



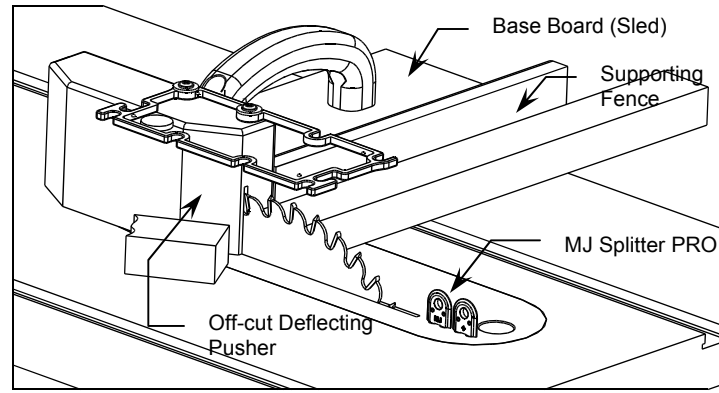
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ZeroPlay™ Guide Bar Jig Plans (V1.0) 1005

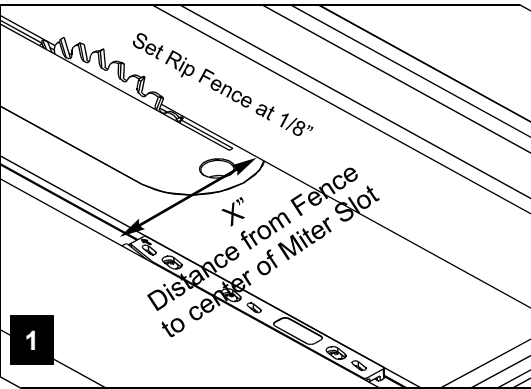


This small cut-off jig built with the ZeroPlay™ Guide Bar is small and lightweight, easy to handle and store, and is very easy to build. Its greatest advantage is that it has an angled Off-Cut Pusher that deflects the off-cut away from the saw blade, which minimizes the chance of kickback. Because it has a fixed 90 degree cross-cutting platform, once it is calibrated correctly, it delivers a perfect square cut every time.

There are two optional components shown on this jig—the handle from the GRR-Ripper® and the MJ Deflector/Connector for the GRR-Ripper®, which are both available separately. The GRR-Ripper® Handle allows for easier feeding, which can be replaced by a user-made handle. The MJ Deflector/Connector acts as a dust shield, which also can be replaced by using a 3" x 7" sheet of transparent polycarbonate.

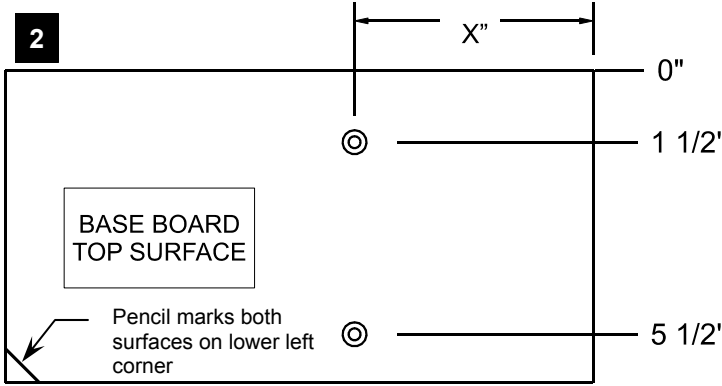
Material List:

- (1) Base Board (Sled): 12-1/4" L x 6-1/2" W - 1/2" thick plywood or MDF
- (2) Angled Off-Cut Pusher (Deflector): 6-1/2" L x 4" H - 2" thick solid wood
- (3) Supporting Fence: 10-1/2" L x 1-1/2" H - 3/4" thick solid wood
- (4) GRR-Ripper® handle (optional)
- (5) MJ Deflector/Connector (optional—but recommended)
- (6) One set of ZeroPlay™ Guide Bars



