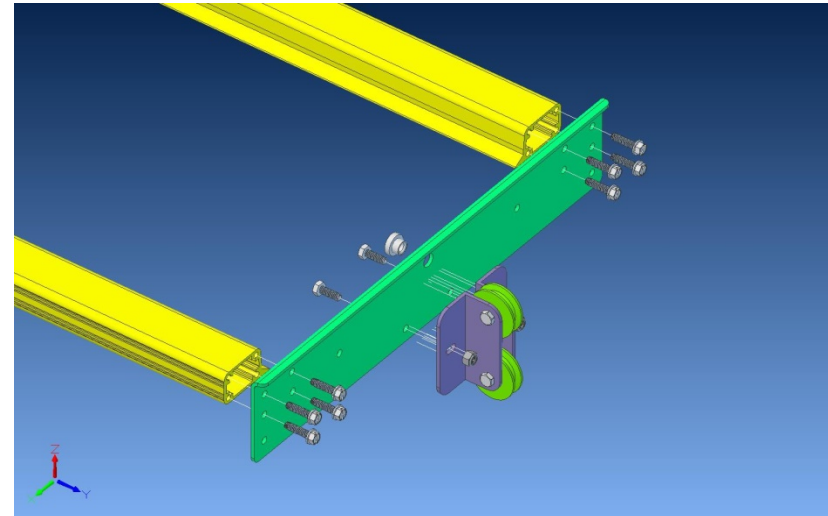
## Rail Assembly

The left and right rails have a flange machined away; creating a gap that enables amazingly fast tool changes. The gap goes at the top (at the right in the drawing above). The upper end plate (the end plate with the bushing installed) is installed at the end of the rails with the gaps. The other end plate obviously goes at the opposite end. The purpose of the bushing is to prevent wear on the rope that goes to the counterweight.

## Rail Assembly (Exploded View)



Bottom End

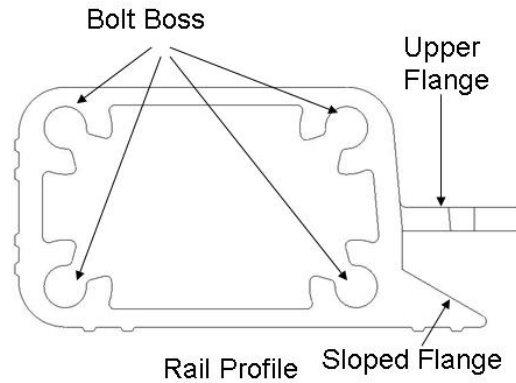
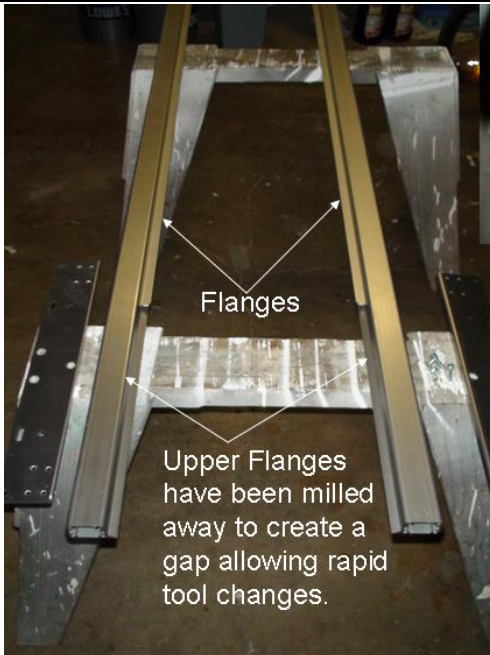


Top End

Fasten end plates to the each end of the rails with self-tapping screws (16 included). **Do not over tighten the screws as this can damage the rails.** The bushing was installed in the upper end plate at the factory. One of the holes in each of the rails is offset so the end plates will only fit one way.

Fasten the pulley assembly to the upper plate with  $\frac{1}{4}$ -20 x .75" long hex head bolts as shown. Ensure that the pulley assembly is located such that the rope will pass through the bushing without touching the bushing.

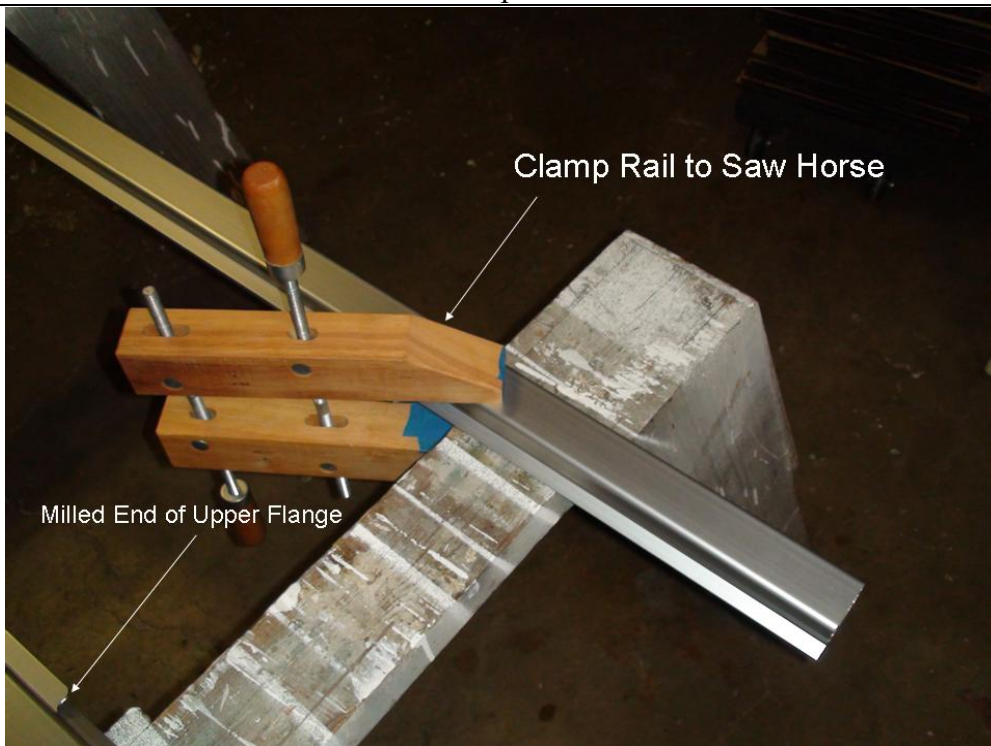
Assembling the guides and carriage:



