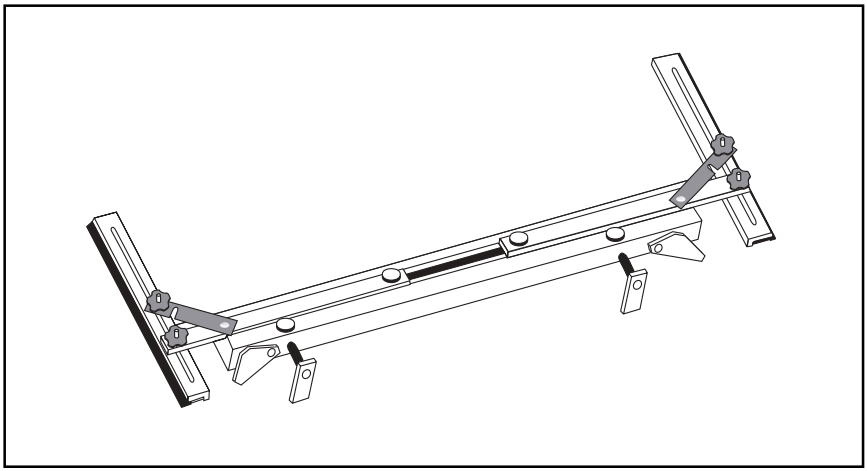
Instruction Manual

The Stair Wizard™

LJ-3052

Tread Layout Jig



L.J. Smith Stair Systems

Stair Wizard

The *Stair Wizard* is a superior tool for all types of treads and risers. It provides both the speed and the accuracy that the true professional demands.

The effect of tread overhang or nosing thickness on the depth of the tread is obvious—they both simply add to it, as shown in Fig. 1. Less obvious, however, is the effect on the length of the tread. When stairs are out-of-square (as most stairs are), tread length as measured on the rough stair is different from that measured along the nosing of the tread—see Fig. 1. This effect is usually quite small in the case of "accidental" out-of-squareness (approximately 1/32" for each 1 degree out-of-square). At times, however, the effect is significant and can lead to over– or under–sized treads, and even wasted treads. In those cases where the stairs are deliberately angled, the tread overhang/nosing thickness effect is an important consideration and must be taken into account.

The *Stair Wizard* automatically corrects for tread overhang, nosing thickness, and the effect of out-of-square or angled stairs. It accurately defines the true length and depth of the tread as well as the true shape. The result is a better fitting tread and a faster, easier job.

OUT-OF-SQUARENESS

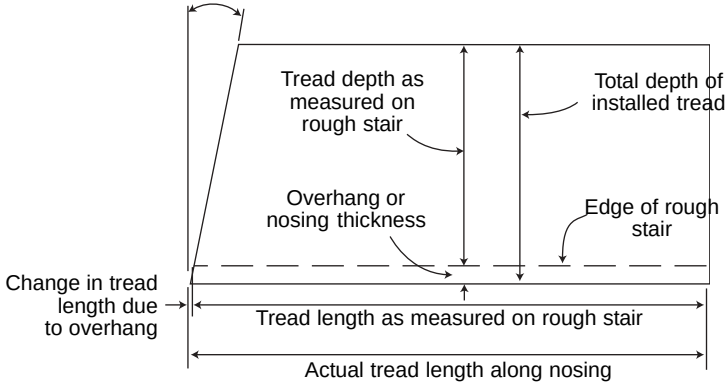


Figure 1. Effect Of Tread Overhang In Out-Of-Square Stairs

Operating Instructions

1. The operative parts of the *Stair Wizard* are illustrated in Fig. 2. Loosen the **5-pronged knobs** and the **set screws** so that the components can slide freely. The action may be a little stiff on a new jig but will soon loosen up. It helps to push down on the **spreaders** before sliding them in the dove-tailed raceway.

2. Move the **adjustable stops** out a distance equal to the desired tread overhang and tighten the **set screws**. See Fig. 3. It is important that both **adjustable stops** be set the same. Use a spacer to ensure a consistent setting. (The tread overhang is measured from the finished riser if it is already in place, or from the edge of the rough stair if the tread is installed before the riser.)

3. Position the jig on the rough stairs with the spring-loaded **drop stops** pressed up against the riser below (Figs. 3 and 4).

4. Extend the **outriggers** so that they are snug against the finished skirt on both sides of the stairway and pushed forward to the riser above (Fig. 4).

5. Tighten the **set screws** (lightly) and the **5-pronged knobs** and remove the jig by lifting up on either end. The **break-away hinges** on the **outriggers** allow easy removal no matter how tightly the jig has been set.

6. Position the jig on a tread blank with the **adjustable stops** pressed up against the nosing (Fig 5). The **drop stops** will automatically swing up and out of the way.

