ZEROPLAY®

ULTIMATE TABLE SAW SLED

ZEROPLAY Miter Bar 2 Pack Project Plans

MICROJIG®

ZEROPLAY®

PROJECT OVERVIEW

This table saw sled combines the ease and precision of **ZERO**PLAY Miter Bars with the versatility of the **MATCH**FIT System. Its modular design allows the user to add a variety of attachments for a wide array of functions. Its defining feature is the incorporation of interchangeable zero-clearance inserts. Each insert is dedicated to one blade, set at one angle. This ensures tearout-free cuts, no matter the blade or angle of cut, all with just one sled.

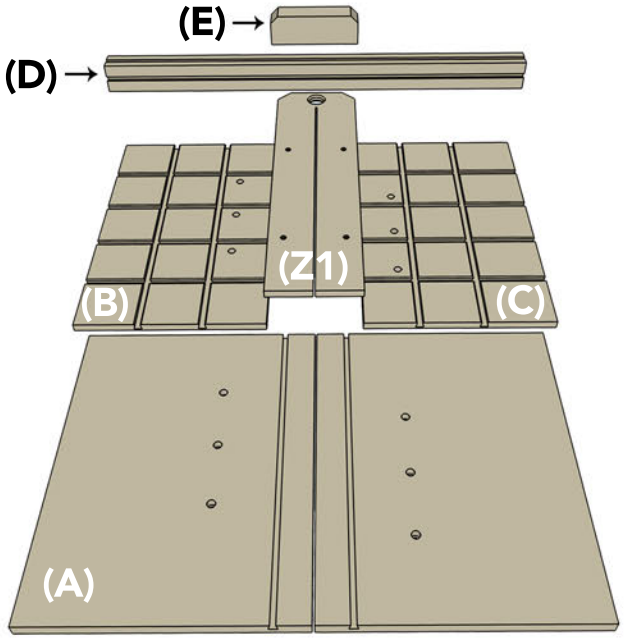
TOOLS & MATERIALS

TOOLS

- **ZERO**PLAY Miter Bars Double Pack (ZP9-B2S2)
- (2) **MATCH**FIT Dovetail Hardware Variety Packs
- 1/2", 14-degree dovetail router bit
- 1/4" diameter
- 1/2" diameter forstner bit
- 3/8" diameter forstner bit
- 1/4" diameter standard drill bit
- Flush trim router bit
- Table saw
- Router table or handheld router with edge guide
- Flat carpenters triangle
- Double-sided tape

MATERIALS

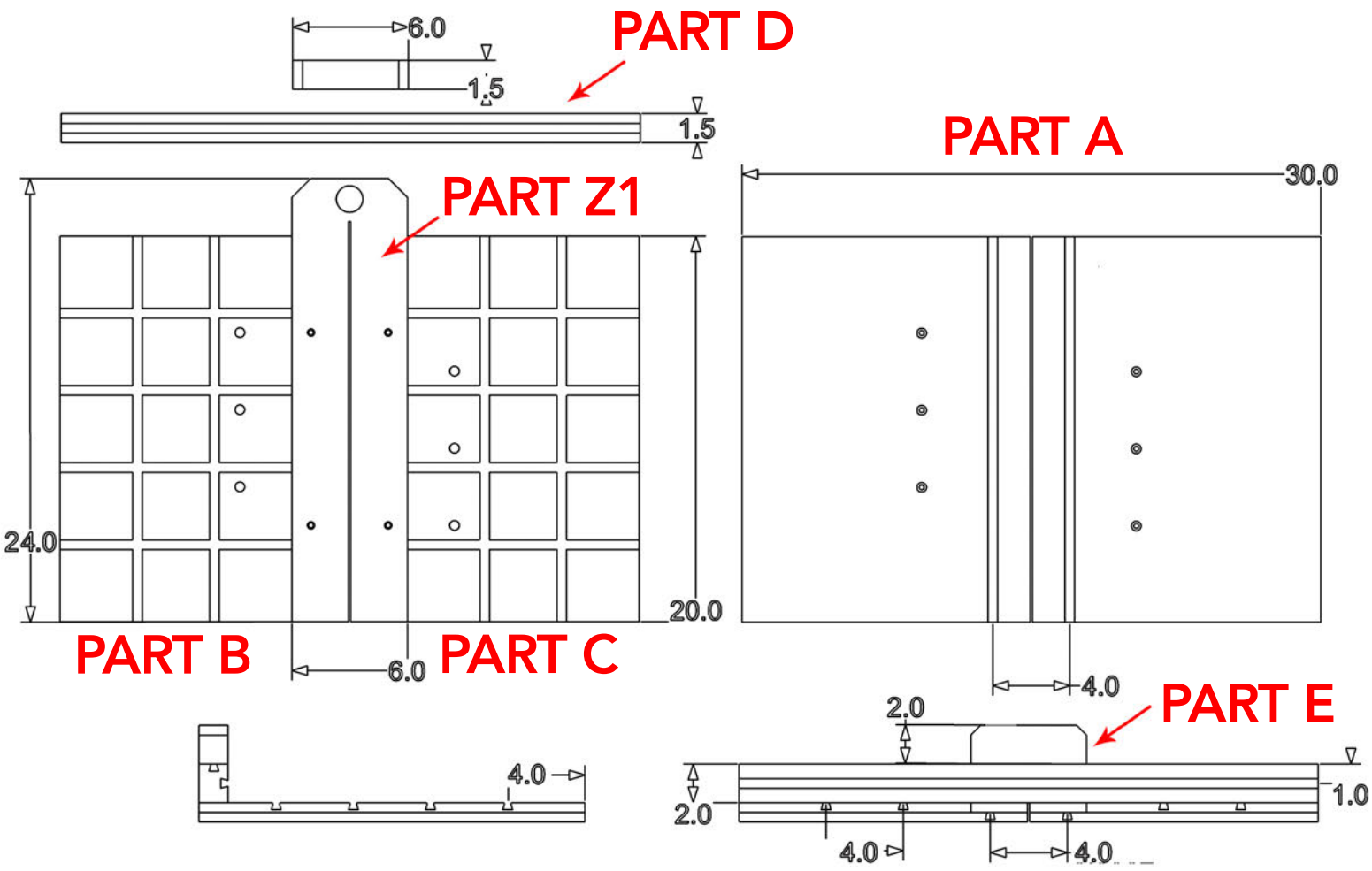
- (1) 20" x 30", 1/2" thick plywood (PART A)
* void-free recommended
- (1) 1-$^{1/2"}$ thick, 2"W x 30"L hard maple (PART D)
-(2) 12-$^{1/8"}$ x 20-$^{1/4"}$, 1/2" thick plywood (PARTS B & C)
- (1) 1-$^{1/2"}$ thick, 2"W x 6"L hard maple (PART E)
-(6) 24"W x 6"L, 1/2" thick plywood (PARTS Z1-Z6)



MICROJIG®

ZEROPLAY®

SLED PARTS



PART A: Sled Base
PART B: Left Top Wing
PART C: Right Top Wing
PART D: Fixed Rear Fence
PART E: Fence Center Support
PART Z1: Zero-Clearance Insert

MICROJIG®

INSTRUCTIONS

STEP 1 - CUT THE STOCK TO SIZE

On the table saw, cut a sheet of 1/2" thick, void-free plywood down to 20" x 30". This will be the base layer of the sled (**PART A**).

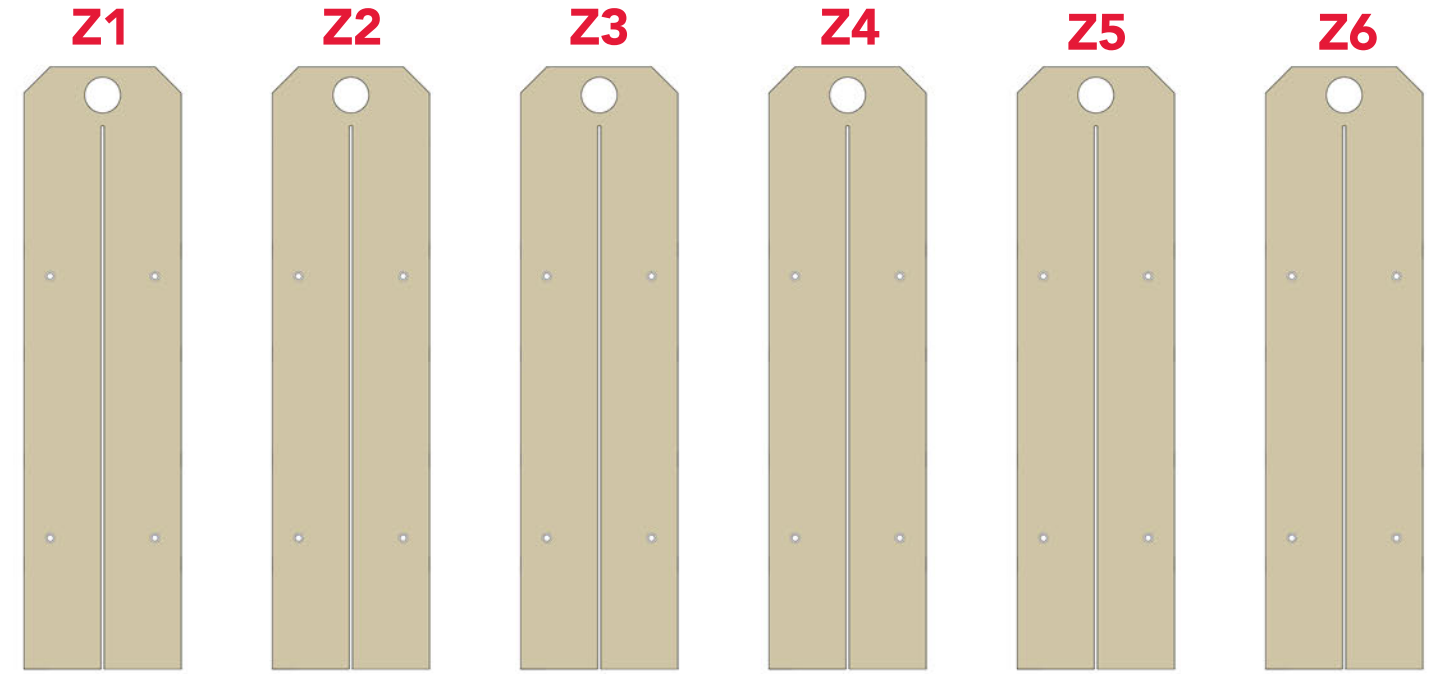
Next, cut two pieces of 1/2" thick, void-free plywood down to 12-1/8" x 20-1/4". This will be the left and right wings of the top layer of the sled (**PARTS B & C**).

* **NOTE:** Cut all plywood parts from the same sheet to ensure uniform thickness.

INSTRUCTIONS

STEP 1 - CUT THE STOCK TO SIZE CONTINUED

Next, cut (six) 6" wide x 24" long strips of 1/2" thick, void-free plywood. This will be the interchangeable zero-clearance inserts (**PARTS Z1-Z6**).