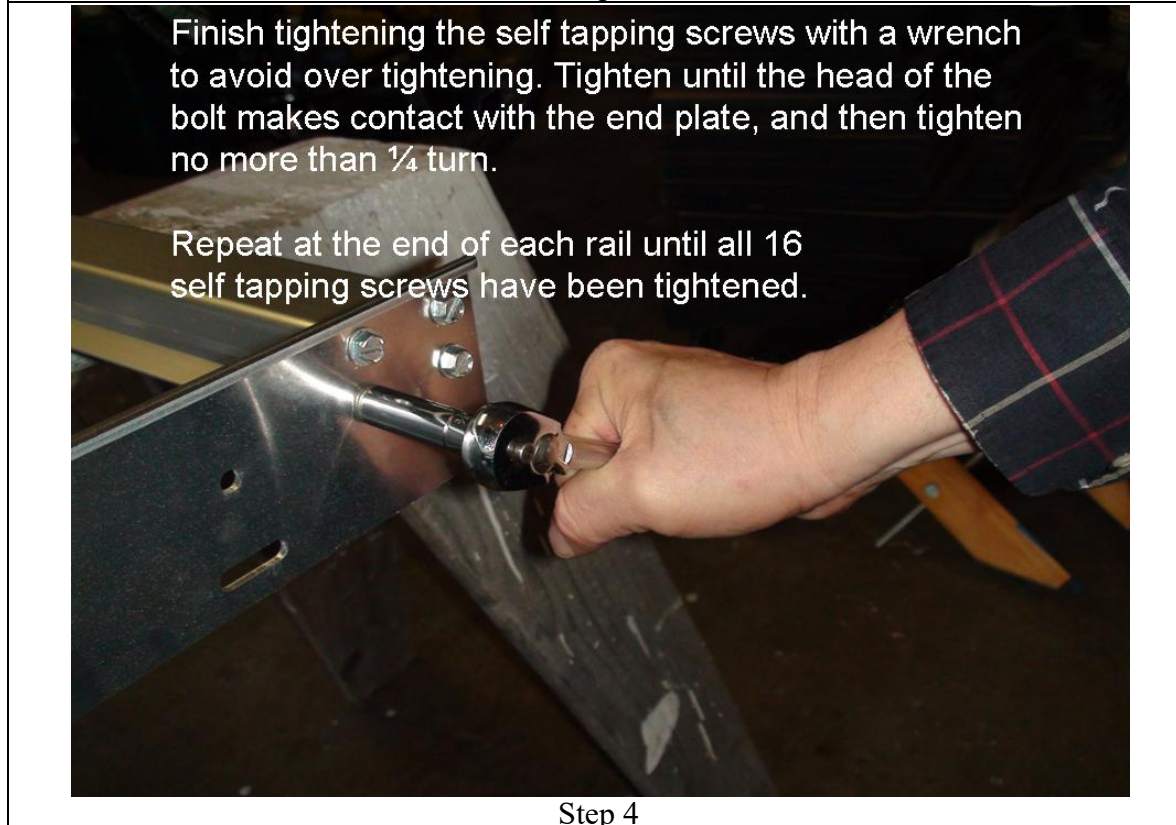
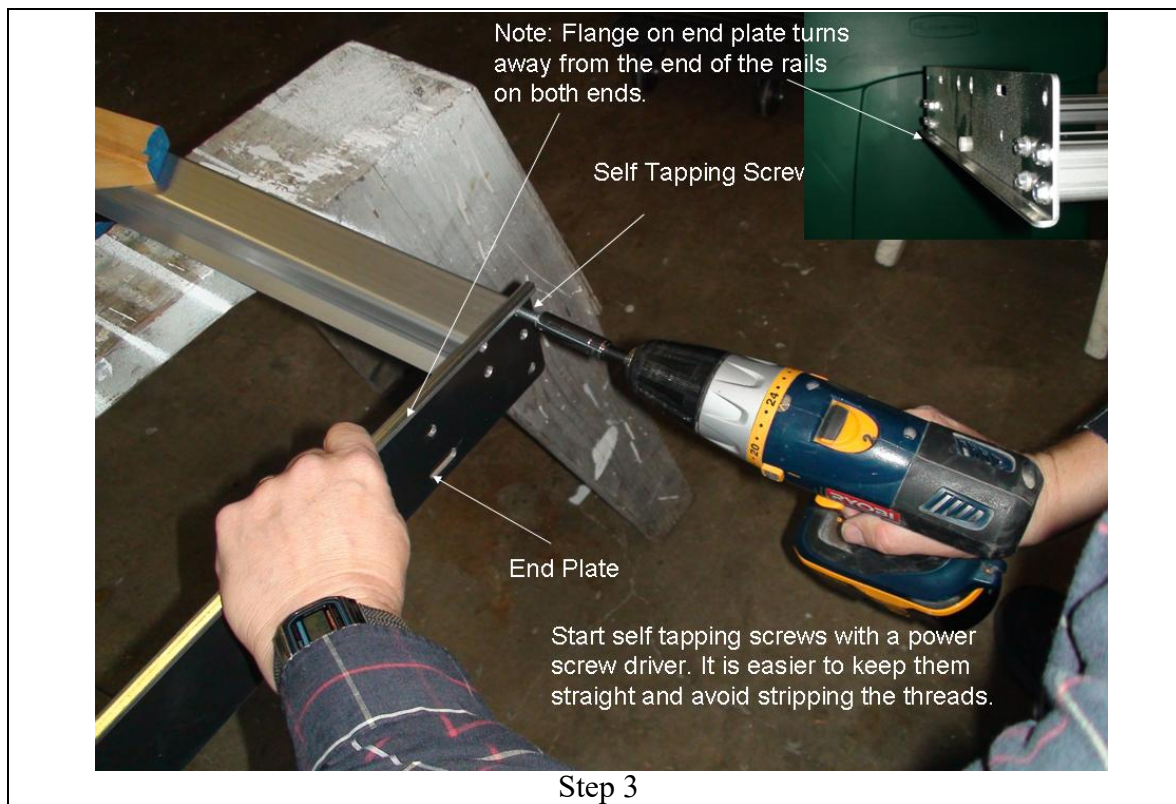
Locate Rails on Saw Horses with flanges facing each other. The flanges form a channel for the tool carriages to slide in.

The rails have four bolt bosses each an upper flange and a sloped flange. The upper flange has been milled away at the top end of each rail.

Step 1

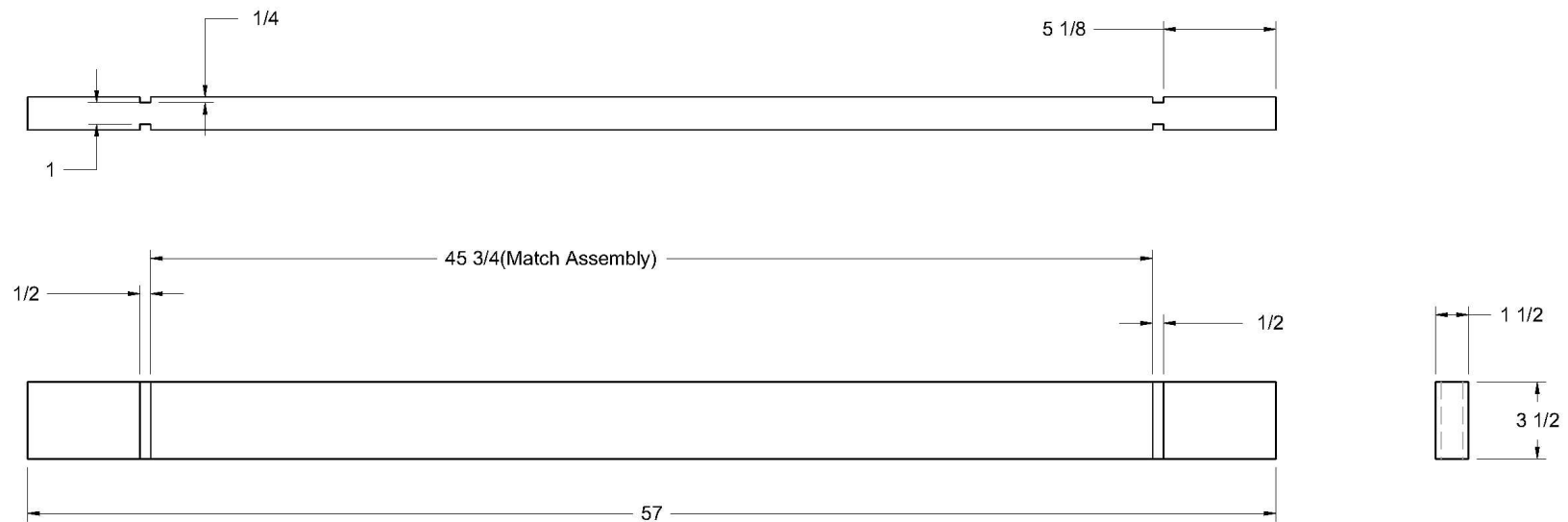


Step 2



## Leg Brace

Make the leg brace from a 2 x 4 stick of lumber.