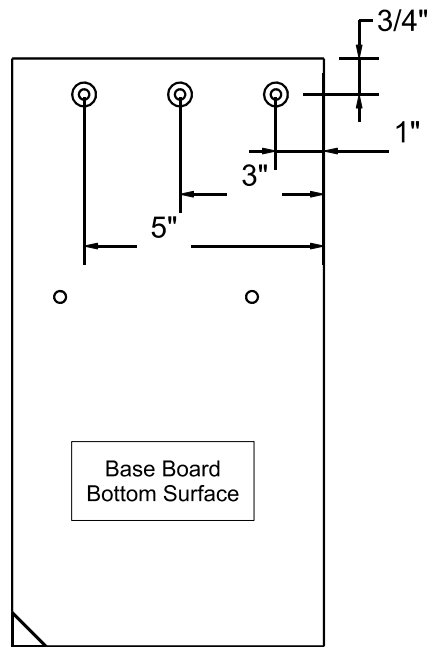
Step 1

- Make sure your rip fence is parallel to the saw blade.
- Set the rip fence at 1/8" from the saw blade.
- Measure the distance (X") from the 1/8" rip fence setting to the center of the left miter slot.



Step 2

- Cut the 1/2" thick base board (Sled) to dimension: 12-1/4" x 6-1/2".
- Drill two counter-bored holes from the top surface of the sled at the locations shown for the ZeroPlay™ Bar. Counter-bore diameter is 1/2" x 5/16" deep. Through hole diameter is 1/4".

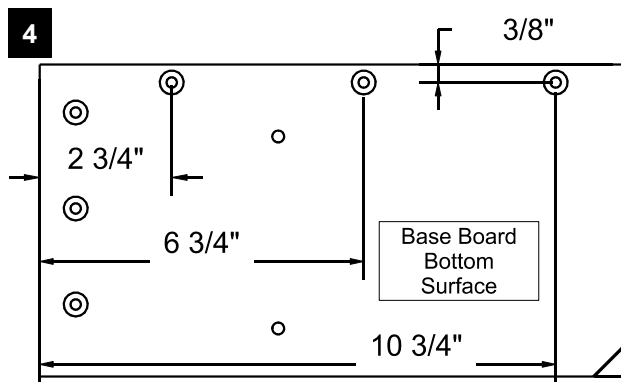


Step 3

- Flip the Base Board (Sled) over and drill three counter-bore holes on the bottom surface at the locations shown. Note the orientation of the sled by the pencil mark at lower left corner.

Counter-bore diameter is 1/2" x 1/4" deep.
Through hole diameter is 1/4".

These holes are for installing the Angled Off-Cut Pusher (Deflector).

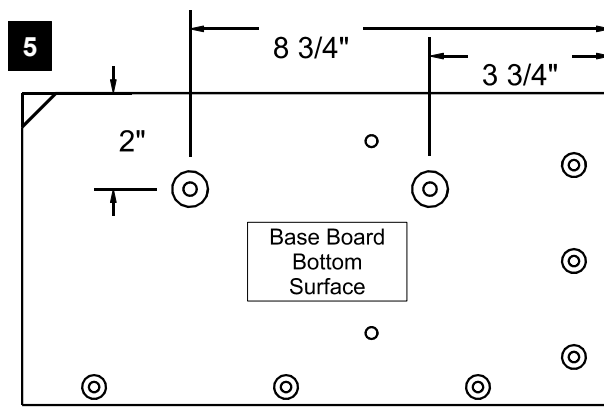


Step 4

- Drill another three counter-bored holes on the opposite long side of the pencil mark at the locations shown.

Counter-bore diameter is 1/2" x 1/4" deep.
Through hole diameter is 1/4".