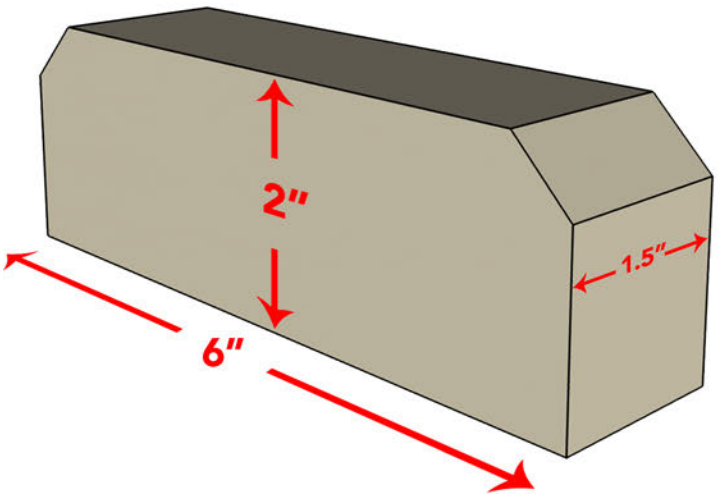


INSTRUCTIONS

STEP 1 - CUT THE STOCK TO SIZE CONTINUED

Prepare a solid piece of hard maple (or other dense hardwood) to finish at 1-½" thick x 2" wide x 30" long. This will be the fixed rear fence of the sled (PART D).

Cut an additional solid piece of hard maple to finish at 1-½" thick x 2" wide x 6" long. This will be the center support of the fence, keeping the two sides of the sled together after the first cut (PART E).

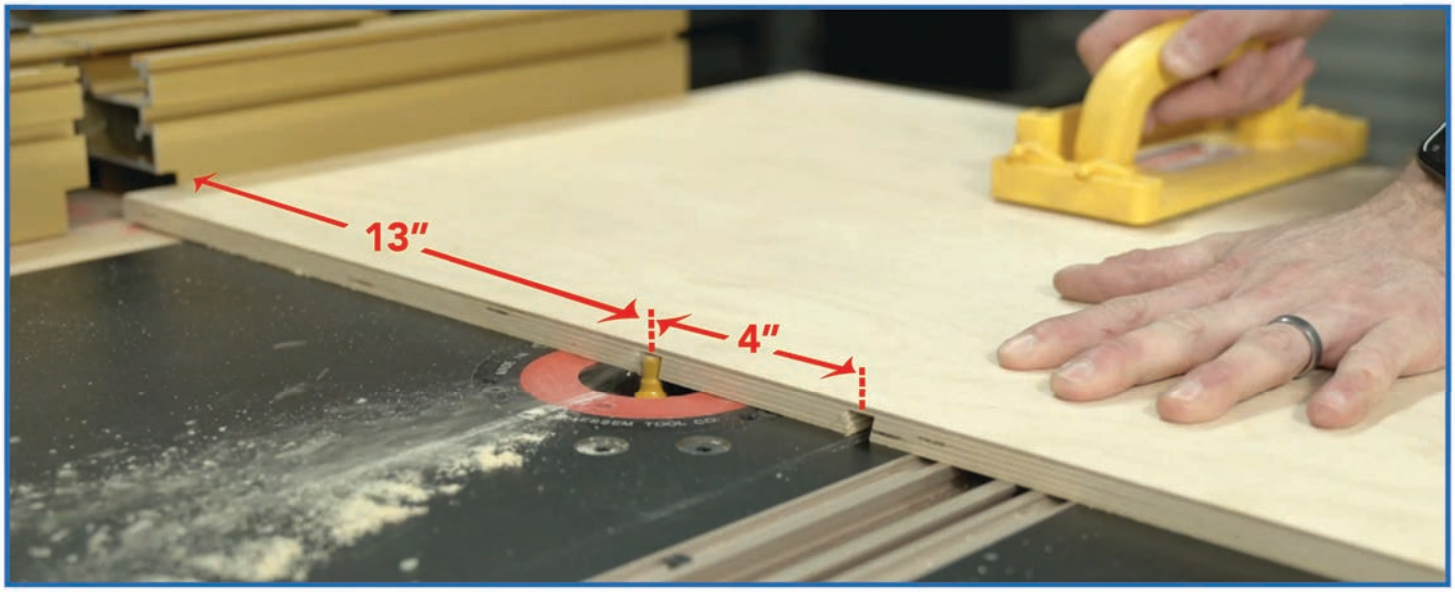


INSTRUCTIONS

STEP 2 - CUT DOEVETAIL TRACKS FOR ZERO-CLEARANCE INSERTS

Using a ¼" straight or spiral router bit, cut 11/32" deep relief grooves along the 20" length of PART A, 13" in from each side. The grooves should be 4" apart on center.

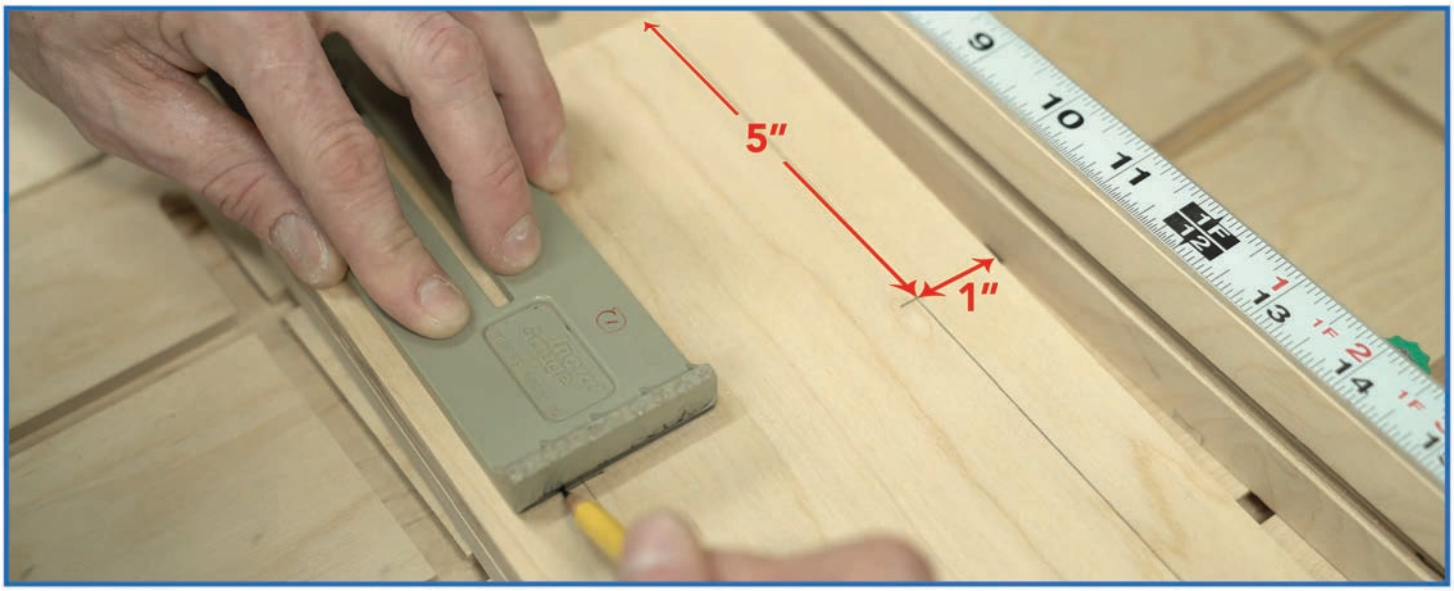
Next, use a ½", 14-degree dovetail router bit set to 3/8" cutting depth, and route dovetail tracks at the same locations as the relief grooves. SEE Fig. 7



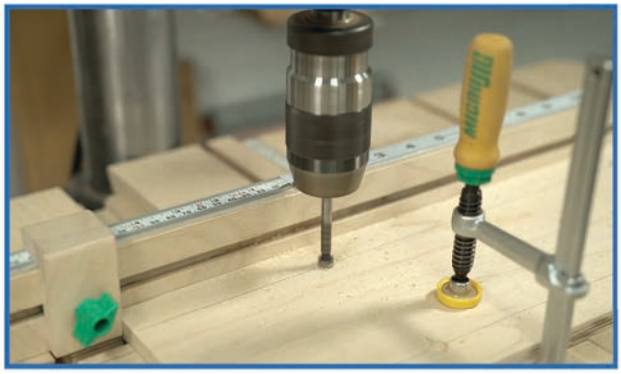
INSTRUCTIONS

STEP 3 - DRILL MOUNTING HOLES IN ZERO-CLEARANCE INSERTS

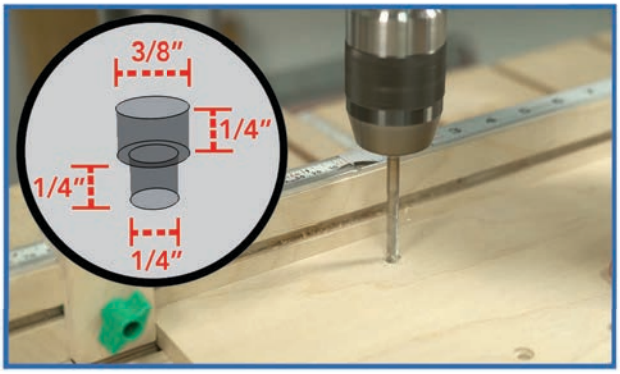
Mark lines 1" in from each long edge, 5" in from one short edge, and 8" in from the other short edge. Where the perpendicular lines intersect will be the mounting hole locations.



Using a 3/8" diameter forstner bit, counterbore all four holes ¼" deep.



Next, drill ¼" diameter thru holes in the center of each counterbored hole.