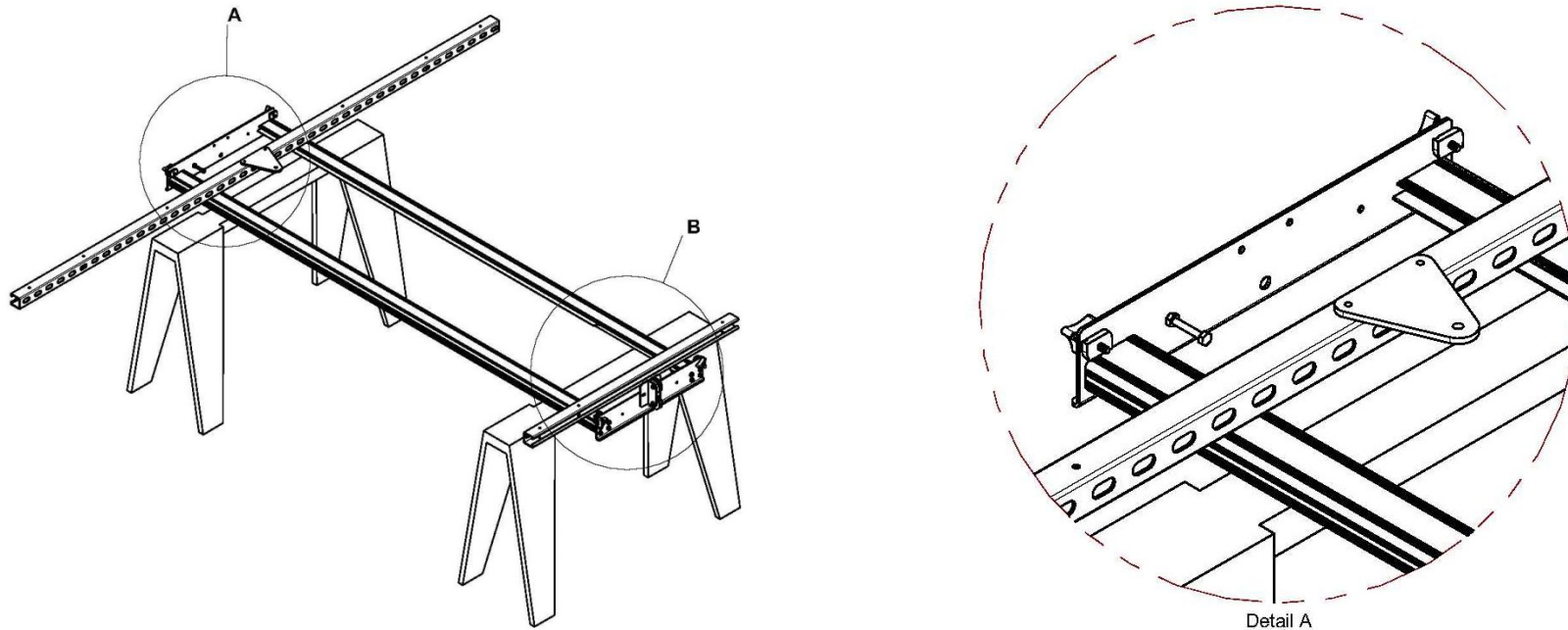


Remember 1/2" Plywood (or OSB) is not 1/2" thick. Router bits exist that exactly match the thickness of today's undersized plywood.

The dimension for the spacing of the dadoes is theoretical. Locate dadoes on this part to match the location of the mating parts (slots in the legs). (As Built Condition)

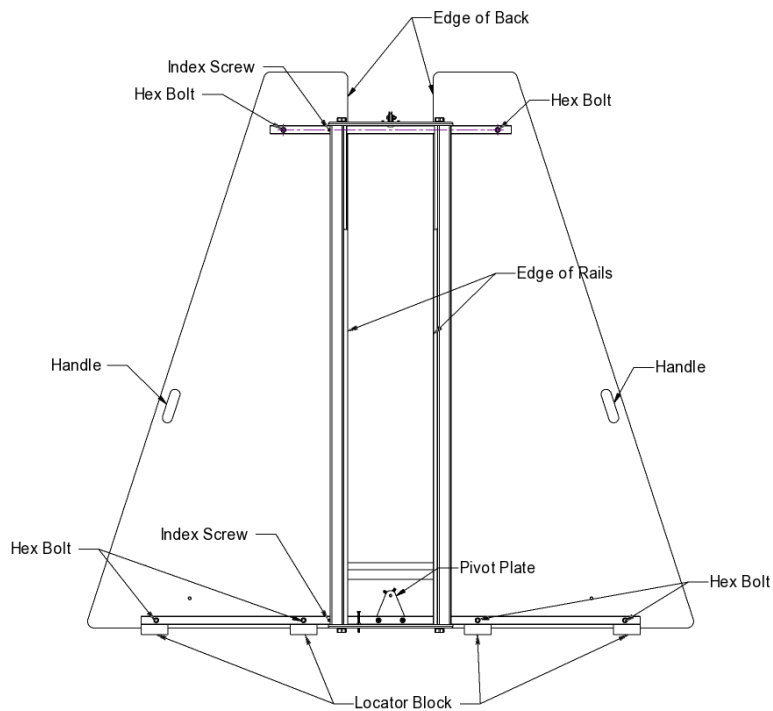
You will need to assemble the back assemblies with legs before fabricating the leg brace.

## Assemble Frame to Struts



Locate the frame assembly on a couple of saw horses with the front facing down. The end plates extend beyond the rails significantly on the back.

Place the lower strut at the bottom end (the gap for inserting the saw and router carriages is at the top) with the open side of the strut facing down and with the Socket Head Cap Screw to the side (not between) of the rails. Slide the strut until the Socket Head Cap Screw comes in contact with the rail. This indexes the strut to the rail and is a critical part of maintaining the accuracy of your saw, then tighten the knobs with the strut nuts. Ensure the nuts rotate by manually pulling on the strut. It is possible for the nut to tighten up completely and not rotate. If this happens you may have a strut hit you on the head when you pick up the assembly. (Don't ask me how I know.) This applies to both the upper and lower struts.



Once the struts have been attached to the frame, it is time to align the frame to the two back assemblies. The easiest way to accomplish this is to lay the right and left back assemblies down on supports such as saw horses (or 5 gallon buckets). One support at the narrow end and two buckets at the wide end of the two back assemblies works nicely.

Set the frame assembly, with both struts attached, on top of the two back assemblies. Ensure that the lower strut is in contact with the locator blocks on the bottom. The pivot plate is on the back side.

Align the edges of the back (shown at left) with the edges of the rails. They don't have to match exactly, but try to get them as close to parallel as possible.

Once you have it set in place, clamp the struts to the back. Using the bolt holes as a guide, drill through the back plywood in all six knob locations. Remove the clamps and the rail assembly.

