

## Configuring the Felder Rip Fence for Accurate Bump-Stop Use

– one user's experience

### Configuring the rip fence for accurate bump-stop use – and as a parallel fence to the right of the saw blade.

A Felder sliding table saw can easily be configured so that the rip fence can act as a bump-stop to the right side of the saw blade. But there are limitations in dimensional accuracy as the fence normally configured. The setup described in this document is one method of improving the accuracy and consistency of bump-stop cutting, as well as a means of transforming the rip fence into a parallel fence to the right of the saw blade.

As normally configured and aligned, the rip fence has a small amount of toe-out to reduce the risk of kickback and edge burning when ripping material. In essence, the rip fence is aligned so that it angles away from the saw blade slightly. Thus, when using the rip fence as a bump-stop, the actual cutting distance from the saw blade to the rip fence varies slightly depending on which section of the rip fence is used to register the material being cut. So, care must be taken to always “bump against” the same place on the rip fence to attain truly accurate cutting lengths. If the rip fence could be temporarily aligned parallel to the saw blade for bump-stop operations, then this inconsistency could be resolved.

Additionally, such a temporary setup would create a parallel fence to the right of the saw blade. This setup be particularly useful when repetitively cutting long thin strips of material to the same width (such as edgebanding). Once the rip fence is configured parallel to the saw blade, the material would be pushed against the rip fence and secured to the sliding table with clamps, then the cutting operation is performed. Given the rip fence is normally aligned at a slight angle relative to the saw blade, if you push material against the rip fence, then clamp the material down to the sliding table and proceed with the cutting operation, the resulting off-cut (to the right of the blade) will be tapered.

It is possible on most Felder sliding table saws to configure and align the rip fence in a manner that when positioned for conventional rip cuts, the fence has the proper toe-out. But when the fence extrusion is retracted and does not overlap the saw blade, the rip fence is automatically realigned to be parallel to the saw blade. With the rip fence parallel to the saw blade, it is possible to obtain repetitive off-cuts that are of consistent length or width when the material is clamped to and propelled by the sliding table. And since the rip fence is not overlapping the saw blade in this setup, the chance of a trapped off-cut being kicked back is significantly reduced.

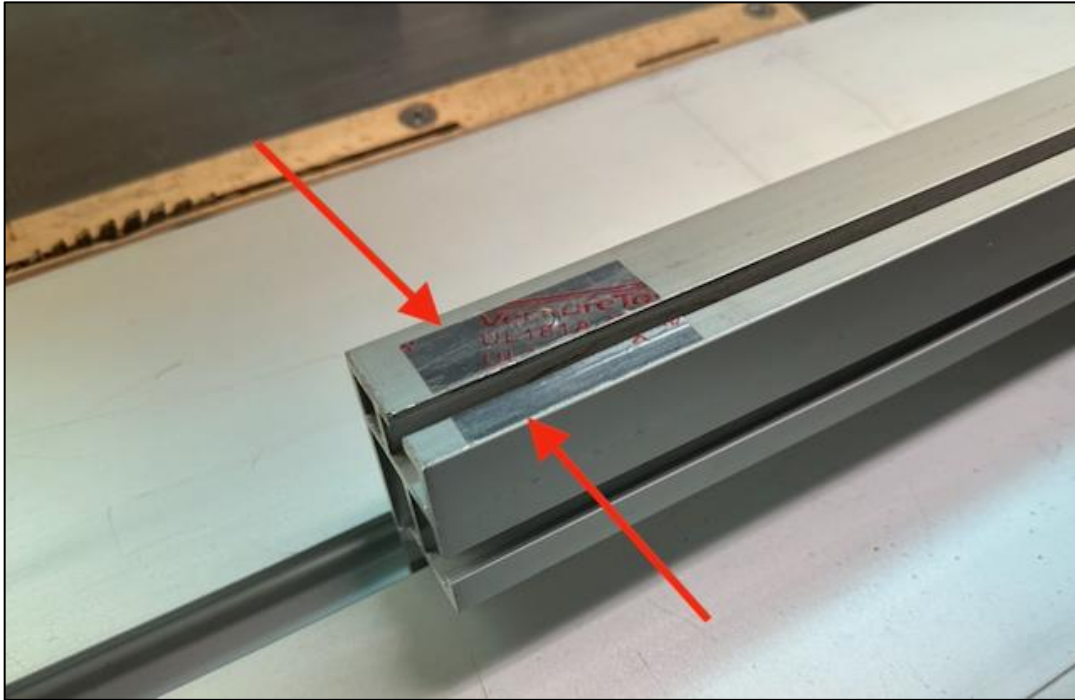
The photo below illustrates such an operation – note that the rip fence extrusion (the silver aluminum section) is retracted such that the front edge is aligned with the nose of the rip fence housing (blue) and does not overlap with the saw blade:



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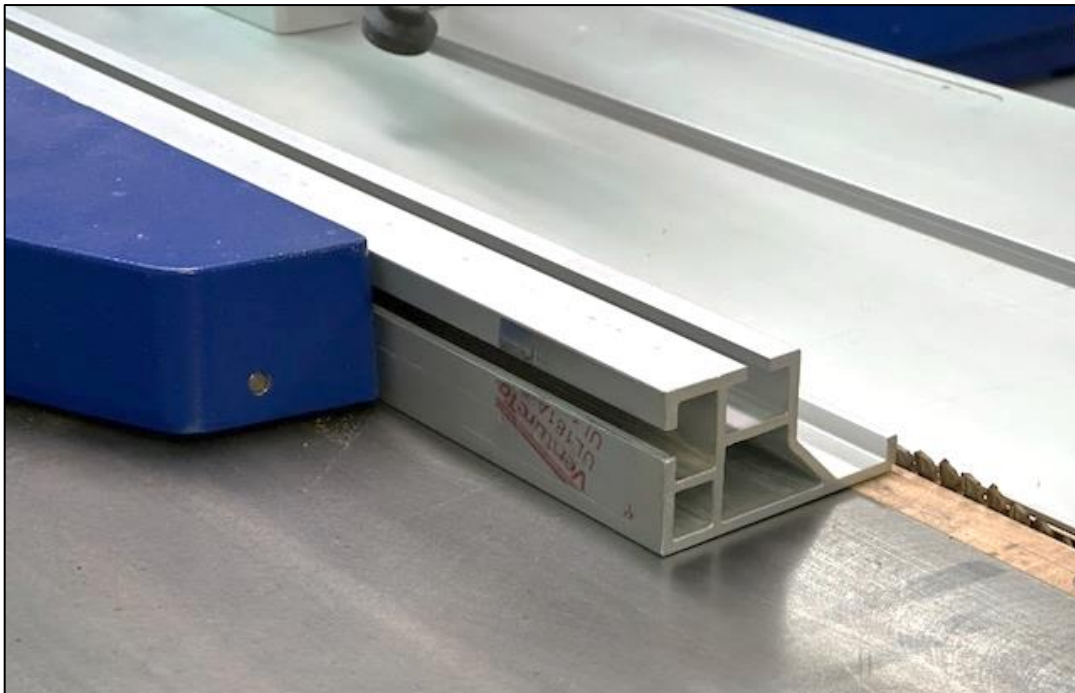
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In this setup, the rip fence extrusion is configured with a small section of packing or sealing tape at the leading edge as shown in the following photo. I prefer to use aluminum tape here for durability. This is the type of tape used in sealing up HVAC ducting joints – available at any big-box home center. Conventional packing tape can also be used but will become more chewed up over time, needing to be replaced. The ideal thickness of the tape should be 0.001-0.003" (0.02-0.04mm).



The tape is applied over a short section of the extrusion – approximately 3" (80mm) long on both sides of the t-slot as shown above and burnished flat to the surface of the extrusion.

Once the tape is affixed to the fence extrusion, burnished down and trimmed, the tape has no influence on the angle of the rip fence when the extrusion is pushed forward. This can be seen in the following photo.



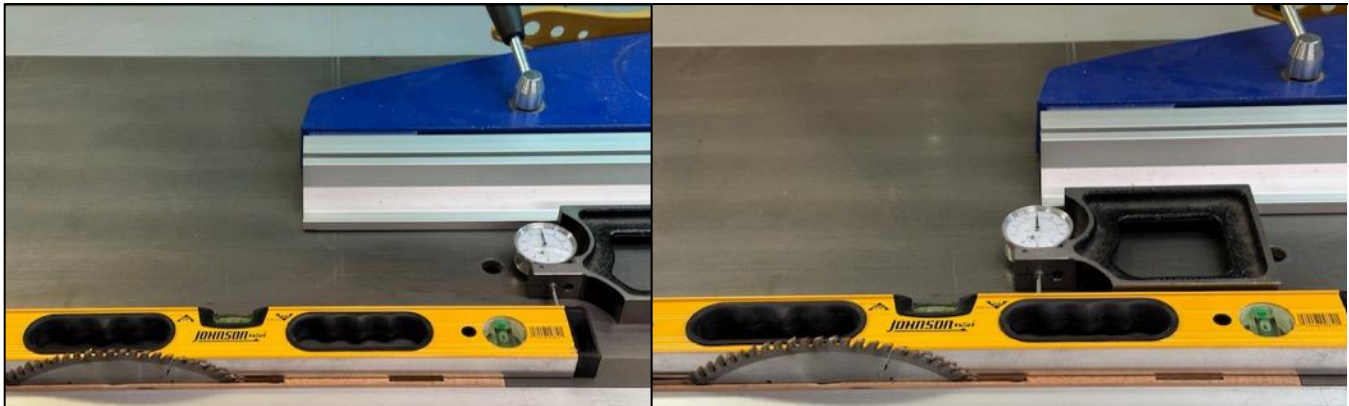
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Once the tape is applied, alignment of the rip fence toe-out proceeds as follows. With the tape applied to the rip fence extrusion and the extrusion pulled back and locked in position as shown in the photo below, the rip fence is then aligned so that it is parallel to the saw blade with zero toe-out. Methods of aligning the rip fence to adjust the toe-out varies between Felder saw models. On a K700 or KF700 machine, this alignment is accomplished by altering the position/angle of the round bar the fence housing rides on. On machines with motorized rip fence systems (like the Kappa 400 xMotion), the toe-out adjustments are contained within the fence housing itself as illustrated at this link:

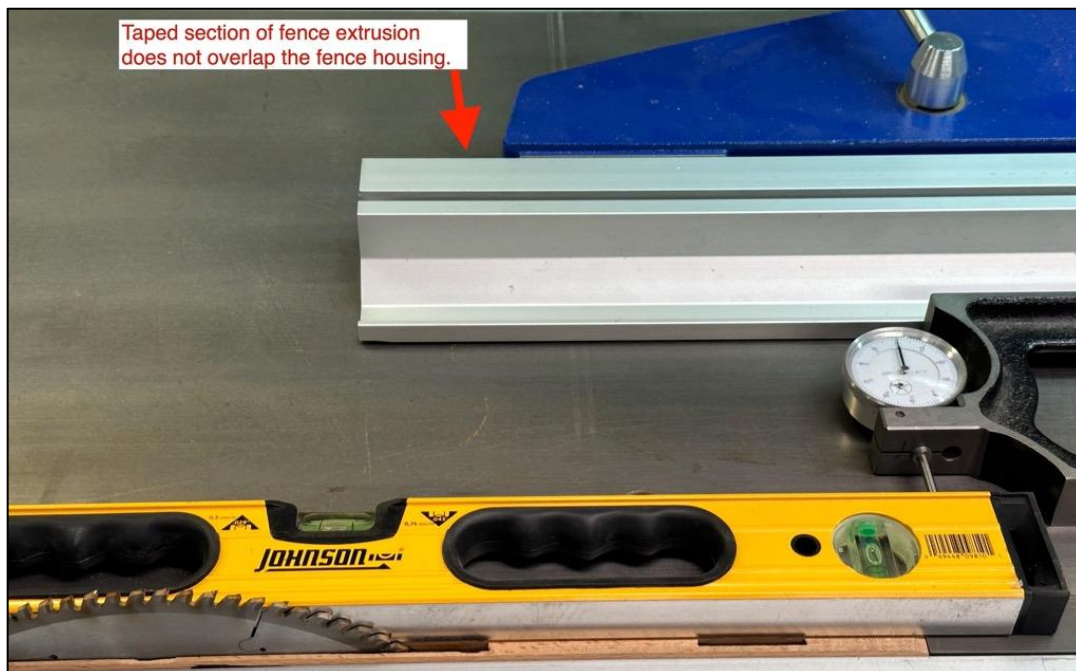
<https://flic.kr/s/aHskGMHZQd>

The photo below illustrates one method of checking that the rip fence is indeed parallel with the right side of the saw blade using a high-quality contractor's level to extend the blade surface forward. Then a Oneway gauge with dial indicator is positioned between the rip fence and the contractor's level and moved forward and back along the fence to check for zero variation.



With the rip fence retracted so that the tape is sandwiched between the extrusion and the fence housing, and the toe-out adjusted to zero, this brings the rip fence extrusion parallel to the saw blade when retracted. Configured in this manner, the rip fence can act as a parallel bump stop to the right of the saw blade, and the material can be pushed against the fence and then clamped to the sliding table with assurance that the offcut will not be tapered along its length.

But when the rip fence extrusion is pushed forward as shown in the following photo, the tape is no longer displacing the rip fence extrusion and the rip fence has proper toe-out – angled very slightly away from the saw blade to reduce or eliminate kickback.



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The following photos illustrate the two rip fence positions.



Rip fence is parallel to saw blade when retracted



Rip fence has proper toe-out for conventional rip cuts