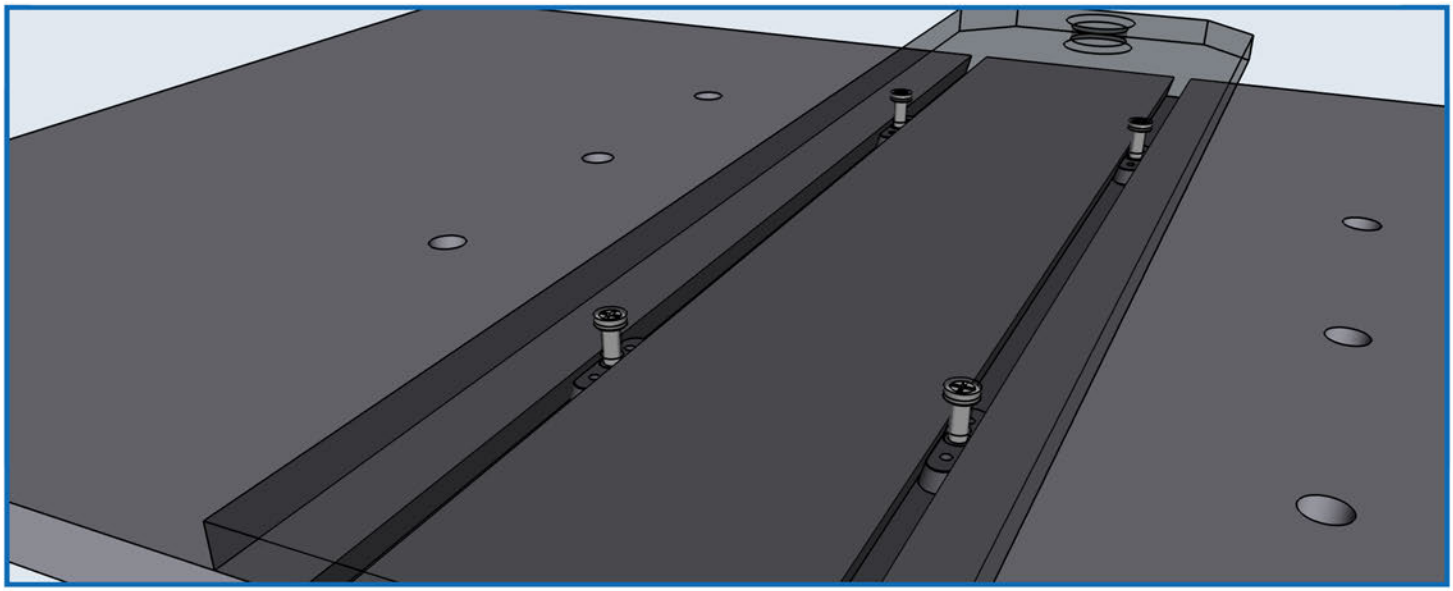


Repeat steps for all zero-clearance inserts

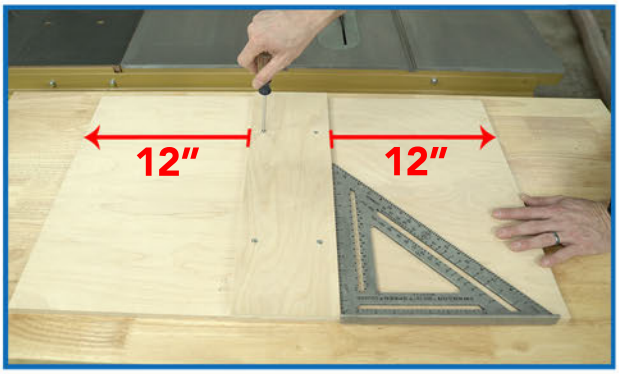
INSTRUCTIONS

STEP 4 - ASSEMBLE SLED PARTS

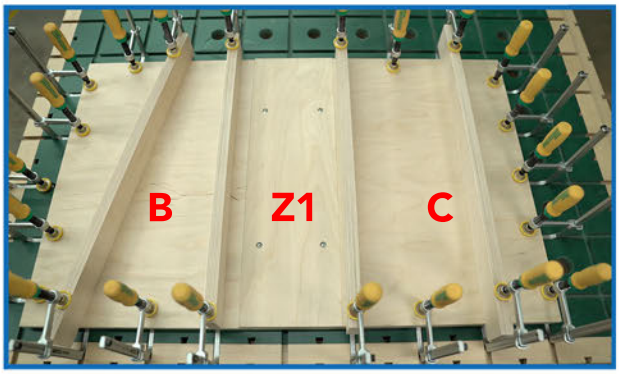
Thread on the screws and Dovetail Track Nuts in the Dovetail Hardware Variety Pack to the bottom of the zero-clearance insert (PART Z1), then insert the Dovetail Track Nuts in the Dovetail Tracks in the base layer of the sled (PART A)



Use a square to make sure that the zero clearance insert is square and centered on the sled base with exactly 12" on each side. Once square and centered, tighten the Dovetail Hardware.



Apply glue to the base layer on both sides of the ZCI. Place PARTS B & C on top of PART A, flush with the edge of the zero-clearance insert. Clamp down using cauls to distribute pressure evenly.

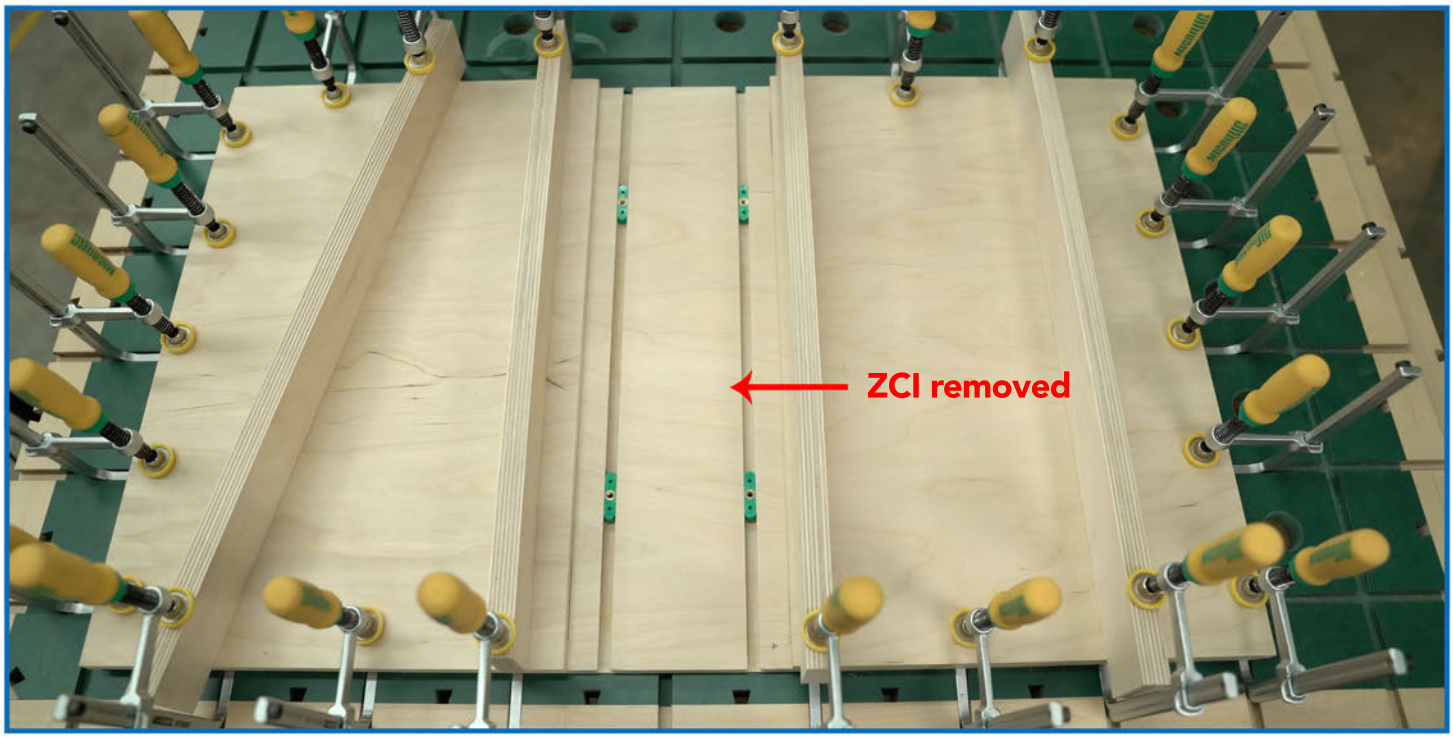


INSTRUCTIONS

STEP 4 - ASSEMBLE SLED PARTS CONTINUED

You'll notice that the wings are slightly oversized. Make sure that the wings overhang the base evenly on all three exposed sides.

Once PARTS B & C are clamped in place, loosen the screws and remove the zero-clearance insert to prevent the squeeze out from permanently gluing it in place.

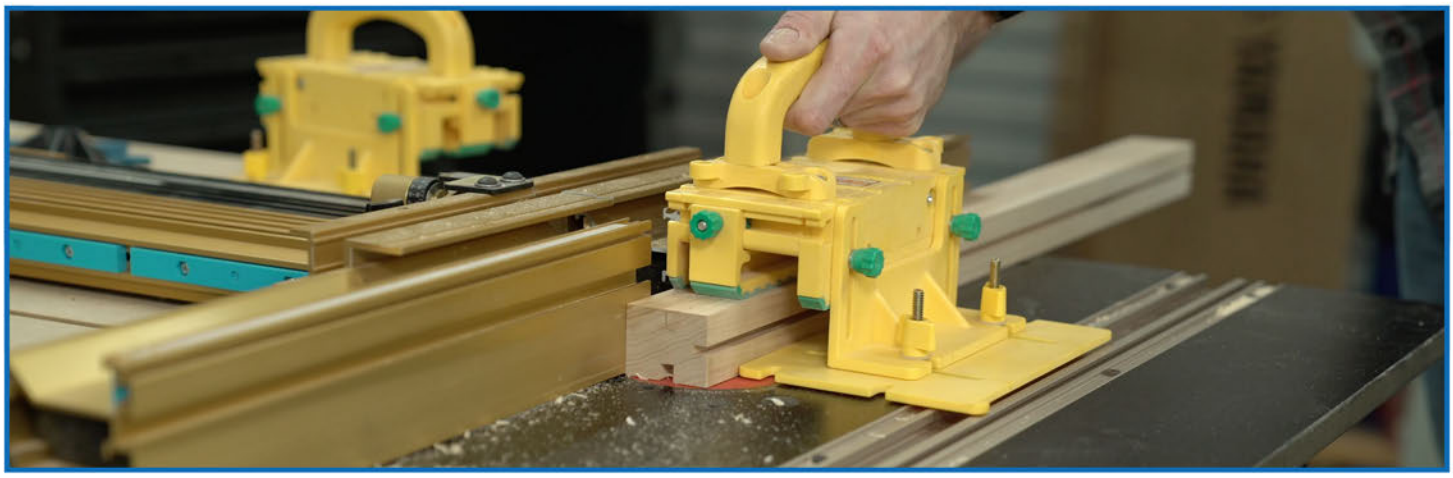


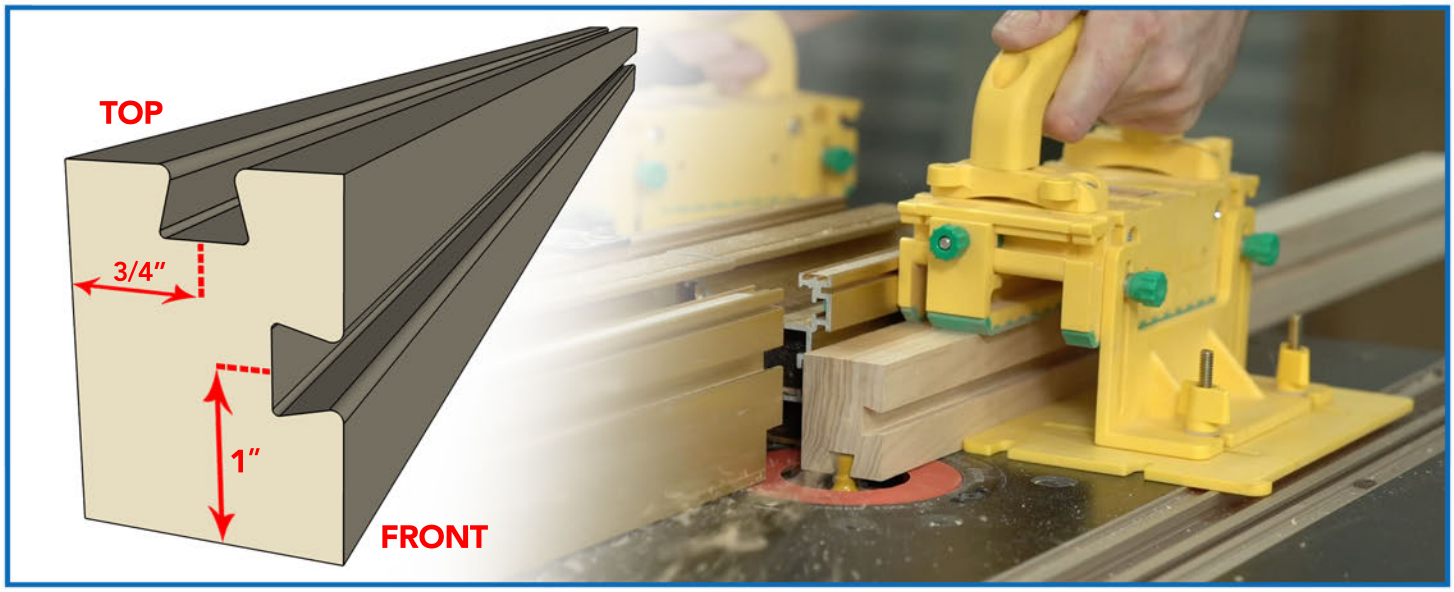
Allow enough time for the glue to dry according to the manufacturers instructions. While the glue is drying, proceed to the next step.