Next, open the knob holes you just drilled in the back up to 11/32" and install the threaded inserts from the back side, in both back pieces

Replace the guide assembly and secure with hex head bolts.



## Fence Assembly

Building the fence is the most difficult part of building the Swap Saw™. It is tempting to just provide a drawing of the finished fence and just build it. That would be easy; however, that approach creates two problems:

1. The center of the clamping holes must line up with corresponding holes in the back panels. If these holes were drilled full size (1") right out of the gate, there would not be a good way to find the center of these holes and transfer them to the back panels without specialized tools.
2. The T-nut for the pivot bolt must be counter bored. If the 7/16" diameter hole for the t-nut were drilled first, the counter bore probably would not be concentric and it would not look professional.

The entire fence can be made easily if we remember two things:

1. Counter bore the center hole (for the pivot bolt) before drilling the 7/16" through hole.
2. Drill 1/8" pilot holes for the clamp bolts, insert the fence between the rails and the back panels, transfer the hole, remove the fence and open these 1/8" holes up to the full 1" diameter.

A template has been provided to make it easy to lay out the fence quickly and with a minimum of measurement. Instructions are on the template.

Operations that can be completed before transferring clamp holes to the back panels:

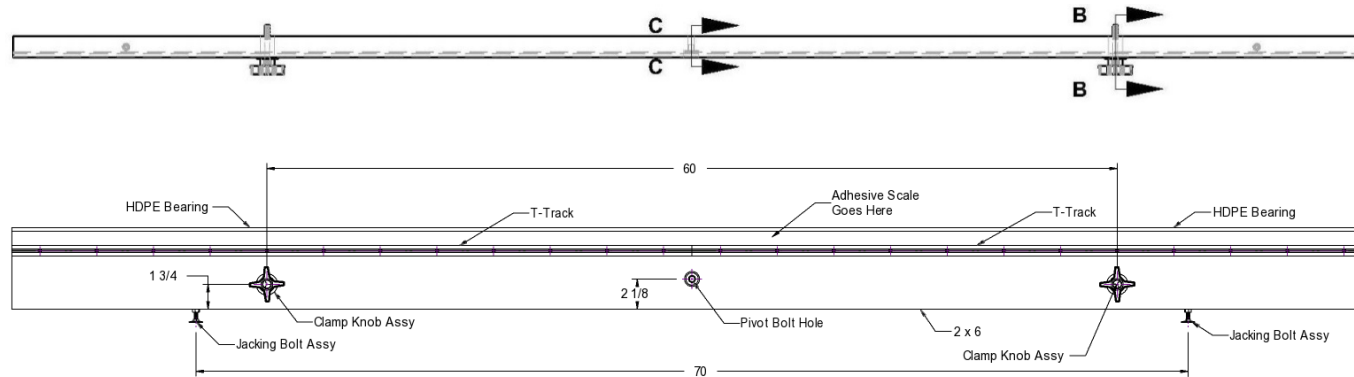
1. Buy the straightest 2 x 6 x 8' or 10' possible.
2. Run the top edge across a jointer.
3. Mark the center of the 2 x 6 (4' from each end for an 8' fence, 5' for a 10' fence).
4. Locate the template on the fence, aligning the centerline of the template with the centerline of the 2 x 6. Also align the template to the top edge of the 2 x 6.
5. Drill 1/8" pilot holes at the center of the pivot bolt hole and both clamp bolt locations.
6. Counter bore the pivot bolt hole 3/4" dia. and 3/4" deep.
7. Drill a full size hole for the pivot bolt (7/16") all the way through.
8. Install the t-nut for the pivot bolt.
9. Cut the dado for the t-track (if desired).
10. Drill holes for the jacking screws. (11/32") on the bottom of the fence.
11. Install threaded inserts for jacking screws.
12. Install jacking screws along with the locking nuts.
13. Adjust jacking screws to stick out 3/4" from the bottom.

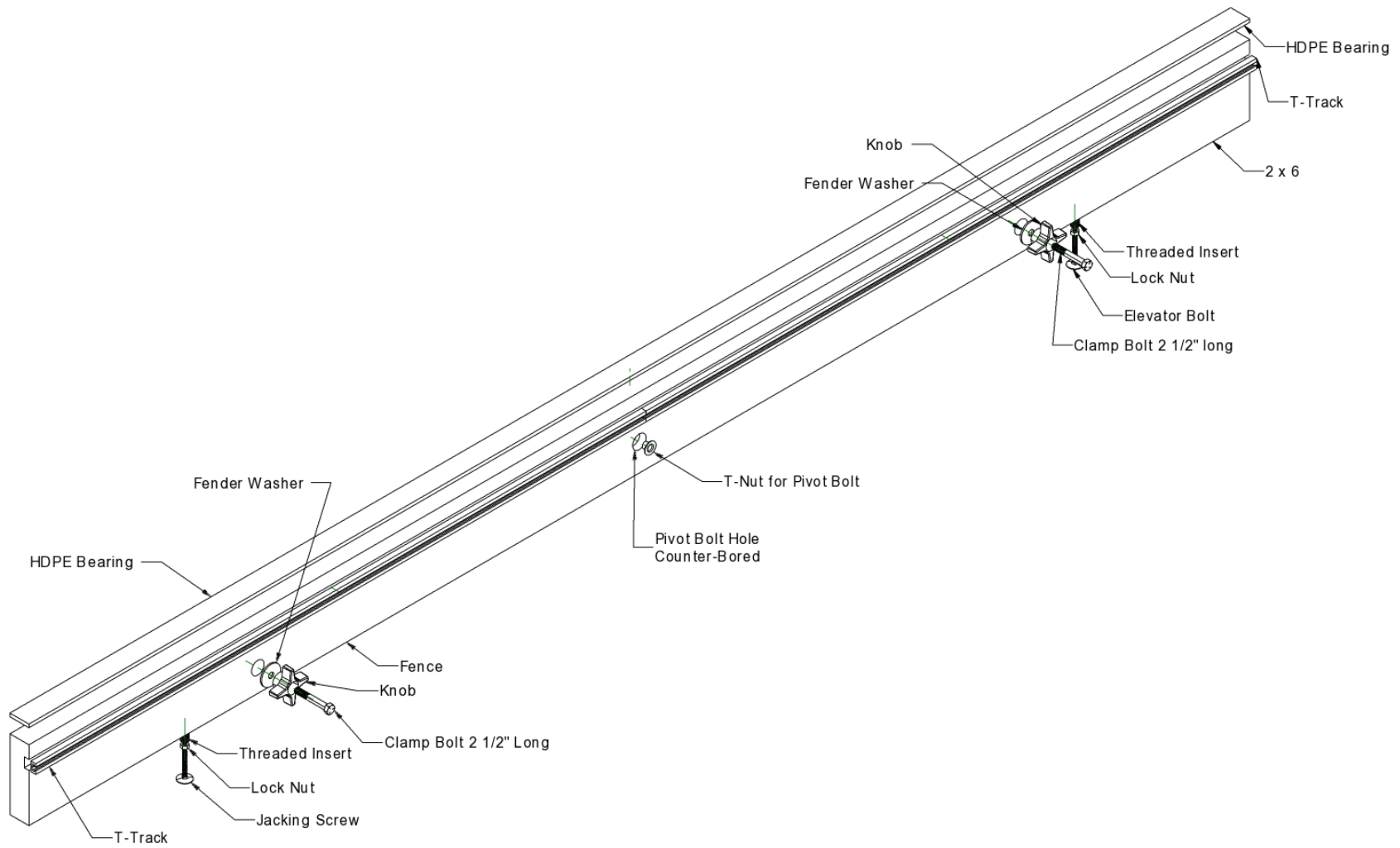
Once the above operations have been completed, insert the fence between the rails and the back panels, insert and tighten the pivot bolt, square the fence to the rails and transfer the clamp bolt holes by drilling through the 1/8" holes in the fence through to the back panels.