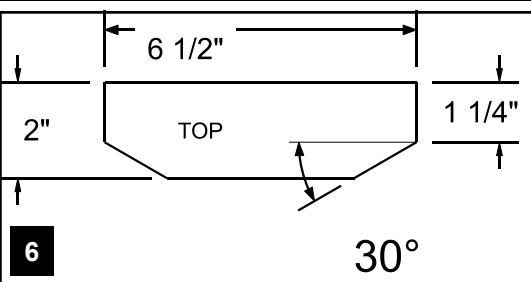
These holes are for installing the Supporting Fence.



Step 5 (optional)

- Drill two counter-bored mounting holes if you plan to install a GRR-Ripper® or a user-made handle.

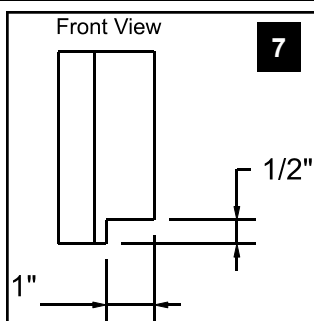
Counter-bore diameter is 3/4" x 1/4" deep.
Through hole diameter is 9/32".



Step 6

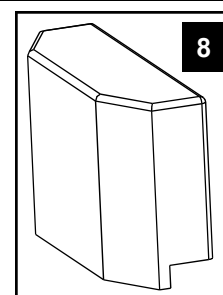
- Cut a piece of solid wood that is 6-1/2" L x 2" W x 4" H.
- Set your saw at a 30 degree bevel and make two bevel cuts at shown.

Refer to Drawing 8 for a 3-D view.



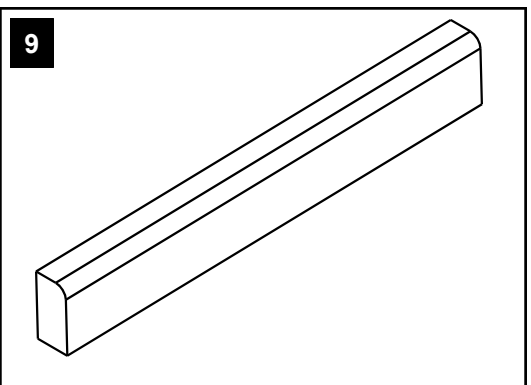
Step 7

- Make a rabbet cut as shown. Refer to Drawing 8 for a 3-D view.



Step 8

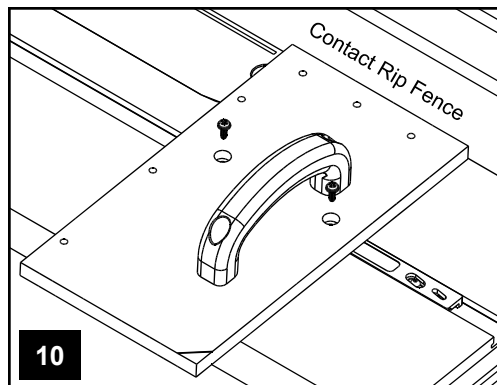
- Off-Cut Pusher shown in Step 13:
- Soften all edges with a round over router bit or sand paper.



Step 9

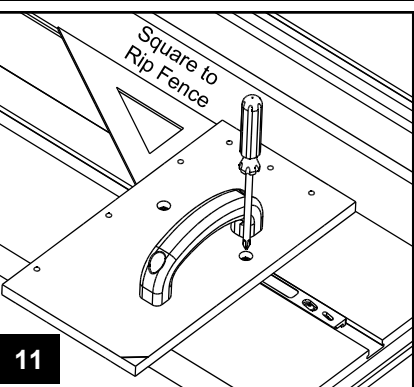
Supporting Fence shown in Step 13:

- Cut a 10-1/2" L X 1-1/2" H piece of 3/4" thick solid stock.
- Soften one long edge with a round over router bit or sand paper.