INSTRUCTIONS

STEP 5 - ROUTE DOVETAIL TRACKS IN FIXED REAR FENCE

Using a ¼" straight or spiral router bit, cut 11/32" deep relief grooves along two adjacent sides of the 30" length of PART D. The grooves should be centered on both sides.



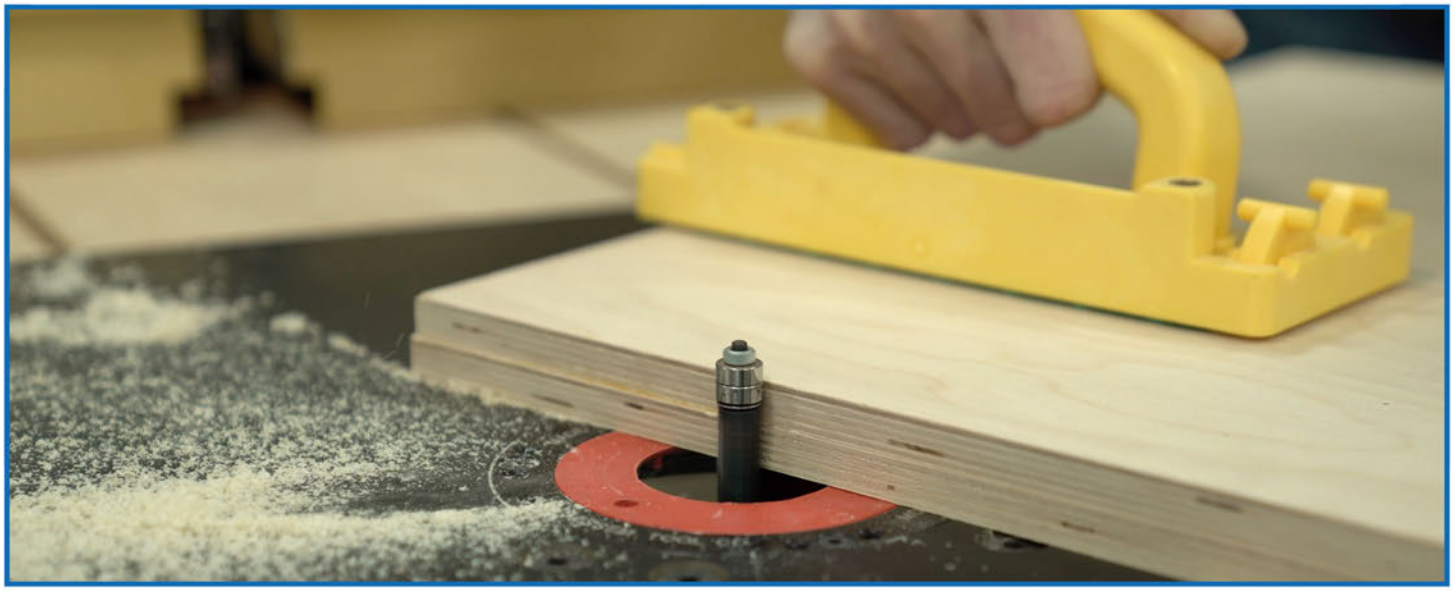


Next, use a ½", 14-degree dovetail router bit set to 3/8" cutting depth, and route dovetail tracks in the same locations as the relief grooves.

INSTRUCTIONS

STEP 6 - TRIM SLED TO FINAL DIMENSIONS

After the glue has dried, use a router and flush trim bit to trim the sled top (PARTS B & C) flush with the sled base (PART A)



STEP 7 - ROUTE DOVETAIL TRACKS IN SLED TOP

Remove zero-clearance insert, thenroute ¼" wide, 11/32" deep relief grooves in the sled top, 4" and 8" in from each edge.

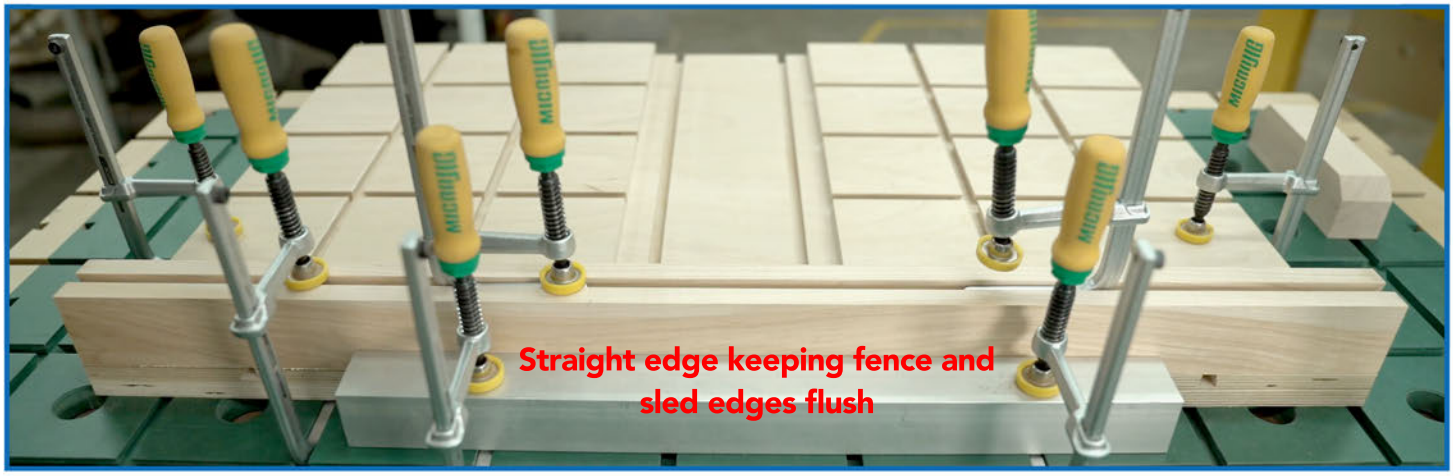
Switch to a 1/2" 14 degree dovetail router bit set to 3/8" depth, and route dovetail tracks in the same location as the relief grooves.

* If your router table fence capacity is less than 8", you can use an auxiliary fence to complete this step. Click **HERE** to learn how.

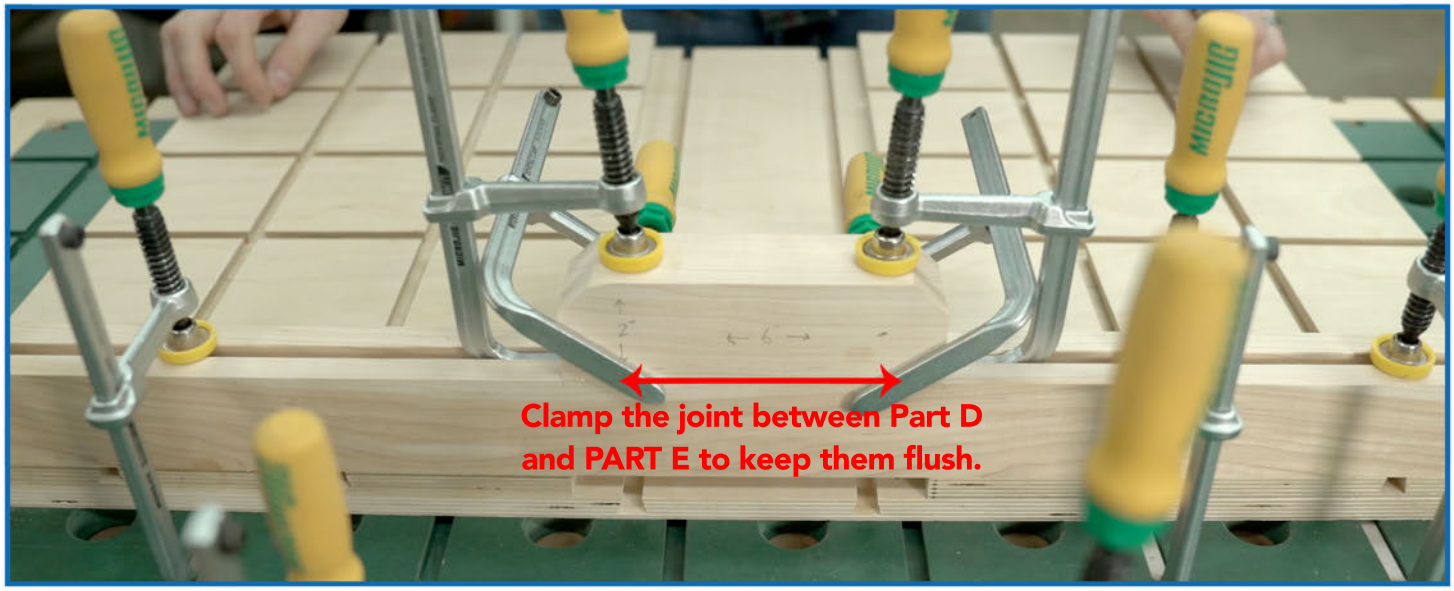
INSTRUCTIONS

STEP 8 - ATTACH FIXED REAR FENCE

Apply glue to the 1-½" face of the fence (PART D) and place it on top of the sled along its 30" side, with the Dovetail Tracks facing inward toward the sled and upward.



* Make sure that the edge of the fence is flush with the edge of the sled and clamp the fence in place.