Once this has been completed, the following tasks can be performed:

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Open up the clamp bolt holes in the back panels to 1 1/32" and install the threaded inserts.</li> <li>2. Drill the clamp bolt holes full size (1").</li> <li>3. Place the fence back in the saw (between the rails and the back panels) and tighten the pivot bolt, install the clamp bolts.</li> <li>4. Square fence to the rails.</li> </ol> | <ol style="list-style-type: none"> <li>5. Make a cut in the fence with the saw. This will mark the location to install the HDPE (High Density PolyEthylene) bearing material that goes on top of the fence. Each piece will extend from the cut away from the saw to the end of the fence.</li> <li>6. Drill and counter sink screw holes for the HDPE bearing. I personally use two screws on each side. One near the saw cut and one near the end of the fence.</li> </ol> |
|--|--|

If you wish to apply adhesive backed right and left reading scales to the fence it will be necessary to sand the area between the t-track and the HDPE bearing and apply a finish like varnish, lacquer, or similar material so the scale will stick to the fence.





**Fence Assy Exploded View**

|  |  |
|--|--|
| <p>Polyethylene Bearing</p> <p>3/4</p> <p>3/8</p> <p>1</p> <p>Leave Room For adhesive Measuring Tape</p> <p>Threaded Insert Drill 3/8 Pilot</p> <p>T-Track</p> <p>1/4-20 Nut</p> <p>Jack Screw 2" 1/4-20 Fully Threaded</p> <p>Section A-A</p> | <p>We use two different types of threaded inserts depending upon availability.</p> <p>Drill a 3/8" pilot for brass inserts.</p> <p>The Steel inserts require a 1 1/32" pilot and are installed with a 6mm Hex Key.</p>   |
| <p>HDPE Bearing</p> <p>1.00</p> <p>3.75</p> <p>T-Track</p> <p>Clamp Knob</p> <p>Clamp bolt</p> <p>2 x 6</p> <p>Washer</p> <p>Lock Nut</p> <p>Jacking Screw</p> <p>Section B-B</p>  | <p>This is the detail (left) of the clamp bolt installation.</p> <p>Note: The threaded insert is not shown because the section cut does not pass through the jacking screw.</p> <p>The jacking screw is threaded into a threaded insert a few inches from the clamp knob assembly.</p> |
| <p>2 1/8</p> <p>7/16</p> <p>T-Nut</p> <p>1/2</p> <p>1</p> <p>Section C-C</p>   | <p>Pivot hole detail.</p>  |

After completing this work on the fence, insert the fence back into the assembly and using carpenters square; get the fence as close to square to the rails as reasonable. Insert and tighten the pivot knob first, then use the jacking screws on each end to adjust the fence for square. Once the fence is square, lock the jacking screws in place with the locking nut. Then tighten the knobs to clamp the fence to the back assemblies.

At this point the saw is basically finished. All that is left is to add a counter weight, mount the saw or router to the carriage assembly, and square the saw.

Note: The Swap Saw™ kit comes with two four foot long sections of t-track. If building a ten foot fence you will be two feet short of completely filling the dado with the t-track. The rail assembly makes it impossible to use the t-track between the rails. This is an 18 inch section. If you apply the t-track to each side of the fence, outside of the rails, there is only a three inch area on each side not covered by the t-track. This typically will not be an issue, plus you will have 18” more usable t-track than you would with an eight foot fence.

## Attaching the saw to the Saw Carriage:

We have standardized on the DeWalt DWE 575 or the DW 575 circular saws. The only difference between these two saws is the DWE has an electric brake. If you set up your saw with a switched duplex outlet (recommended) so you can turn both the saw and vacuum for dust collection, the electric brake will be useless as it will not work without power.

We have standardized on this saw because the shoe (plate on the bottom of the saw) is removable. Remove 7 screws (torx 20 heads) and the saw can be fastened directly to the carriage.

Note: The screws that come with the DeWalt saw are not long enough to be used (in the same locations) to attach the saw to the carriage. Use three of the screws at the front of the saw in the read mounting locations.

We have supplied four 4m-.7mm screws 16mm long to mount the saw at the front.

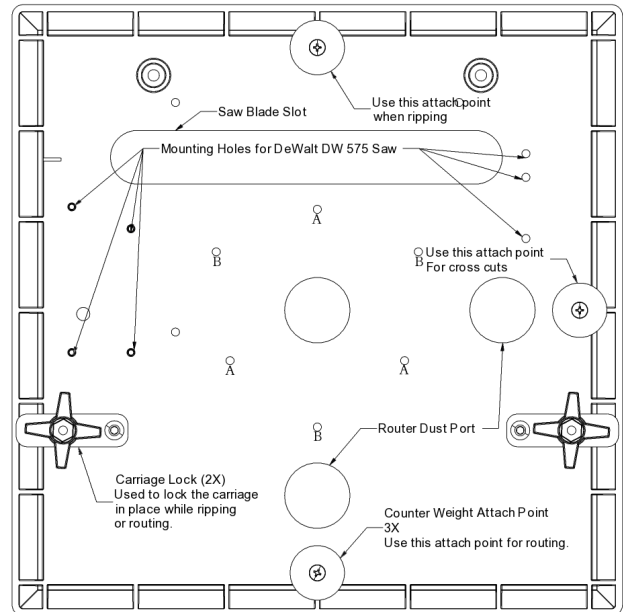
Store unused screws in a safe place. Torx head screws in this size are hard to find and very costly compared to other screws. I store mine in the shoe they came out of, with tape over them, then I store the shoe in the bag that came with the saw.

Also note: The dust collection fitting that you can buy from DeWalt for this saw is pretty much useless. Save your money. Don't buy it.

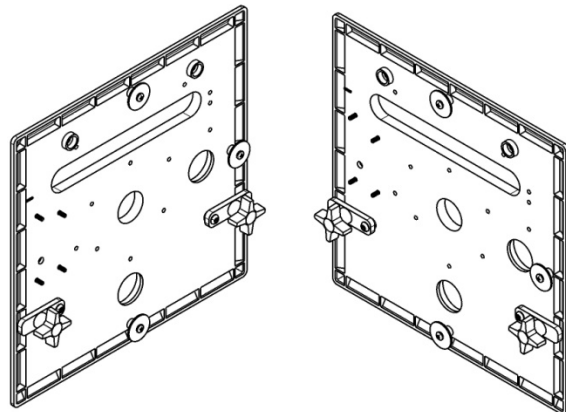
### Attaching the Router

Hole pattern A fits most professional routers with three holes. These include the Porter Cable 690 & 892, Ridged R22002, Bosch MRF23EVS, Makita 1100 series, Hitachi M12VC, DeWalt DW616 & DW618, Bosch 1617 and 1618 series Routers.

Hole pattern B is for. Craftsman and Skill routers and compatibles.



