

WATCH THE INSTRUCTIONAL VIDEO: microjig.com/bladematch-video

WARNING! BLADEMATCH Arbor Shims are designed to be used in conjunction with a table saw. Make sure you are familiar with the operation of your saw before attempting any of the techniques presented within this manual. MICROJIG, Inc. assumes no liability for any product not manufactured by it. The user must take all necessary precautions when operating a table saw or any other tools as recommended by their manufacturers and as required by any prudent tool user.

NOTE: For illustration purposes, instruction photos are shown with left-tilting table saws, with the fence on the right side of the saw blade.

- Left-tilting table saws: arbor is located on the left side of the saw blade
- Rip fence is parallel to the saw blade
- Saw blades must not be thinner than riving knife or splitter

NOTE: BLADEMATCH Arbor Shims do not work on table saws where the arbor or table change locations for cuts, such as the ShopSmith® System.

CALIBRATE RIVING KNIFE OR SPLITTER TO THE ZERO CUT LINE ESTABLISHED BY THE DEFAULT TABLE SAW BLADE

NOTE: For left-tilting table saws: Use thickest as default saw blade.

NOTE: For right-tilting table saws: Use thinnest as default saw blade

STEP 1: Align your saw blade to the arbor flange

Mark a dot on the arbor flange and another on the saw blade, make sure they're aligned. Always mount saw blades with marks aligned. This ensures that runout will be the same each time that blade is used.



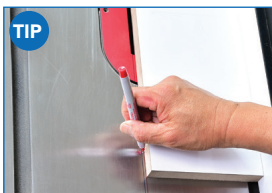
STEP 2: Align riving knife or splitter with kerf of default blade



2A Prepare one 3/4"x18"Lx5.5"W piece of MDF. Write "RIVING KNIFE SETUP" on this board. Prepare a 3/4"x8"Lx5.5"W piece of MDF for each blade you will be using. Prepare an extra piece for **STEP 3A** and mark it "5" SCALE SETUP". For illustration purposes, we laminated all MDF in white. **NOTE: DO NOT** move the fence until **STEP 2D** is finished.

2B One piece of MDF for each blade, and one for the 5" SCALE SETUP, as shown.

2C Without moving the fence, unplug the table saw. Remove the saw blade and throat plate for safety. Loosen bolts securing the riving knife or splitter.



TIP: Using an extra fine red marker, draw a line on the table saw top along the kerf edge of the RIVING KNIFE SETUP board. This red line indicates the zero cut line where the saw blade exits at the end of your stock.

2D Place RIVING KNIFE SETUP board against the fence. Push the riving knife or splitter against the MDF kerf edge and tighten the securing bolts. Now, the riving knife or splitter is aligned with the actual kerf of the default blade.

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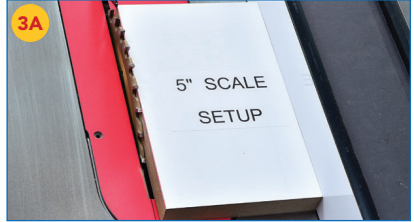
ALIGN EVERY SAW BLADE TO THE SAME ZERO CUT LINE

STEP 3: CALIBRATE TABLE SAW SCALE

- 3A** Using the default blade, rip the 5" SCALE SETUP board to exactly 5". For best results, measure the piece with a digital caliper.

NOTE: Lock the fence. DO NOT move the fence until **STEP 5C** is finished.

- 3B** Calibrate the table saw fence scale to 5". Now the scale will be accurate to the default blade and all thinner blades when the proper amount of Arbor Shims are installed.



STEP 4: FINDING THE ZERO CUT LINE

- 4A** Draw a black line through the center of each remaining board. Write "DEFAULT BLADE 5\"" on the top half and "THIN KERF BLADE" on the lower half. Draw a vertical red line exactly 5" from the right

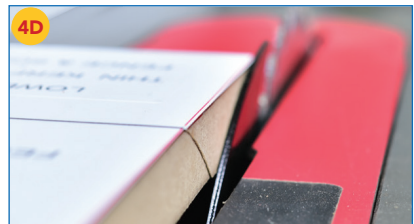
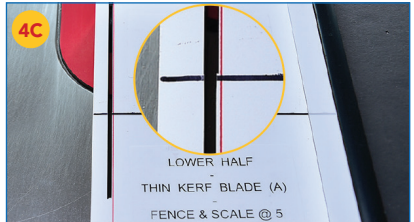
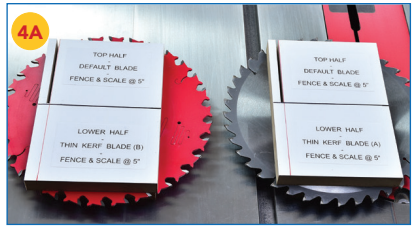
edge of the board. This line represents the zero cut line established in **STEP 3**. Cut the kerf to the black line at the top half of the board with the default blade.