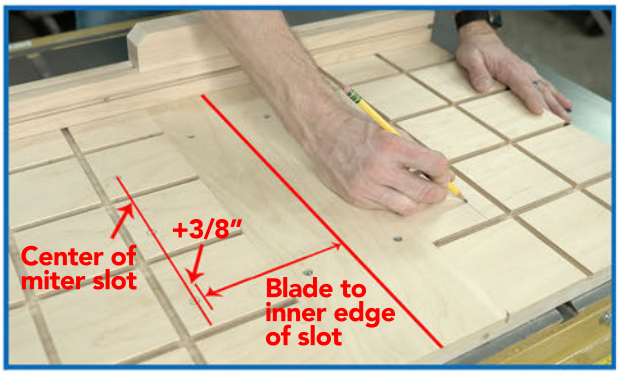
Glue the fence center support (PART E) to the top of the fence. Allow appropriate time for the glue to dry before removing clamps and proceeding to the next step

INSTRUCTIONS

STEP 9 - DETERMINE MITER BAR LOCATION

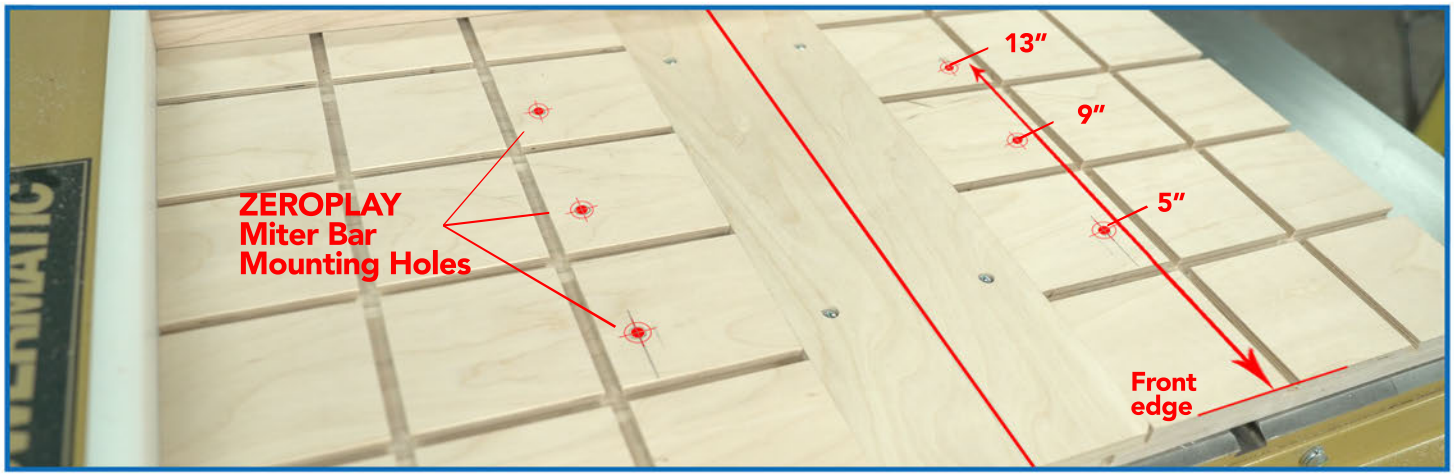
Mark a line down the center of the sled's width (15" in from each side).

Measure the distance from the saw blade tooth to the inside edge of both miter slots.



Transfer the measurement to the sled, starting from the center line.

Add 3/8" to both measurements, then mark lines parallel to the center line on the sled.

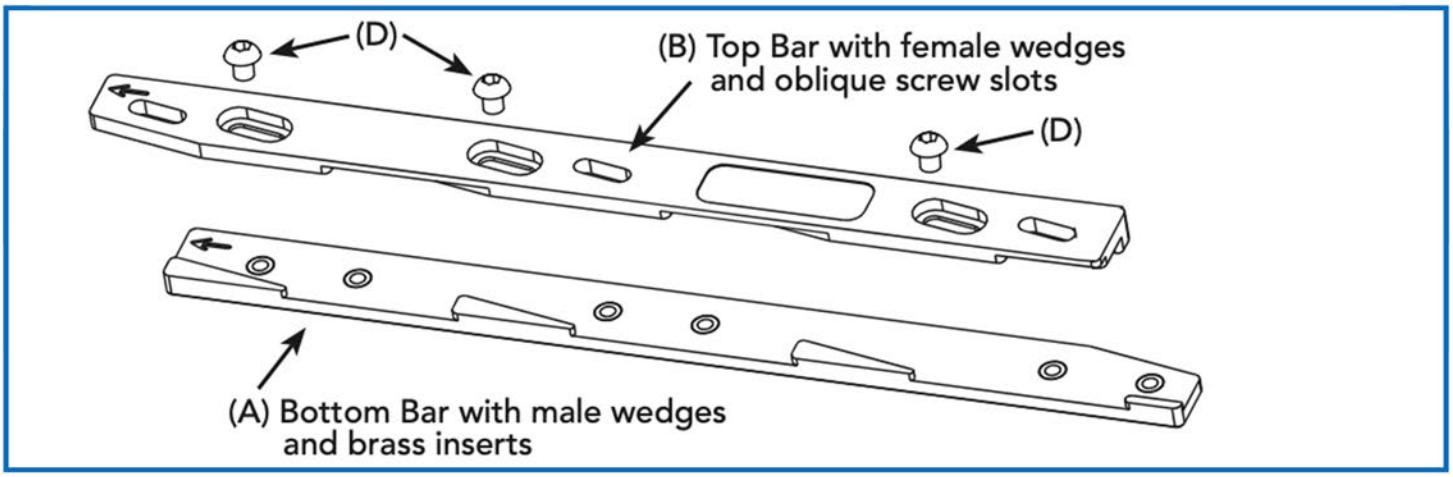


On the miter slot center lines, mark 5", 9", and 13" in from the front edge of the sled. Where the lines intersect will be the Miter Bar mounting hole locations

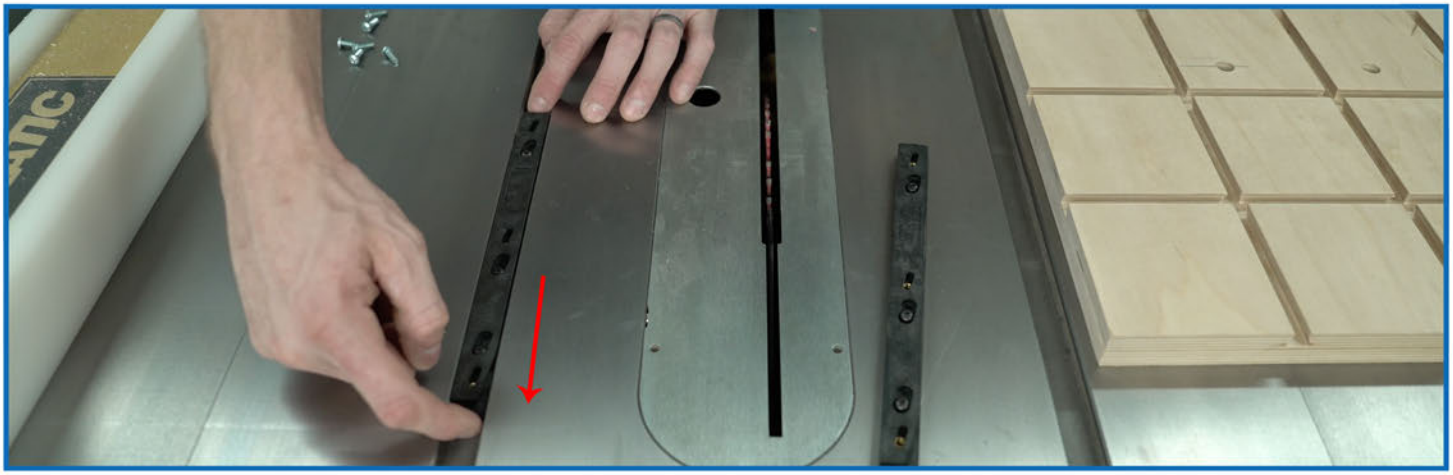
INSTRUCTIONS

STEP 10 - ADJUST MITER BAR TO SLOT WIDTH

Stack the ZP Top Bar (with oblique screw slots) onto the ZP Bottom Bar (with brass inserts), with arrows facing the same direction.
Insert the three (3) button head screws (D) through the counter-bored slots of the ZP Top Bar using the hex key included. Make sure the two bars still slide freely.



Insert two nickels in the bottom of the miter slot, then place the ZEROPLAY Miter Bar assembly on top of the nickels. With one finger, hold the Bottom Bar in position. With the other finger, gently slide the Top Bar in the direction of the arrows shown in FIGURE 17. Once the Bottom Bar contacts the left wall of the miter slot and the Top Bar is touching the right wall of the miter slot, tighten the button screws.

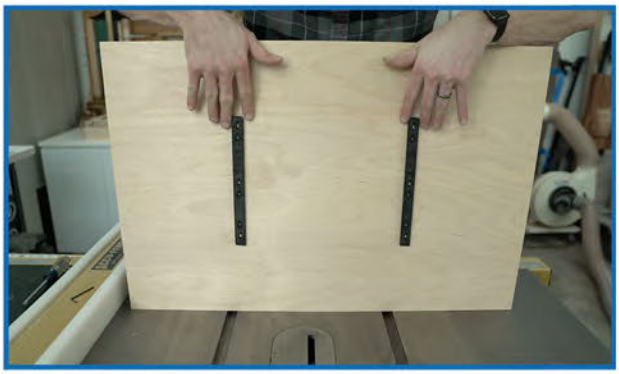


INSTRUCTIONS

STEP 11 - ATTACH ZEROPLAY MITER BARS

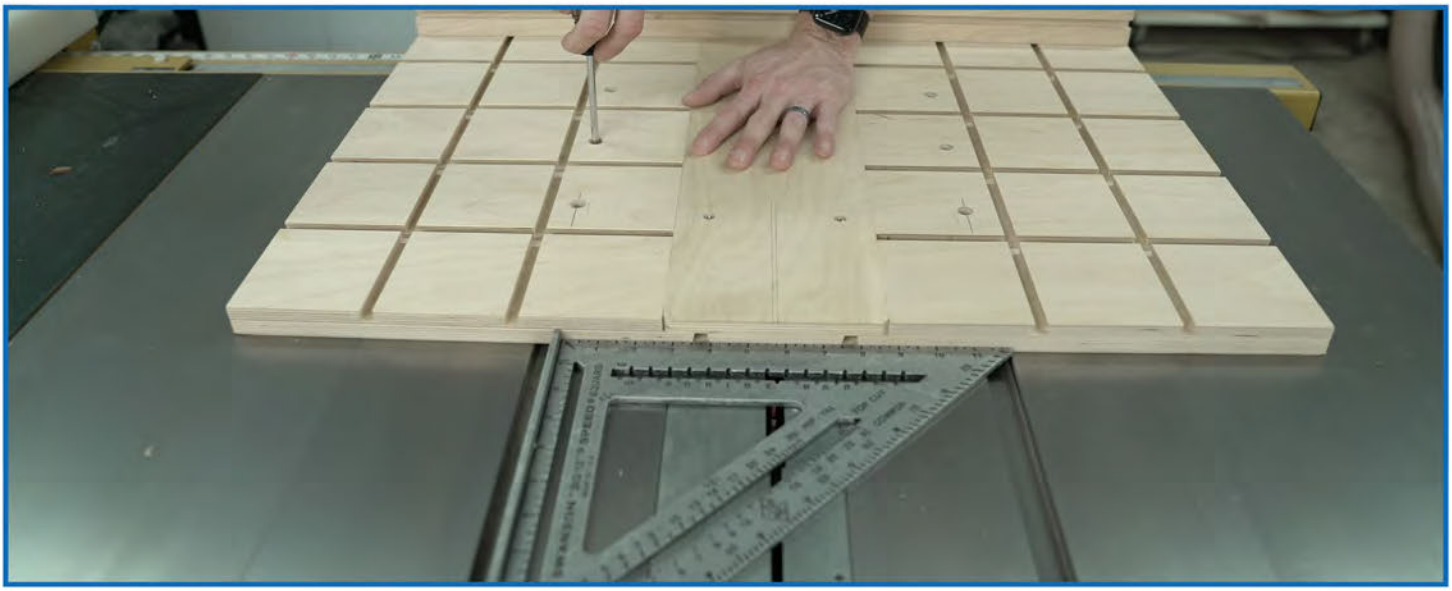
Using a ½" diameter forstner bit, counterbore the mounting holes ¾" deep, leaving ¼" of material at the bottom of the counterbored holes.