Universal Carriage

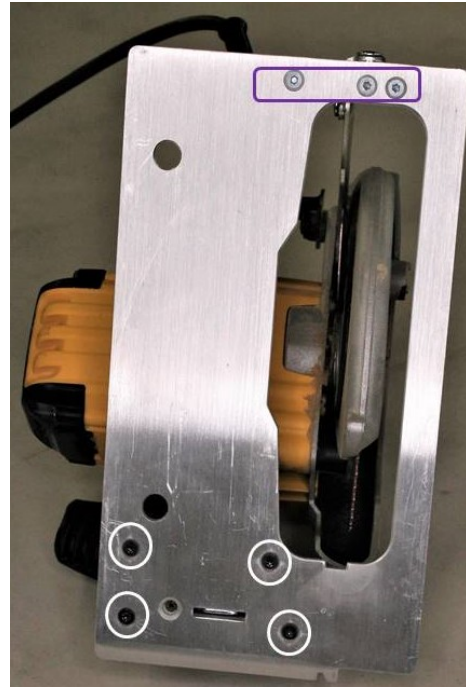


My advice is to take your carriage to the store with you when you shop for a router. Most stores will allow you to check it for fit if the alternative is to let you buy the router, take it home and try it. If it does not fit you will just return it.

Porter Cable and DeWalt (part of the same conglomerate) recently changed all their routers. It is unknown if the new models are compatible.



DeWalt DWE 575



DeWalt DWE 575 Shoe



Remove all seven screws from the shoe (photo upper right). The three screws at the top of the photo are too short to work with the Swap Saw™ carriage. When assembling to the carriage, use the four screws supplied with the kit at the front of the saw. Use the longer screws that came with your saw at the three fastener locations at the rear of the saw. Keep any unused

saws in a safe place so you can reattach the shoe. I store them in the holes they came out of in the shoe.

1. **Attach counter balance rope.** We chose to use a rope because a cable could potentially cut the hand of the operator and the operator must disconnect the rope from the carriage when changing the tool or changing the orientation of the saw. The rope should pass through the bushing in the top plate; go over the two pulleys and down to a weight. A loop should be tied in the end of the rope such that when the rope is disconnected from the carriage, the knot stops it from going through the bushing and over the top. The loop should be large enough to easily go around the attach point on the carriage.
2. **Attach counter weight.** Try to keep your counter weight short to avoid dragging on the ground when your carriage is all the way to the top of the guides. Many prefer to use a short length of PVC pipe (capped at both ends) filled with lead shot. Such a weight usually has an eyebolt at one end to attach to a rope or carabineer. Lead shot is not economical to ship so we did not include this item in the kit. In most cases your saw and router will be different weights so it is unlikely that your counter weight will be perfect for both tools unless you add weight to the lighter of the two to make them weigh the same. We do not recommend this. Most of the time it is unlikely that you will notice the difference.

As odd as it may sound, a one liter soda bottle filled with lead shot makes a very nice counter weight. The shape of the bottle prevents it from catching on things. Just drill a ¼” hole through the center of the cap, put the rope through the hole, place a ¼” washer over the rope, on the inside of the cap, and tie a knot in the rope. Place the cap on the bottle and it is connected. To remove the counter-weight, just remove the cap and place another cap (without a hole) on the bottle for transport.

Warning: Lead is a toxic material. Do not use where children or pets may get into it if the bottle was to break or the lead was to otherwise spill. Inspect the bottle regularly.

3. **Square fence to rails.**
  - a. Place a piece of masking tape vertically on the back panel. This tape should be at least 24” long and start just above the fence and continue up. Place the tape just outside of one of the rails (not between them.)
  - b. Cross cut a piece of scrap plywood at least two feet wide.
  - c. Keeping the freshly cut plywood in the same orientation, slide it over so that the edge you just cut is centered on the tape.
  - d. Draw a line on the tape using the edge of the plywood for a straight edge.
  - e. Slide the plywood out of the way and place a framing square on the fence next to the line you just drew.
  - f. Loosen the knobs and jacking screws that hold the fence in place and adjust the fence until the square aligns perfectly with the line on the tape.
  - g. Tighten the knobs and adjust the jacking screws so that the fence has been immobilized.
  - h. Make another cross cut and check for square.



## Operation

### Cross Cutting:

The saw is oriented vertically in the guides for cross cutting. You begin with the saw at the top of the guides (above the work piece) and the saw is moved downward through the work piece.



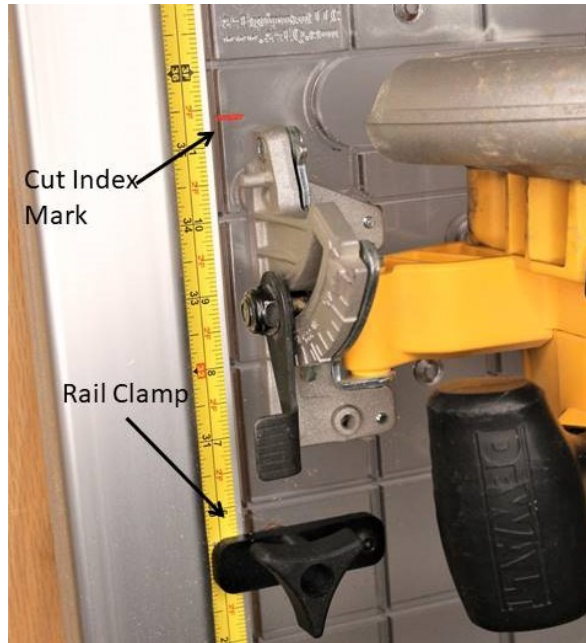
Saw Oriented for Cross Cutting

When Cross Cutting, be certain that you start above the work piece, you move the saw down the guides and that the saw is rotating as shown. (Scale Not Included.)

## Rip Cutting:



Saw orientation for rip cutting.



Adjust to the desired dimension and lock saw in place with both rail clamps.  
(Scale not included)



With rip cutting you move the work piece through the stationary saw. Feed your work piece as shown above. Be certain that both rail clamps are locked and your work piece engages the blade on the up stroke.

**Installing the saw or router:** Disconnect power from the power tools first before doing anything else. Make certain the switches on all power tools have been turned off, and if you have a switched outlet supplying power to the Swap Saw™, turn that off as well. You don't want the router or saw turning on unexpectedly.



After Removing the saw, place router near the opening in the guides with the counter balance attach point at the top as shown.



Insert into the guides.



Clamp to rails



Attach Counter Weight

Once the power tool has been inserted and attached to the rails,

### Routing:

There are a few important considerations for routing.

1. You must *secure your work piece*. Failure to do so will scrap your part. The router will move your part as you cut. We always secure the work piece with toggle clamps.
2. For routing 3/4" plywood: Your router is mounted 1.5" from the back of the panel saw. Most routers do not have enough travel to reach the work piece if it is left on the back. Moving the work piece toward the guides is advised. I always use scrap 3/4" plywood behind the work piece both top and bottom. If you are routing 2 x lumber this is not necessary because a 2x4 is 1.5" thick; however, it is always necessary to secure your work piece.
3. If you wish to route by pushing the work piece through the Swap Saw™ it can be done. You must restrain the work piece top and bottom.
4. The first time you use your router it will cut a half moon shape into the fence. This is very handy. If you are like us and use your router primarily to cut dados then all you need do is mark the location for your dado (both sides) and line your marks up to the half moon and bingo; you know where it is going to cut.