7. Mark or scribe the tread along the **straight-edges** (both ends of the tread). Cut the tread to length on your mitre saw (or use the jig itself as a saw guide [Fig. 6]).

8. Determine tread depth by marking the tread at the end of each **outrigger** (Fig. 5). (If the outrigger is at an angle, mark the tread at the deepest point.) Cut the tread to the proper depth and install.

Figure 2. Stair Wizard – Parts

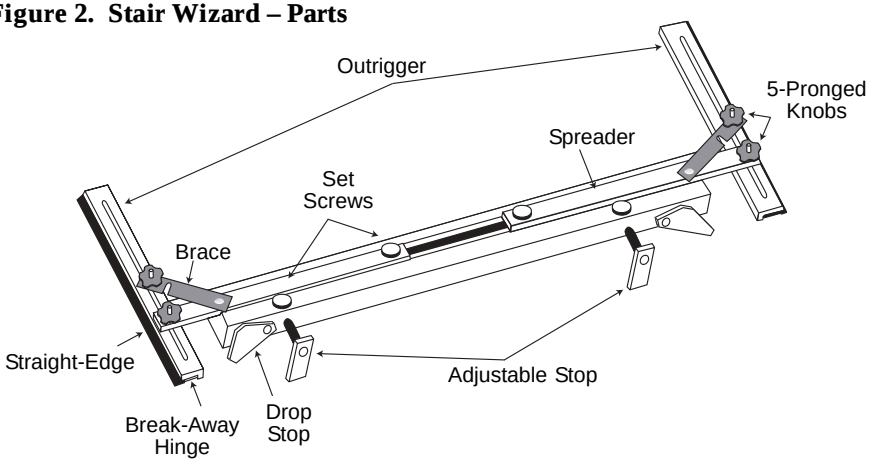


Figure 3. Setting The Adjustable Stops

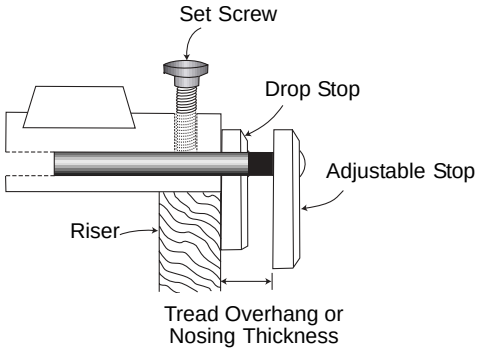
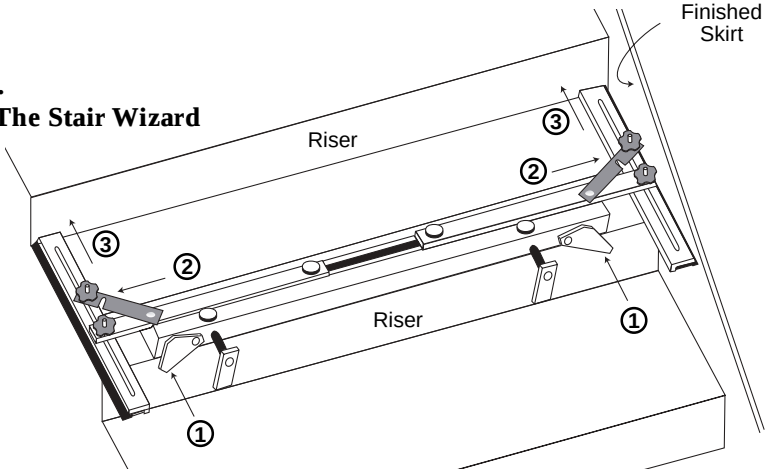
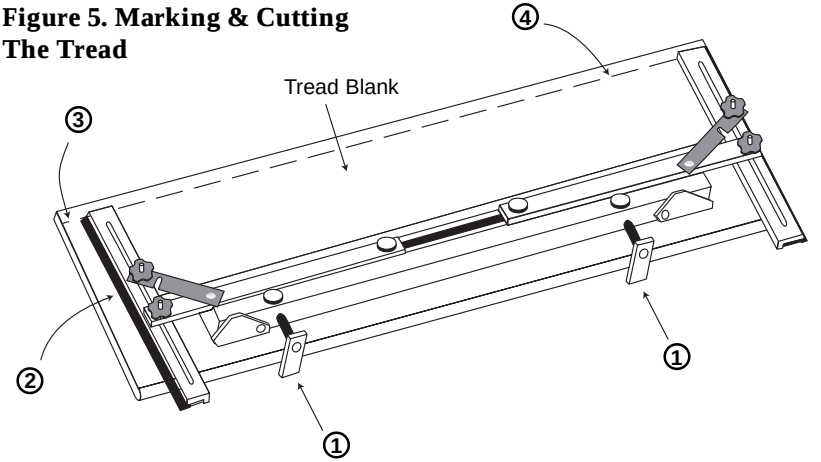