Next, drill 1/4" diameter thru holes in the center of each counterbored hole.



With the button screws facing outward, attach the Miter Bars to the bottom of the sled with the 8-32 panhead screws. Don't tighten the screws all the way.

Put the sled down on the table saw top with the Miter Bars in the miter slots.



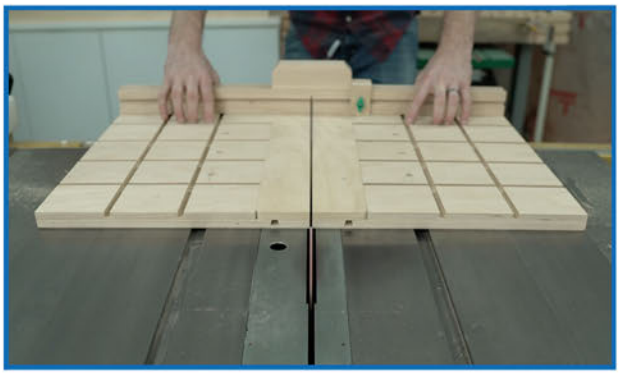
Use a carpenters triangle to square the sled to the blade. Put one edge of the triangle on the rear fence, and the perpendicular edge on the body of the saw blade. Once the sled is properly aligned, tighten the 8-32 panhead screws.

INSTRUCTIONS

STEP 12 - DESIGNATE ZERO-CLEARANCE INSERTS

Install a zero-clearance insert and the desired saw blade.

Turn on the saw with the blade outside of the sled. Wait a few seconds before advancing the sled through the cut. There is more runout when the saw blade initially starts rotating.



After the blade has cut all the way through the portion of the ZCI in front of the fence, pull the sled back toward the front of the saw until the blade is again completely outside of the sled before turning off the saw.

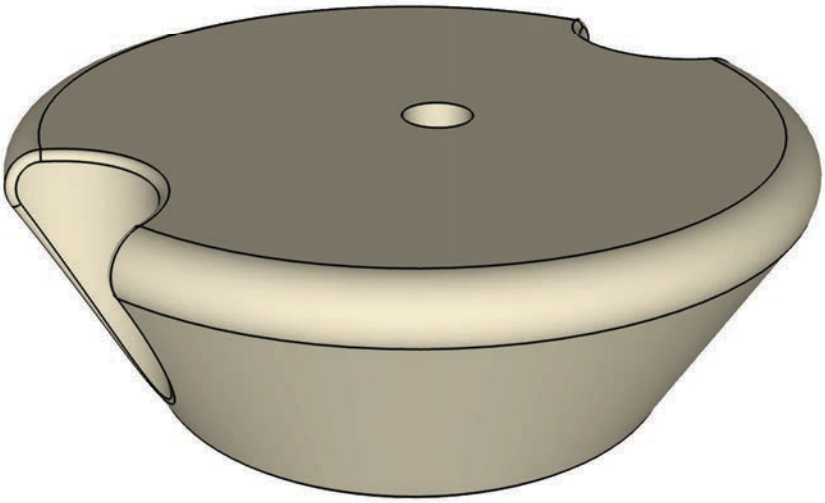
Make note of the blade used on the ZCI, remove, and hang to store.

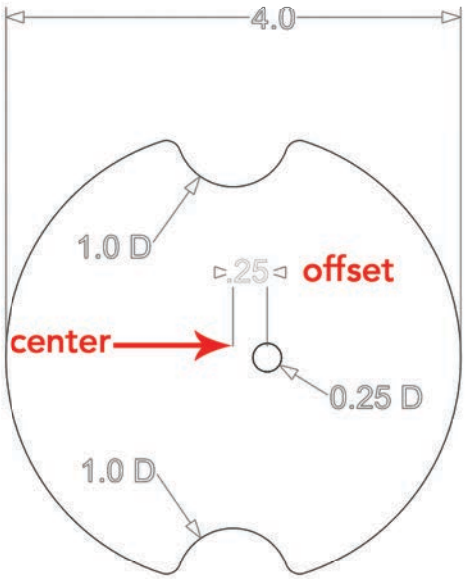
Go through each ZCI and blade combination individually using the same method.

ZEROPLAY®

SLED ATTACHMENTS

The "Flying Saucer"

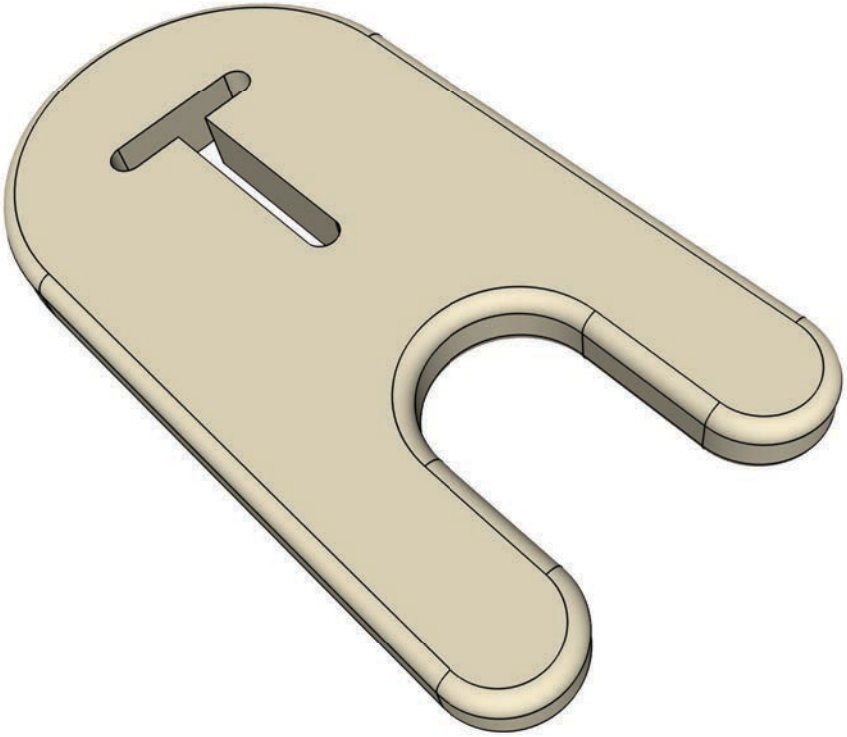


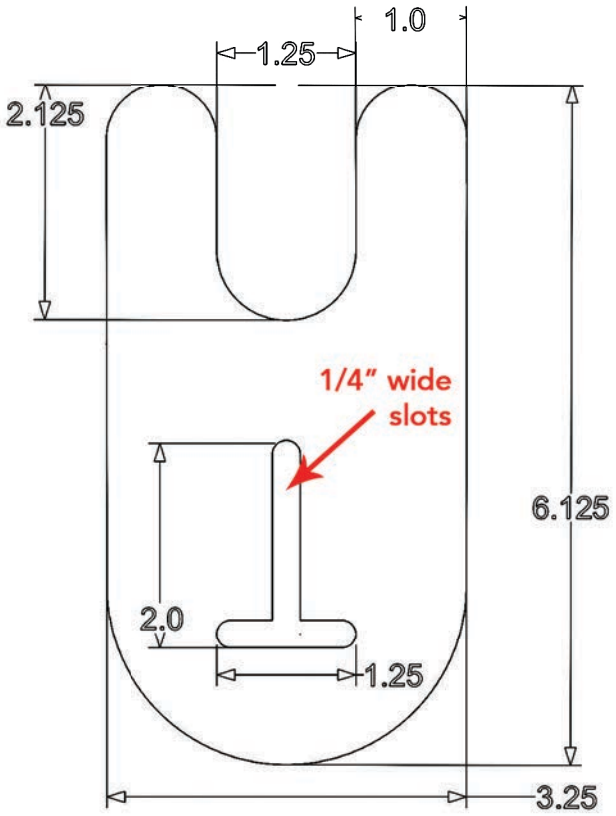


- 2-in-1 hold-down & cam clamp.
- Cut a 4" diameter disc, bevel with 30 degree chamfer bit, drill offset hole 1/4" from center.
- 1" thick to hold down 3/4" material