Step 10

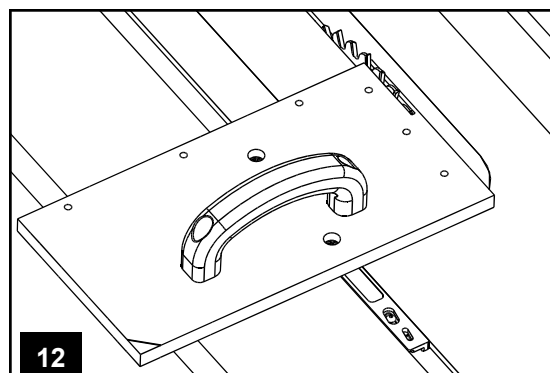
- Install the GRR-Ripper® handle or the user-made handle on the sled if desired.
- Lay the calibrated ZeroPlay™ Guide Bar in the left miter slot.
- Loosely thread the supplied #8 x 1/2" pan head screws (F) and the washers (G) through the two holes on the top surface of the Sled (from Step 2).
- Make sure the Sled is in contact with the rip fence, which is set at 1/8" from the saw blade.



Step 11

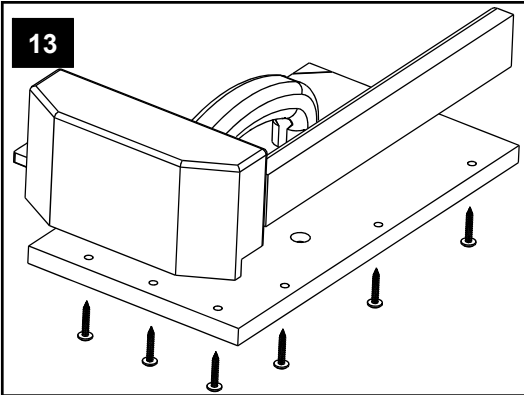
- Lower the saw blade completely.
- Set a drafting triangle or a mechanist's square against the front edge of the Sled and the rip fence.
- Use a Phillips screwdriver to tighten the two pan head screws that secure the Sled to the ZeroPlay™ Guide Bar (do not over tighten). Over tightening the mounting screws may cause binding.

Note: Only two mounting screws are used on a smaller Sled such as this.



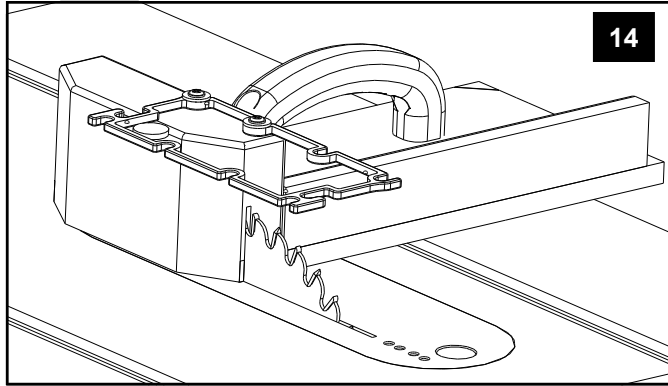
Step 12

- Move the rip fence away from the saw blade.
- Raise the saw blade to about 3/4" to 1" in height.
- Trim the sled to obtain the Zero Clearance edge.



- Step 13**
- Install the angled Off-Cut Pusher and the Supporting Fence with #8 x 1" pan head wood screws as shown.
 - Make sure the Supporting Fence is installed flush with the front edge of the sled.

Pre-drilling the pilot holes on the Off-Cut Pusher and the Support Fence will facilitate installation.