**Adjustment:****Fence Adjustment:**

1. Place a piece of masking tape just to the side of one of the guides. This tape needs to be at least 24 inches long. Start the tape just above the fence and continue up, parallel to one of the guides.
2. Draw a line parallel to the guides on the tape. Using a piece of 1x4 hardwood (smooth and square on all four sides) can serve as a straight edge. As an alternative, you can cut a piece of plywood with the saw and use the freshly cut edge as a straight edge. The latter method is the better method but can scrap a nice piece of plywood. The former method works just fine.
3. Release the fence if it is not already free. Do this by loosening both clamping knobs and the jacking screws.
4. Place a carpenters square on the fence and adjust the fence until the square exactly matches the line on the tape.
5. Tighten the knobs on the fence and adjust the jacking screws until they just make contact with the fence, then lock them down with the locking nuts on the jacking screws.
6. Once the fence is square you can add an adhesive backed scale to the flange of either one of the guide rails. Again, a measuring tape from the fabric store and double back tape work wonderfully.

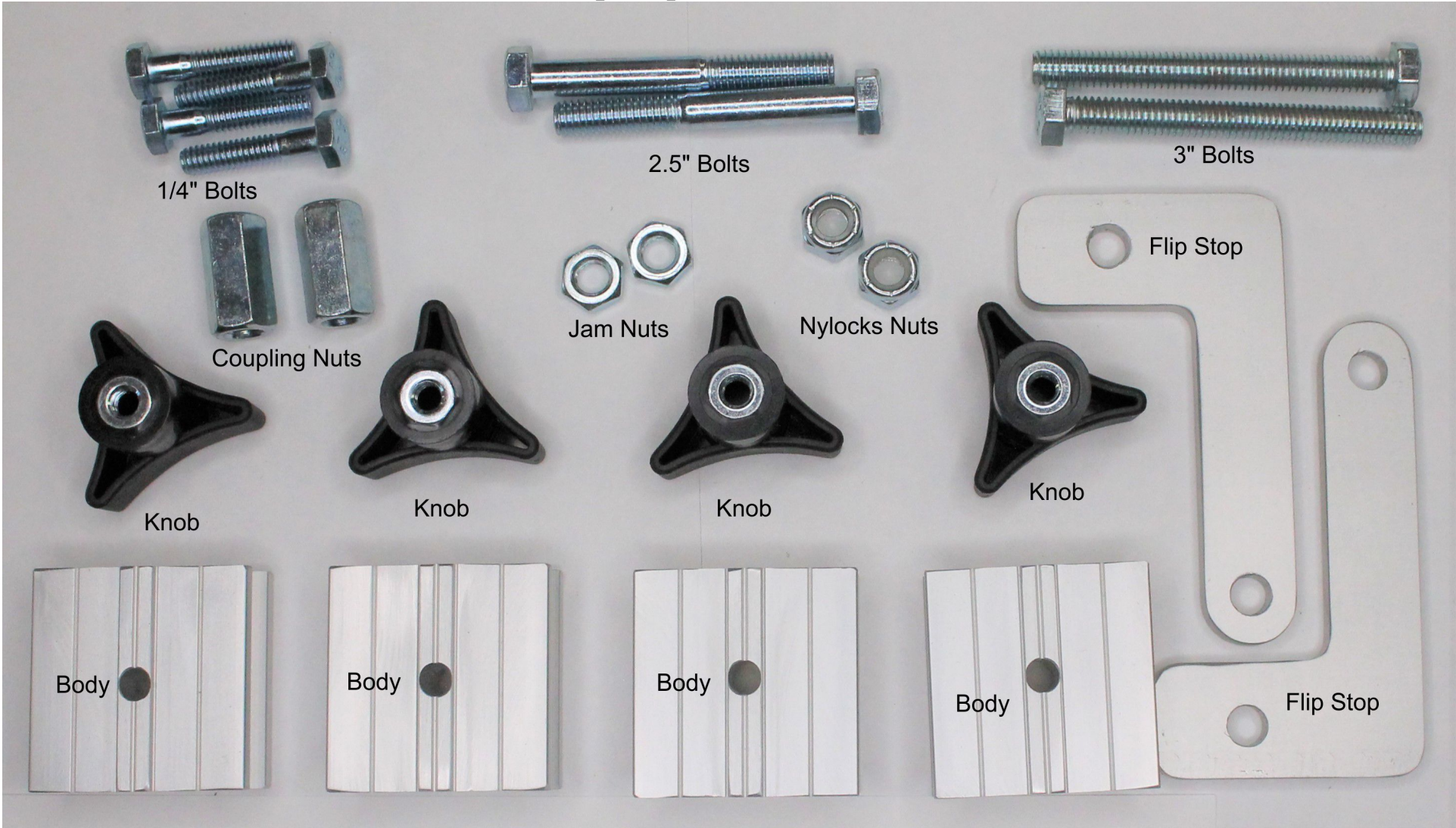
**Adjusting End Stop Screw:**

Your saw will cut part way through the fence. You do not want to cut any farther into your fence than necessary. The first time you use your saw, cut carefully toward your fence. Once your saw has cut completely through the work piece, turn off your saw, leave your saw all the way down and adjust the end stop screw until it just contacts the saw carriage. Tighten the nuts both above and below the end plate on the end stop screw.

**Maintenance:**

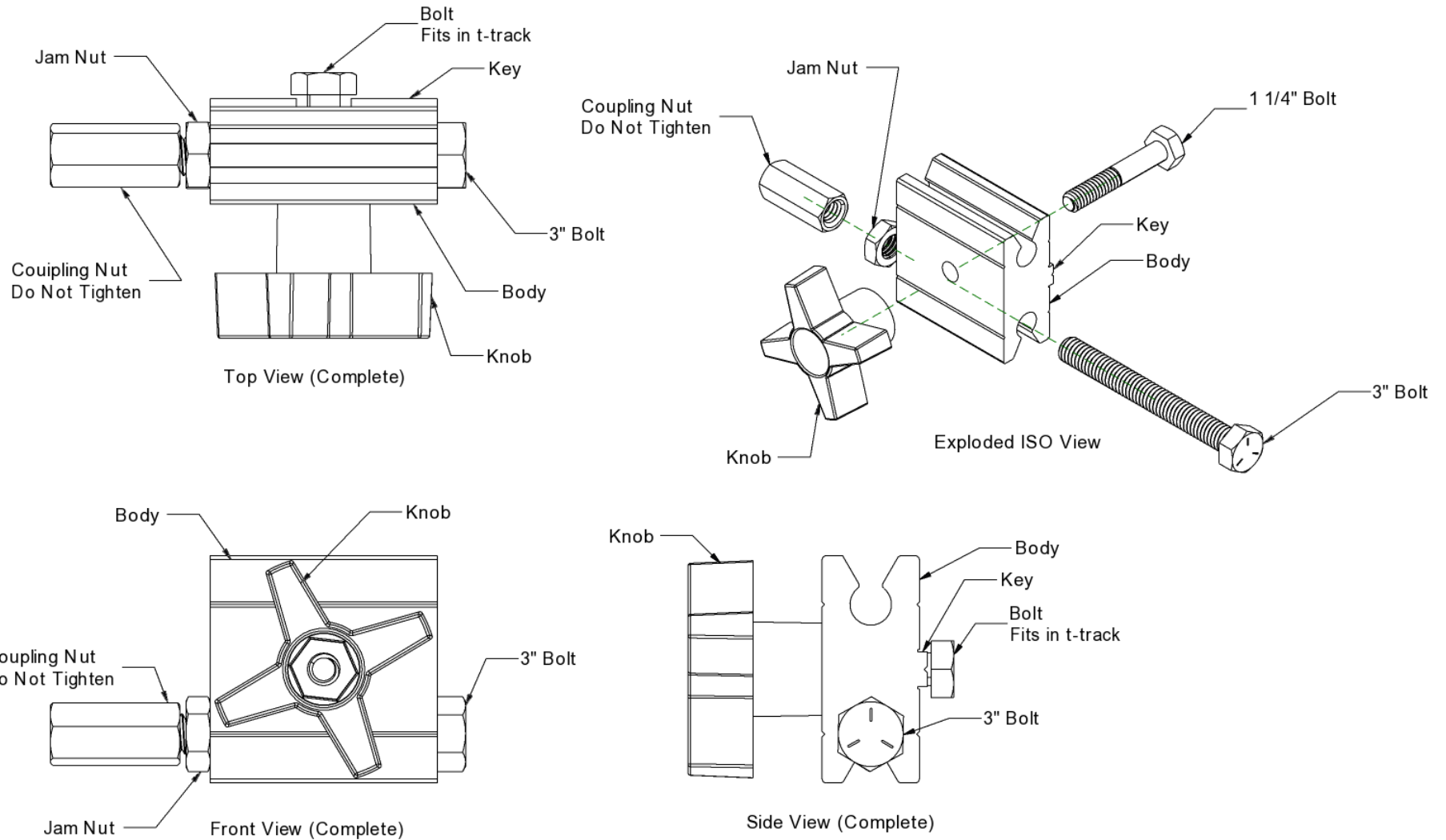
1. Keep your guides clean.
2. Do not lubricate your guides as this could damage the carriage(s).
3. Do not ever use an abrasive of any kind on the guides. This will greatly reduce their life.
4. Protect the guides, particularly the surfaces that engage the carriage(s) from impact of any kind. These guides are made from high quality 6000 series T6 Aluminum extrusions. Impact from harder materials can damage the guides. Such damage can impede the ability to move the carriage along the guides smoothly. High impact to the guides could bend them, at which point the damaged guide would have to be replaced.