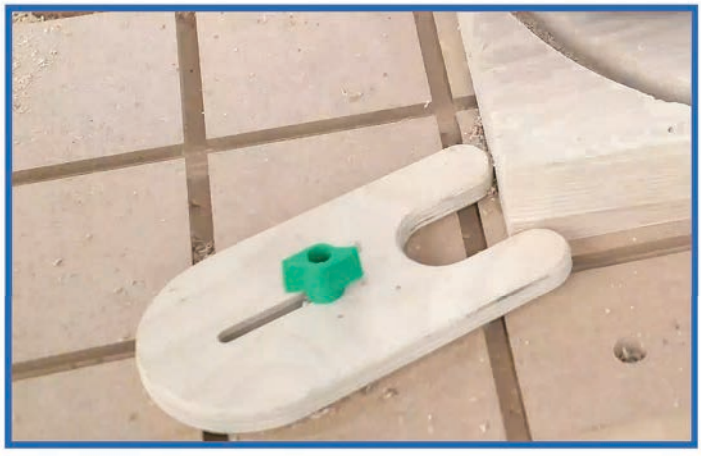
MICROJIG®

Universal Corner Stop / Cam Clamp

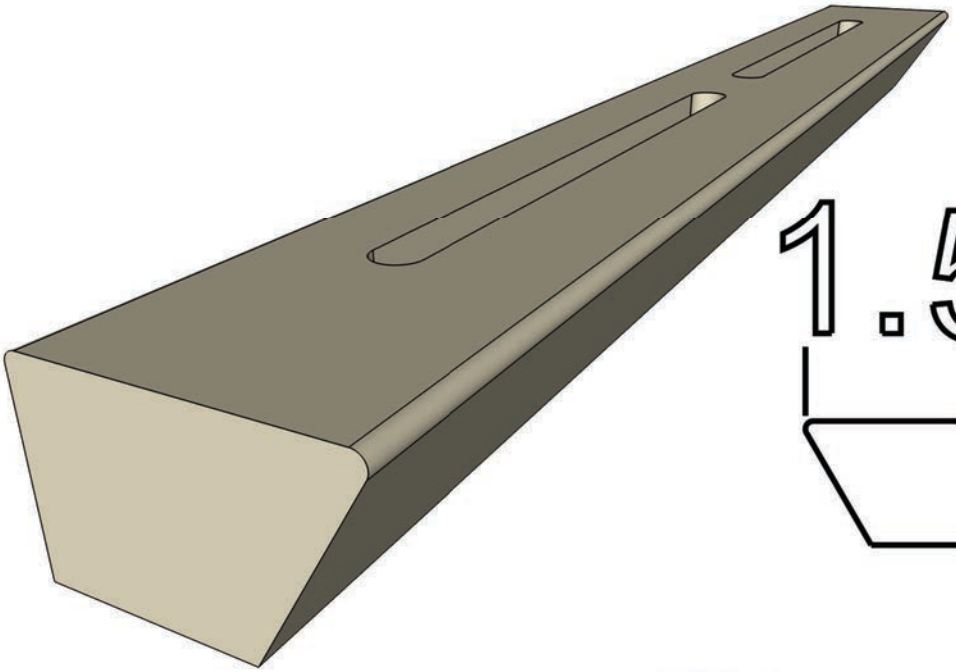


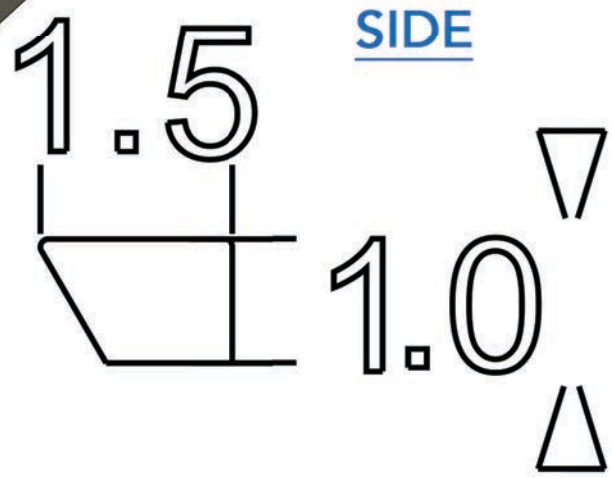


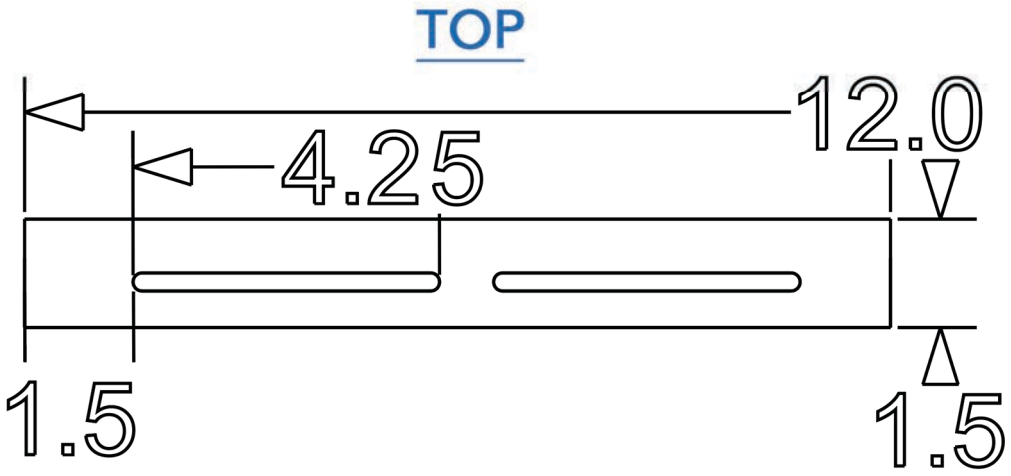
- 2 points of contact for odd shapes and angles.
- Doubles as a cam clamp.
- Slotted to reach anywhere on the surface - flat side or round.



360 Hold-Down Fence

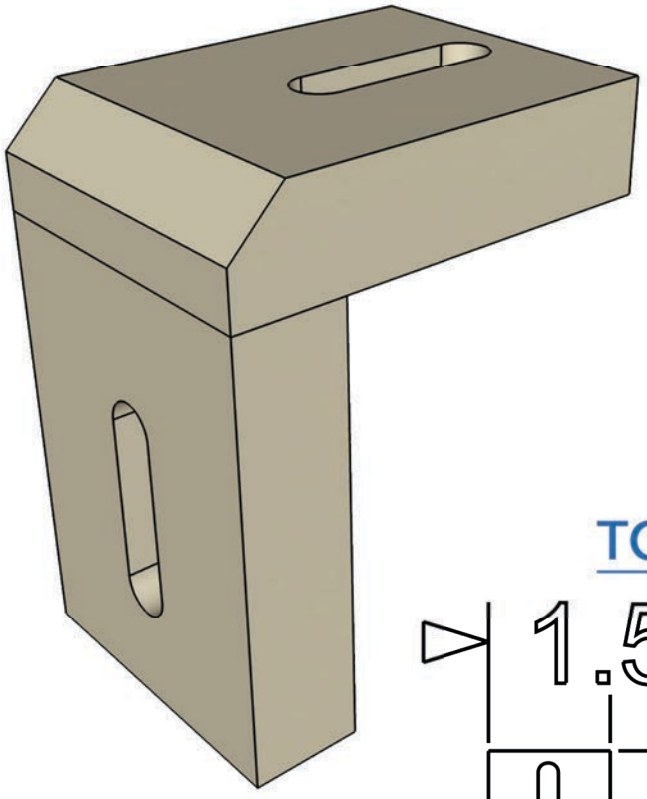


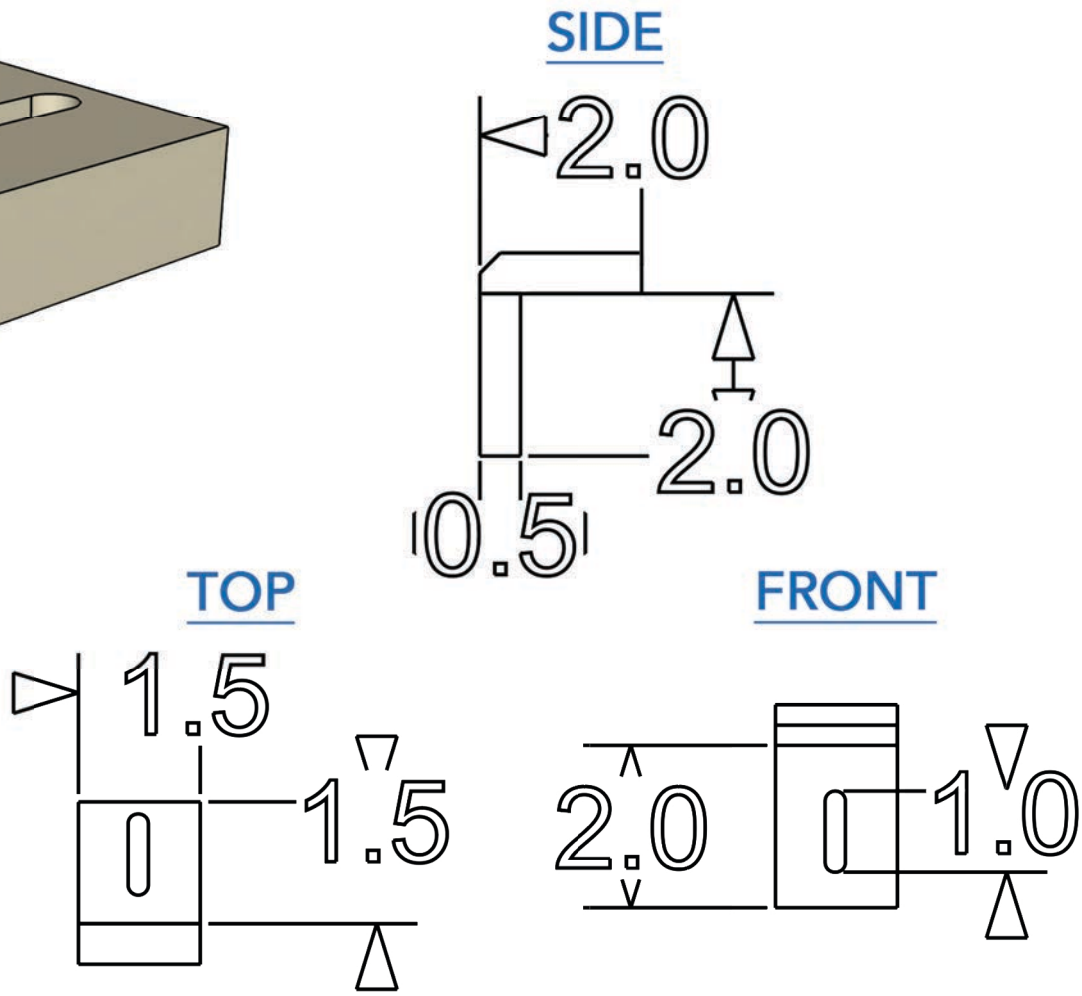




- Rotates 360 degrees and locks into any angle.
- One flat edge to act as a fence, one beveled edge acts as a hold-down.
- Used in tandem as a split fence - set two angles for a single cutting operation.