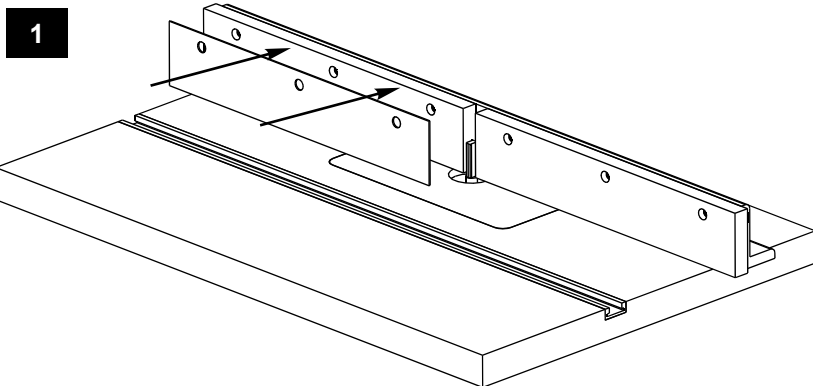


- Step 14**
- (Optional) Install a see-through polycarbonate shield (3" x 7") on the Off-Cut Pusher, or use the MJ Deflector/Connector.
 - Raise the saw blade to 2" in height—set at 90 degrees—and cut a kerf into the Off-Cut Pusher. Do not cut all the way through—cut only when the highest point of the saw blade is in the Off-Cut Pusher.
 - The Small Cross Cutting Jig is now ready for use.

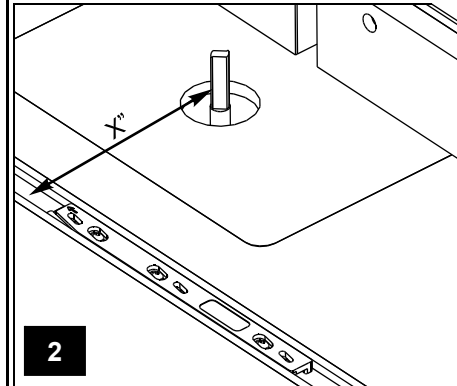
Router Table Jointing Fence Setup Jig - This custom sled - built with the ZeroPlay™ Guide Bar System - provides for a repeatable, quick and precise method to align the split sub-fence used in a jointing operation on a router table.

Material List:

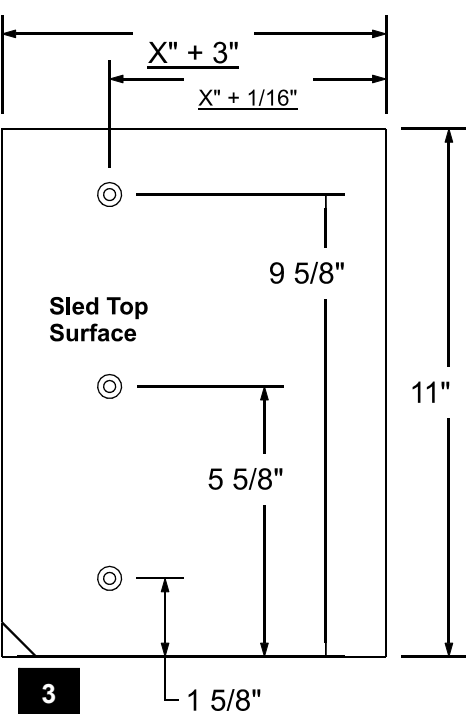
- (1) Base Board (Sled): Approximately 11"L x 10" W - 3/4" thick Baltic Birch Plywood or MDF
- (2) Two pieces of 3/4" thick MDF (for in-feed and out-feed sub-fences) to fit your existing router fence
- (3) One piece of plastic laminate to fit the out-feed sub-fence
- (4) One set of ZeroPlay™ Guide Bars
- (5) (Optional) Two hold-down clamps with two ZeroPlay™ Stops (see ZeroPlay™ - Z1 Manual - page 2 - for details)