# Flip Stop Start Kit Parts



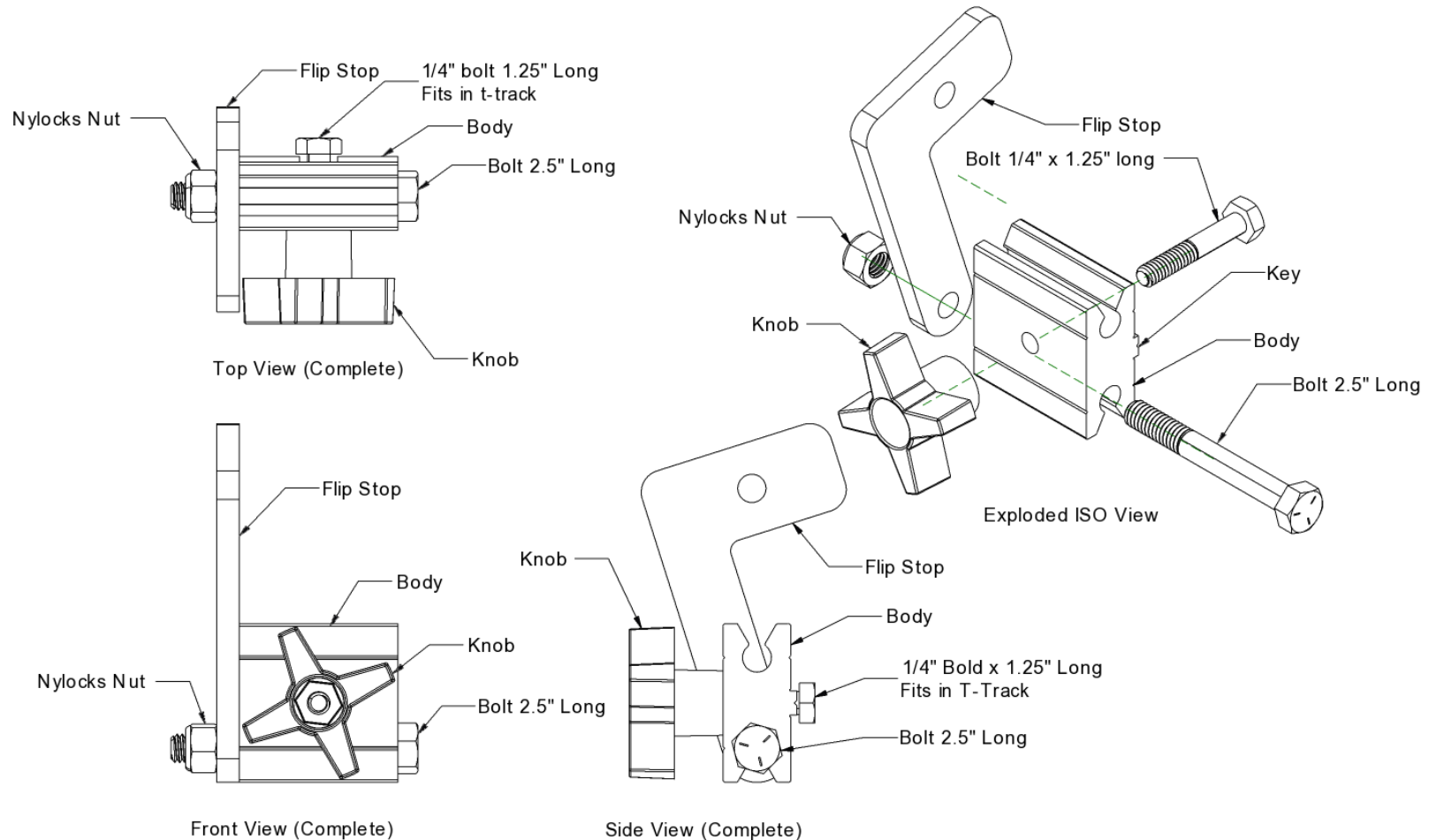
The Flip Stop Starter Kit pictured above is not included on all models. The above graphic is used to identify the parts. The graphics which follows shows how the parts fit together. Please note that the flip stop body and micro adjuster body are identical parts. The body has a front side and a back side. The front side is flat. The back side has a key that fits into the slot on our t-track.

## Micro Adjuster Assembly



The Micro Adjuster can be assembled with the coupling nut on the right (shown) or on the left, mirror image of the graphic above. The jam nut should be tightened snugly. The coupling nut needs to rotate easily by hand so do not tighten it more than finger tight. The three inch bolt can be located in either the top hole or the bottom hole as required. The flip stop body and micro adjuster body are the same part. Note: The body has a front and a back side. The knob goes on the flat side. The head of the 1/4" bolt goes on the side with the key sticking out.

## Flip Stop Assembly



The flip stop assembly can be assembled with flip stop (“L” shaped part) on the left as shown or on the right (mirror image to that shown above). The 2.5” bolt should always be in the bottom hole and the work piece (plywood being cut) should always contact the L shaped flip stop on the side opposite the body, so that the work piece pushes the L shaped part into the body. The Nylocks Nut should be not be tight enough to prevent the flip stop from being actuated. It should be tight enough that the parts do not fit sloppily. If the work piece is going to be pushed into the stop from the left, the flip stop should be assembled on the left of the body. If the work piece is going to be fed from the right, the flip stop must be on the right of the body. Always locate the nylocks nut adjacent to the flip stop. Note: The body has a front and a back side. The knob goes on the flat side. The head of the 1/4” bolt goes on the side with the key sticking out. The key is identified in the ISO view