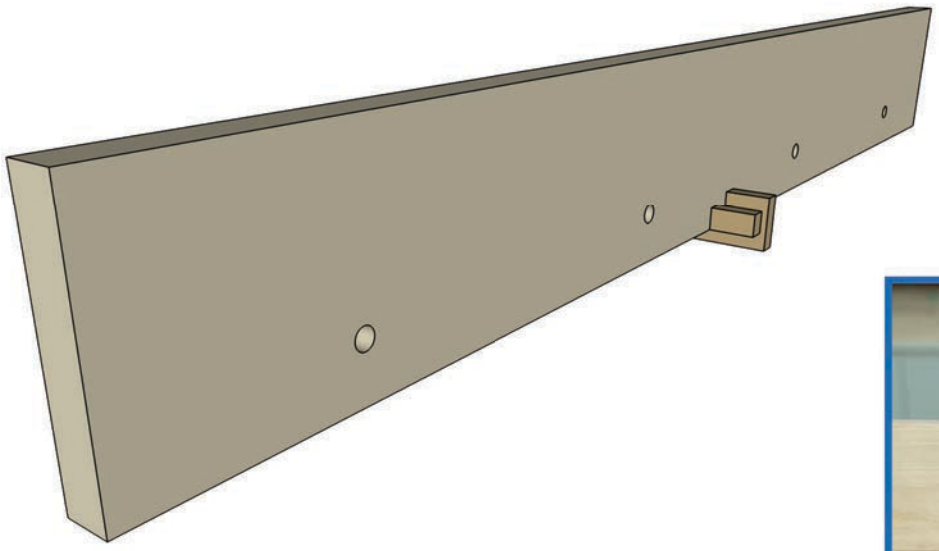
Sliding Fence Stops

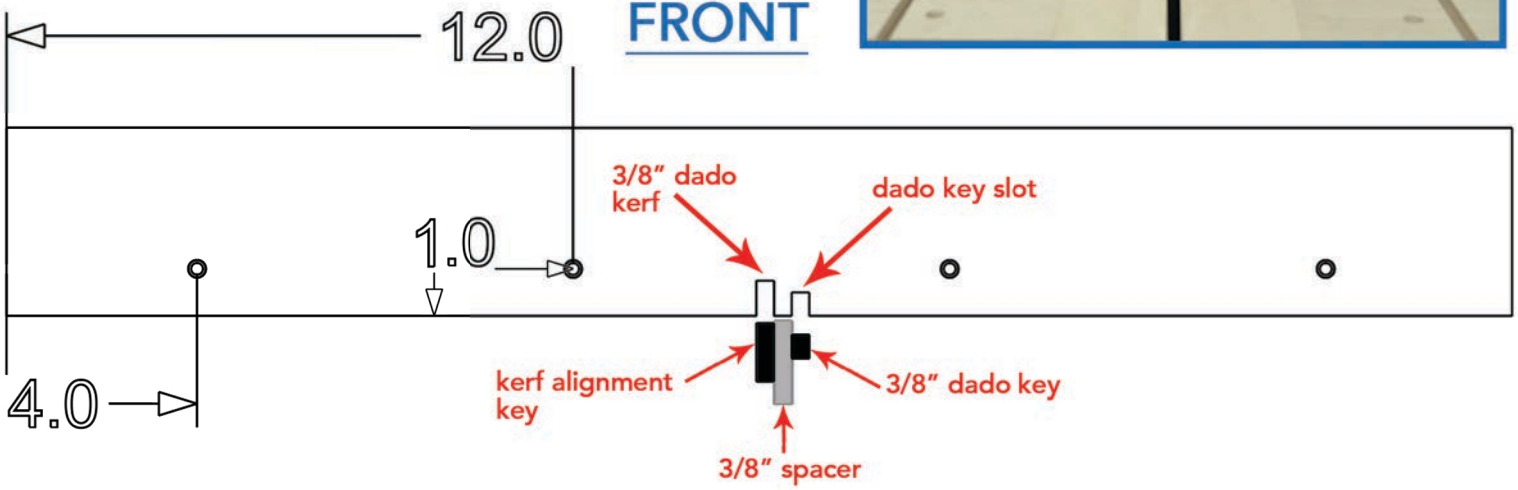




- Locks in anywhere along the fence.
- 1/4" wide slots. Can be placed on top of thin material as a hold-down.
- Reversible for positioning close to the blade.

Box Joint Jig

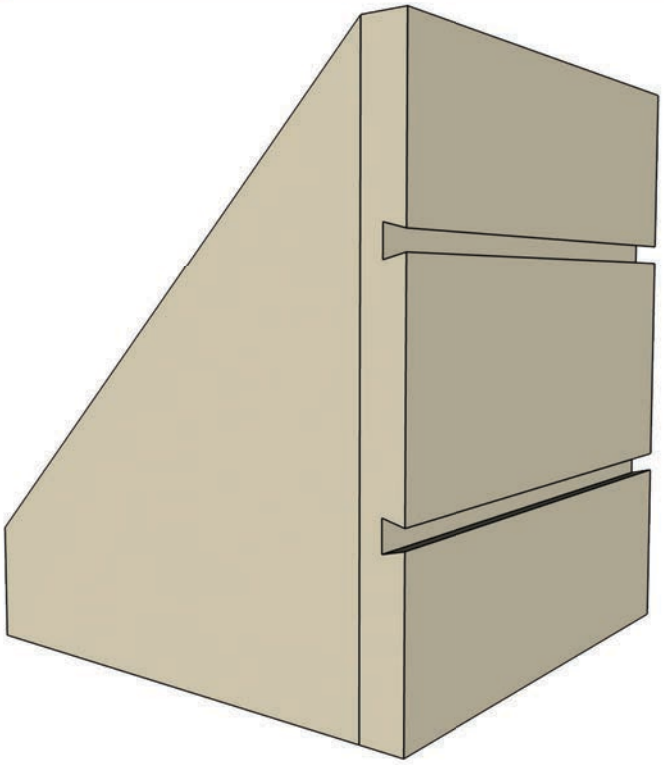


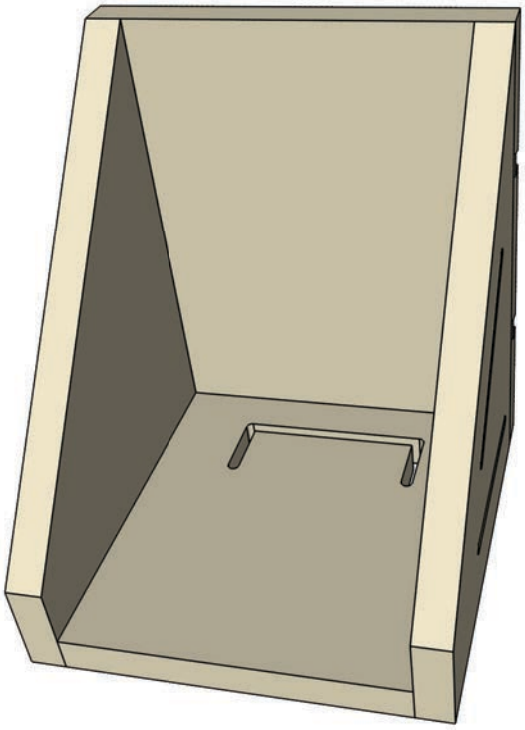


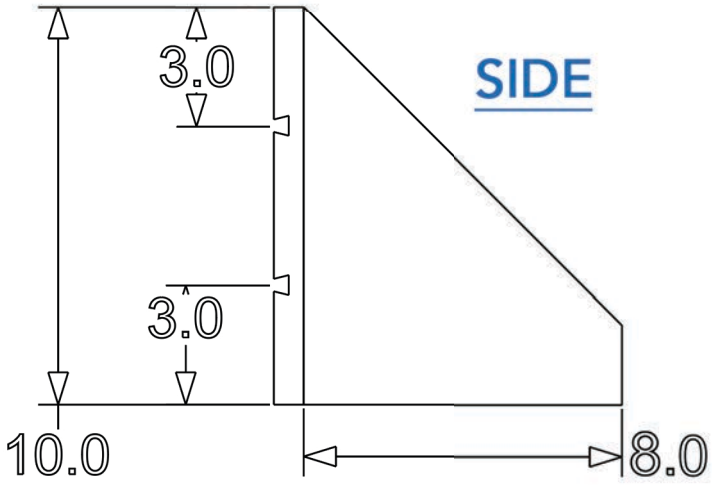
- Easy-on, easy-off with Dovetail Track Nuts.
- Cut keys and a spacer equal to kerf width for easy alignment.
- Dado key remains in slot, spacer used to reposition fence
- Kerf alignment key lines up zero clearance insert with fence.

SLED ATTACHMENTS

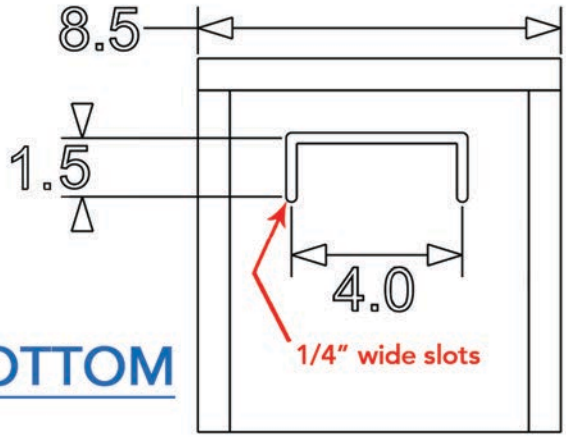
Vertical Cutting Jig







SIDE



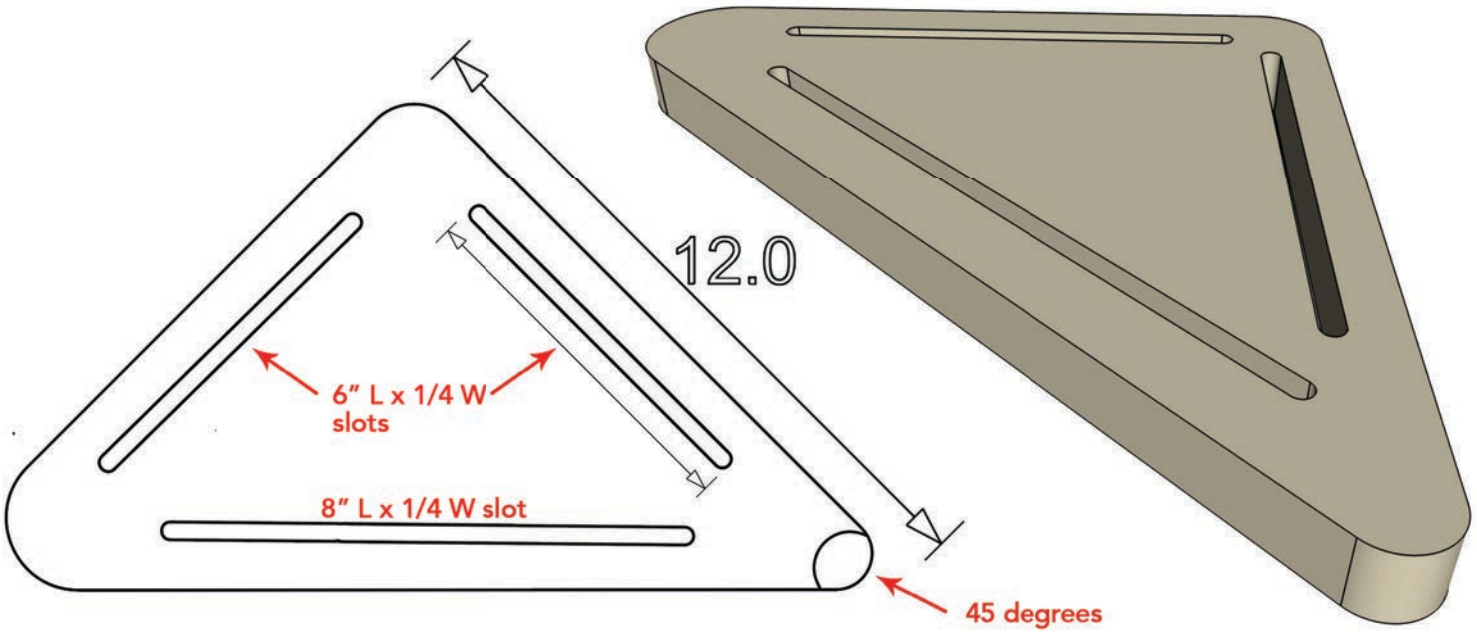
BOTTOM

- 90 degree vertical wall secures material for vertical cutting.
- Ideal for tenons, splines, and angles deeper than 45 degrees.
- Attaches to sled with MATCHFIT Dovetail Hardware

MICROJIG®

Miter Attachment

SLED ATTACHMENTS



- 45 degree attachment template routed from existing commercial product.
- Attaches to sled or vertical cutting jig with MATCHFIT Dovetail Hardware for precise 45 and 90 degree alignment.