Figure 4. Setting The Stair Wizard



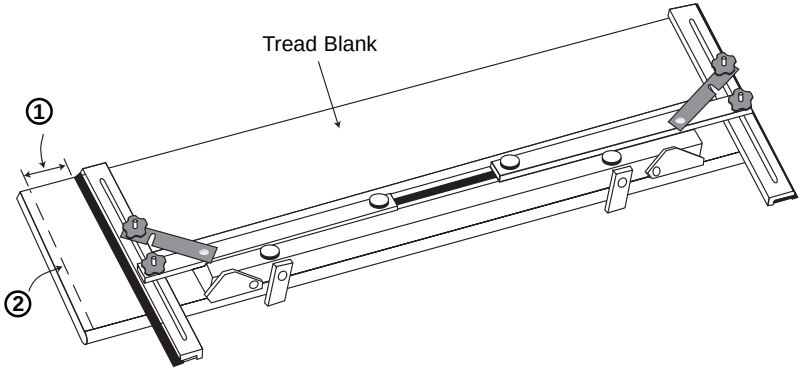
① Press Drop Stops Against Riser Below
② Extend Outriggers To Finished Skirt on Both Sides
③ Slide Outriggers Forward to Riser Above

Figure 5. Marking & Cutting The Tread



① Press adjustable stops against tread nosing (drop stops will pivot up out of the way)
② Mark or cut tread along straight-edge (both ends of tread)
③ Mark tread depth at end of outrigger (both ends of tread)
④ Cut tread to proper depth

Figure 6. Using the Jog as a Saw Guide



① Offset jig as appropriate for your saw and clamp outrigger to tread
② Cut tread using outriggers as a saw guide

Winders

Unlike other stair jigs, the *Stair Wizard* will handle winders and other angled treads as easily as standard treads. Treads with a narrow end can be laid out using the same operating procedures as described above, however, if the narrow end is less than about 5", slide the **spreader/outrigger assemblies** completely out of the dovetailed raceway and exchange them end for end. The operation of the jig is then standard in all respects.

The *Stair Wizard* will also handle winders where the narrow end of the tread is less than 2" or actually comes to a point (even though such treads are unlikely to meet code standards). In cases such as this, simply turn the **outrigger** at the narrow end of the tread parallel to the back edge of the tread and set the jig in the usual manner.

Multi-Plank/Strip Treads

Treads that are built up from a number of planks, or strips, require a slightly different approach than full-width treads. For this type of tread, place the jig on one of the planks/strips and slide the **outriggers** forward or back so that they just reach the back edge of the plank/strip. Snug-tighten the **5-pronged knobs**.

Place the jig on the stairs and push it forward as far as it will go (all stops should be turned up and out of the way). Extend the **outriggers** to the finished stringer on both sides and finish tightening the **5-pronged knobs.** Transfer the jig to the plank/strip then mark it, cut it to length, and install it.

Repeat as often as necessary until you get to the bull nose piece, which is handled as though it were a standard full-width tread.

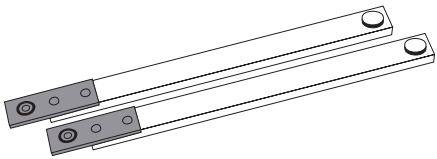
Risers

The *Stair Wizard* may be used for risers as well as treads. The operation of the jig is the same except that it is used vertically rather than horizontally. The **adjustable stops** may be left in the proper setting for the treads and the spring loaded stops used both for setting the jig and marking the risers.

For risers less than about 5" high, slide the **spreader/ outrigger assemblies** completely out of the raceway and exchange them end for end. The jig is then used in the normal way.

Stair Wizard Extensions

The *Stair Wizard* will accommodate stair widths up to 53". For wider stairs, one or more of the accessory Stair Wizard Extensions (Item Number LJ-3053) can be used to increase the capacity as necessary. Simply splice on the required number of extensions and use the tool in the normal manner. Each extension piece increases the capacity by 18". Extensions are available in sets of two.



Quik-Scribes

In some situations, an irregular cut is required to achieve a tight fitting tread. This might occur in the vicinity of a newel post, in the case of circular stair, or with an uneven sheet rock wall. The optional Quik-Scribes (Item Number LJ-3054) are designed to handle these situations quickly and easily. Attach one of the adhesive-backed Quik-Scribes to the underside of the straight edge and set the *Stair Wizard* in the normal manner. Scribe along the irregularity and then cut the Quik-Scribe along the scribe line. Reset the *Stair Wizard* to achieve the correct tread length and check the fit. Transfer the pattern to the tread blank. Quik-Scribes are available in set of 16 pieces.