

# HOW TO BUILD YOUR OWN...

## CROSSCUT TABLE SAW SLED FOR SMALL PARTS

featuring UHMW runner bars

Version 1.0



Disconnect saw from power source before making any adjustments.



Always wear proper ear protection when working with machinery.



Use caution when handling sharp objects (saw blades, router bits, drill bits and so on). Use protective gloves whenever possible.



Always wear proper eye protection when working with machinery and tools.



Always wear proper respiratory protection when working near airborne dust particles.

*Please read and fully understand any and all safety materials that came with your power tools or machinery before operation. Always follow all safety guidelines set in place by the power tool or machine manufacturer.*



### PLEASE NOTE:

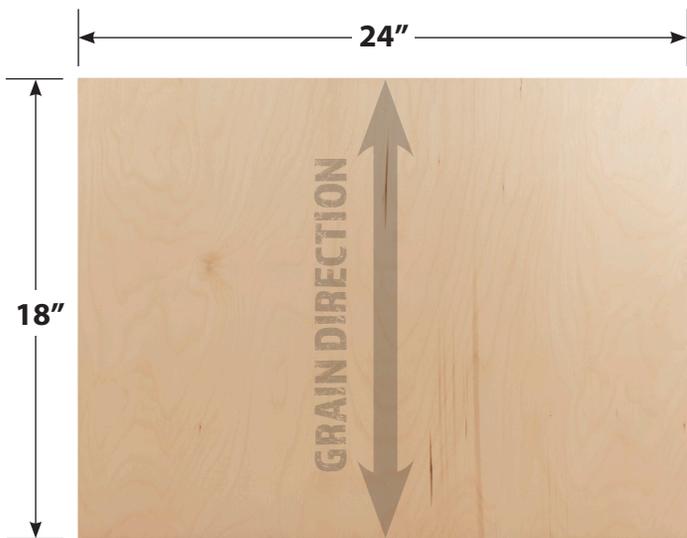
This is a general guide on how to build your own crosscut sled. Make your version to the scale, look and size of your choosing. Final results may vary

### Before we get started, gather the things you'll need:

- 2 ea. 12" long mini t tracks
- 2 ea. 19" long 3/4"x3/8" UHMW bars
- 1 ea. 1/4"x20 Star Knob and Bolt
- Wood Screws of varying lengths
- CA Glue

Keep in mind that your sled may vary in size and appearance so we are unable to provide an exact cut list

# CROSSCUT SLED BASE



We chose to use half inch thick baltic birch as our base since it is rigid and considerably lighter than three quarter inch stock. This will make the sled lighter and easier to lift and handle when it is completed. Cut the base to 18" by 24" with the 18" side (short side) going with the grain of your stock as shown in the illustration above.



Make a mark at the halfway point of the 24" side of the base. With the power off on your table saw, raise the blade so it is visible. Place the base with the 18" side (short side) up against your fence and align the center mark you just made with the table saw blade as shown above. With the base firmly against the fence and the mark aligned with the blade, lock the table saw fence into place. Lower the blade then remove the base from your table saw and set it aside.

## IMPORTANT!

Once the base center point is marked, aligned with the saw blade and the table saw fence is set and locked, it is very important that the table saw fence remains in this position and remains **LOCKED** in place for the next few steps.

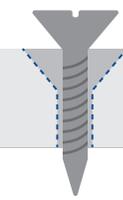
# INSTALL THE UHMW RUNNERS

Before we can install the 3/4" x 3/8" UHMW runners to the base we must cut the UHMW to length. In our example we cut the two bars to 19" in length. Pre-drill and countersink the UHMW runners so that they will accommodate 3/4" #6 flat head screws.

## 2 COUNTERSINK METHODS

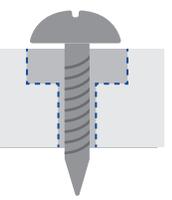
*Depends on your wood screw type*

**FLAT HEAD**



Create countersink with a standard countersink bit

**PAN HEAD**



Create countersink with a forstner bit



Fig. 1



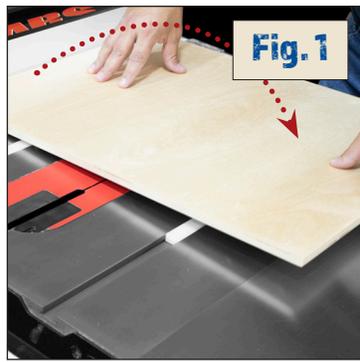
Fig. 2

Place a few dimes into the tracks of your table saw (Fig.1). Next, place your UHMW bars on top of the dimes in the tracks (Fig.2). The dimes raise the bars so they come into contact with the base for proper glue adhesion.



Dab CA glue along the length of each runner. Do not apply too much glue as the glue could drip into the table saw tracks. Simply dabbing glue every few inches will work for the next step.

Using the locked fence as your guide, carefully place the base board on to the runners. Make sure the short 18" side is up against the locked table saw fence (Fig.1) and both UHMW bars are even front to back.