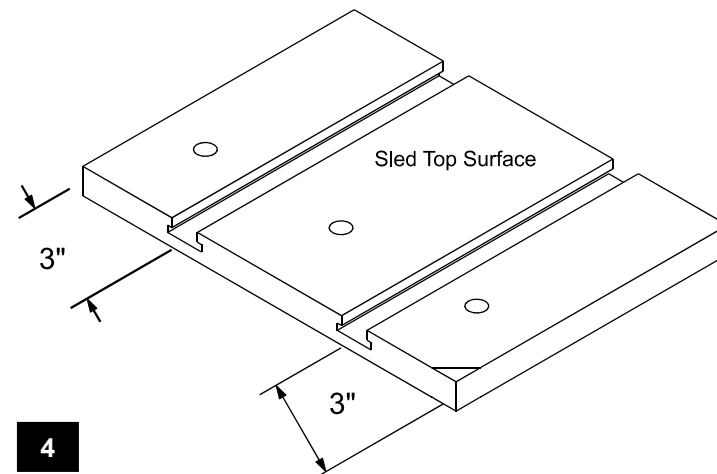
- Step 1**
- Prepare two sub-fences of equal thickness and attach them to your existing one-piece router fence.
 - Glue one piece of plastic laminate to the out-feed fence, or plane down the in-feed fence about 1/32". This will create an out-feed fence that is about 1/32" thicker.



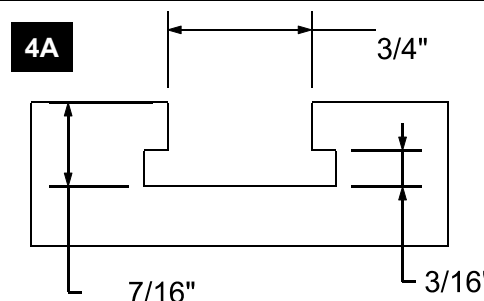
- Step 2**
- Chuck a 1/2" straight or spiral router bit in the router and raise it to about 1" in height.
 - Measure the distance (X") from the cutting edge of the router bit to the center of the miter slot.



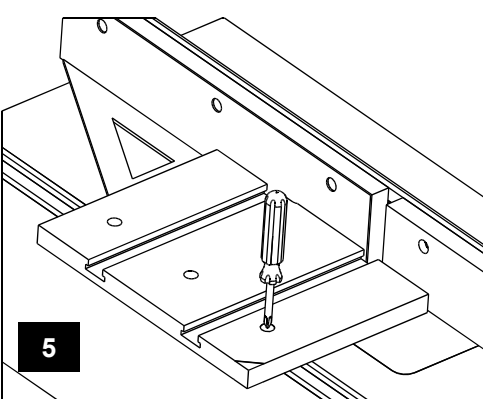
- Step 3**
- Cut the 3/4" thick sled to dimension: 11"L x 10" (or X" + 3") W
 - Drill three counter-bored holes from the top surface of the sled at the locations shown for the ZeroPlay™ Bar. Counter-bore diameter is 1/2" x 9/16" deep. Through hole diameter is 1/4".



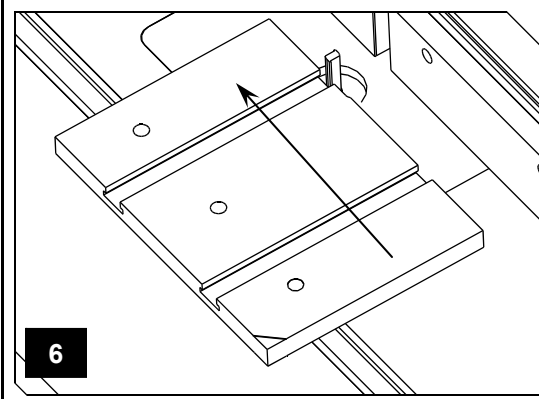
- Step 4 (Optional)**
- In addition to performing as a Jointing Fence Setup Jig, the sled can also be used as a sled to carry stock so it moves parallel to the miter slot. In this case, two hold-down clamps must be used for securing the stock to be jointed, therefore two T-slots must be routed on the top surface of the sled for the hold-down clamps.