- 4B** Unplug your table saw. Left-tilting table saws: change to a thinner blade. Right-tilting table saws: change to a thicker blade. Mark a dot on the blade that aligns to dot on the arbor flange from **STEP 1**.

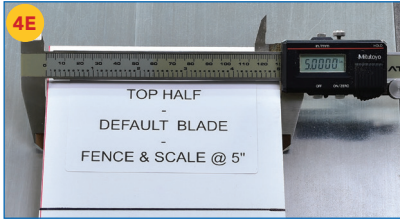
- 4C** Trim the lower half of the board with the thin kerf blade. Notice the thin kerf blade did not cut to the red 5" zero cut line. This means the Thin Kerf blade cuts wider than 5", even when the scale is at 5". For illustration purposes, we did not trim off the entire lower half.

For right-tilting table saws, flip the board upside down, and front to back. With the lower half towards the front, trim to the black line.

- 4D** Push the MDF through the riving knife with the lower half kerf contacting the riving knife. Depending on the kerf difference, the riving knife may apply too much pressure to the kerf cut by the thinner blade. This indicates the riving knife is not aligned with the thinner blade when Arbor Shims are not installed.



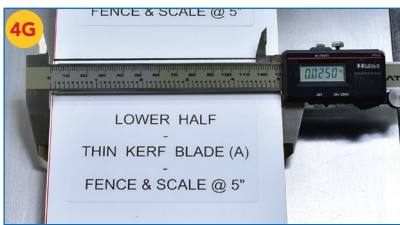
STEP 4: FINDING THE ZERO CUT LINE *Continued*



- 4E** Find the kerf difference. Measure the width of the top half of the board. It should read 5.000”.



- 4F** Keeping the caliper in place, zero your caliper from 5.000” to 0.000”.



- 4G** Measure the width of the lower half of the board. The caliper reading will now show the Arbor Shims required for this thin blade, on this particular table saw.



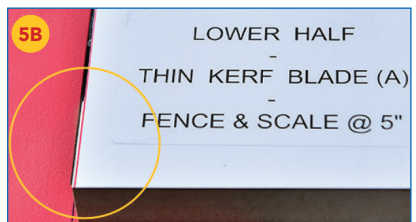
- 4H** Write the Arbor Shim(s) needed on this blade. For this particular scenario, the number is 0.025”.

STEP 5: INSTALLING AND USING ARBOR SHIMS

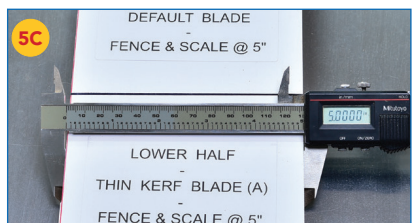
- 5A** Unplug your table saw. Remove stacking and thin saw blade. Install the Arbor Shims determined in **STEP 4G** to the arbor. Reinstall the thin saw blade with dots on the blade and arbor flange aligned.



- 5B** Trim the lower half of the board from **STEP 4C**. For illustration purposes, we did not trim the entire lower half. With the proper amount of Arbor Shims installed, the thin blade now cuts to the 5” red zero cut line.



- 5C** The width of second half should be identical to the top half trimmed by with the default blade in **STEP 4A**, and should read 5.000” or within one or two thousandths tolerance. Now this thin blade will be aligned with the fence scale and riving knife when used with corresponding Arbor Shim(s), and is in the same orientation to the arbor, dots aligned. Repeat **STEP 4** and **STEP 5** with every thinner blade you own using the remaining MDF pieces.



NOTE: Each table saw and saw blade has a different runout. Every Arbor Shim calibration is specific to the individual saw blade mounted on a certain table saw, when calibrated with the same default blade.

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