Next, place steady, downward pressure on the board for a couple of minutes. If you have something heavy that can be placed on top of the board for a few minutes that would work as well to firmly adhere the UHMW bars to the base. (Fig. 2)

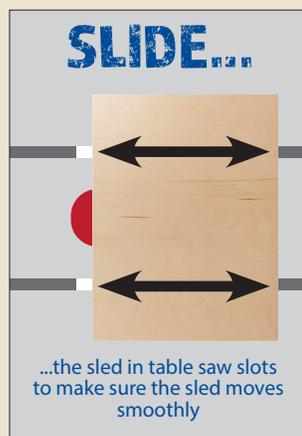


Once the CA glue dries, remove the board from the slots and flip it over. With a screw driver, secure the pre-drilled and countersunk UHMW bars with 3/4" #6 flat head screws. DO NOT over tighten screws, but be sure that the head of each screw is in far enough and is below the UHMW surface.

**DO NOT USE A POWER DRILL TO SECURE UHMW BARS**

## SHOP TIP

Test to make sure the UHMW bars are sliding smoothly through the table saw slots. If not, check to see if some of the screws are too tight and are pushing the UHMW sides outward. Check all the screws, adjust and test again until correct.



# INSTALL THE BACK BRIDGE



We chose to use a board that runs the entire length of the base for the back bridge. You can cut the board as seen above leaving a hump in the center or you can simply leave the board at its original height. Keep in mind that the board must be at least 3/4" taller than your blade when the blade is fully raised to make sure the blade won't accidentally cut the back bridge in half.



Using clamps to hold the back bridge in place so it is flush with the back of your sled, attach the back bridge by first pre-drilling and counter sinking holes across the back edge of the base. Then secure the back bridge using appropriate length flat head wood screws.

**CAUTION: MAKE SURE YOUR HOLES DON'T ALIGN WITH THE BLADE CUT**



With the back bridge secured we can now unlock the table saw fence and slide it out of the way. Place the base on to the saw with the UHMW guide bars in the slots and the back bridge facing the blade (Fig.1). Raise the blade all the way up, power on the saw and cut through the base and back bridge. Make sure you STOP SHORT before you cut all the way through the back end of the sled base (Fig. 2).

# INSTALL THE FRONT BRIDGE



We cut a piece of stock to approximately 3/4" taller than our fully raised blade height by 1-1/2" wide by 24" long and softened or rounded the edges for our front bridge

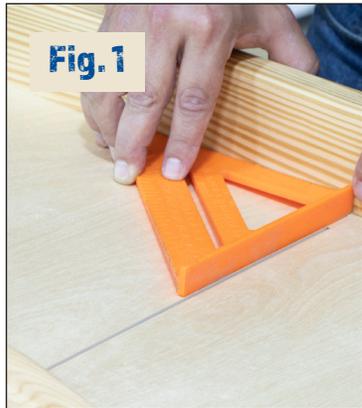


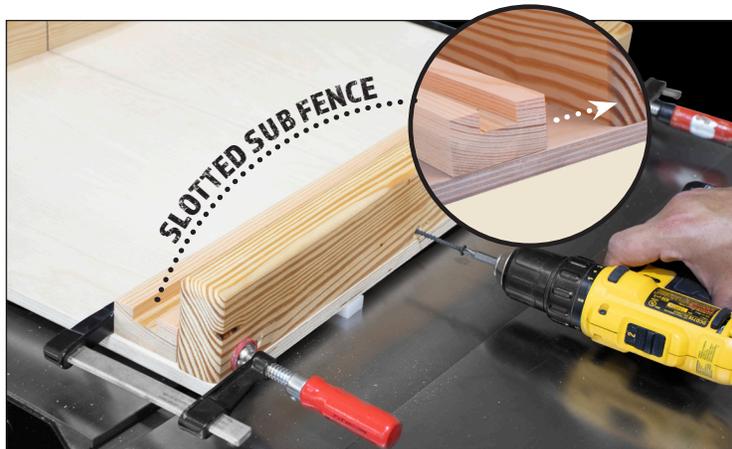
Fig. 1



Fig. 2

Attach the front bridge to the base so that it is square to the blade. To do this we recommend clamping one end of the front bridge and adjusting the fence accordingly. Align your square to the kerf line of the cut that you made earlier and adjust the fence to be square with the kerf line (Fig. 1). Clamp the other end place. Pre-drill and countersink the holes from the underside of the base and secure bridge with wood screws (Fig. 2).

**CAUTION: MAKE SURE YOUR HOLES ARE NOT ALIGNED WITH THE BLADE CUT**



SLOTTED SUB FENCE

We decided to add a sub fence with a mini track embedded into the top so we could outfit the sled with a stop block. We used a 1"x2"x24" long piece of stock and milled the slot using a router table. Make sure the slot the right depth and width to fit your track dimensions so the track is flush with the top of the board. Secure the sub fence to the front fence using clamps and then attach the sub fence using wood screws as shown above.

**CAUTION: MAKE SURE YOUR HOLES ARE BELOW THE TRACK SLOT AND ARE NOT ALIGNED WITH THE BLADE CUT**



Fig. 1



Fig. 2

Before installing your track, cut through the sub fence to separate the two sides (Fig. 1). Install the mini track 1/8" back from the cut line of the sub fence using wood screws. (Fig. 2). This prevents the blade from contacting the tracks.

## MAKE A STOP BLOCK & GUARD BOX



Using scrap pieces of stock and standard a star knob and bolt we made simple a stop block to make repetitive cuts. We also made a 3" x 3" guard box to go over the center of the bridge. This guard box is designed to prevent the blade from being exposed while cutting through your stock piece. This helps to keep you from getting your fingers near the blade.

## YOUR SLED IS COMPLETE & READY FOR USE!