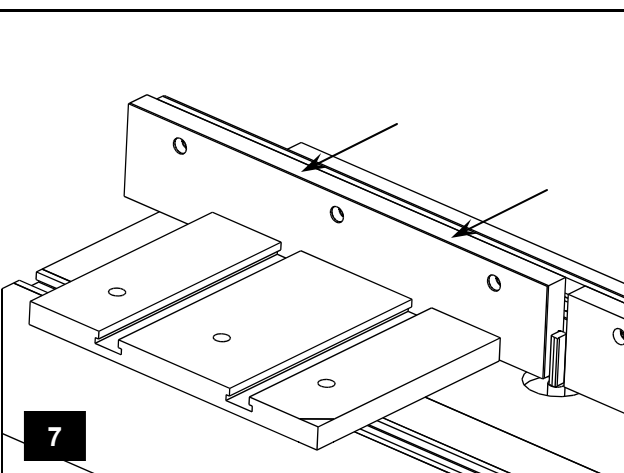
- Step 4A (Optional)**
- A key-hole or T-slot router bit is required to rout the T-slot. Although a 1/8" key-hole cutting height is best, it is not widely available. We use a key-hole bit with a 3/16" cutting height, which is available from most router bit suppliers. When using a 3/16" cutting height bit, the depth of the T-slot must also be increased to 7/16" instead of the usual 3/8". We cut a dado that is 3/4" W x 3/8" D before using the key-hole bit.



- Step 5**
- Lay the calibrated ZeroPlay™ Guide Bar in the miter slot.
 - Loosely thread the supplied #8 x 1/2" pan head screws (F) and the washers (G) through the three holes on the top surface of the Sled (from Step 3).
 - Move the Sled towards the out-feed fence. Use a drafting triangle or a machinist's square to carefully square the front edge of the Sled to the out-feed fence.
 - Lock the fence and use a Phillips screwdriver to tighten the three pan head screws that secure the Sled to the ZeroPlay™ Guide Bar (do not over tighten). Over tightening the mounting screws may cause binding.

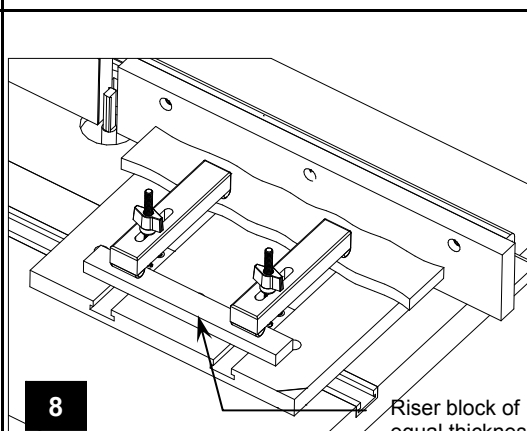


- Step 6**
- Move the fence away from the router bit. Raise the router bit to about 1" in height. With the ZeroPlay™ Guide Bar in the miter slot, turn on the router and feed the Sled in the direction shown to trim the Sled, creating a zero clearance edge.



- Step 7**
- The jig is now ready to setup the router fence (with the sub-fences installed from Step 1) for a jointing operation.
 - Move the jig to the out-feed side of the router table, then move the entire router fence forward until the out-feed sub-fence contacts the zero clearance edge (from Step 6). Lock the entire fence in position.
 - Now the router fence is ready for a jointing operation with the same 1/2" straight or spiral router bit.

Once the jig is created, it takes only seconds to set up the same router fence again for a jointing operation.



- Step 8 (Optional)**
- To use the jig as a Sled, two hold-down clamps are required (see page 2 of the ZeroPlay™-Z1 Manual).
 - Slide the ZeroPlay™ Stops and the hold-down clamps into the T-slots.
 - Place the work piece against the in-feed fence and clamp it in position. Turn on the router and perform the jointing operation.
 - Loosen the clamps and move the stock against the in-feed fence and re-clamp before each additional pass.

Note: Use a riser block of equal thickness to provide leverage for a user-made plywood clamp. Depending on your router table and fence sizes, a longer and wider sled with additional T-slots can be made to handle larger stock.