Flatten Workbench With Router: Sled Jig Guide for Flat Tops

Flatten workbench with router sleds cuts a cupped or twisted top into a flat reference plane for hand work. The proven setup uses two side rails about 18 inches longer than the bench, built from 3/4-inch stock 6 to 8 inches wide, according to Highland Woodworking, accessed November 2026. A 1-3/4-inch straight bit then skims the surface after string diagonals set the rails coplanar, according to Highland Woodworking, accessed November 2026. Shops without a wide planer gain a flat reference this way, and our how we test process favors repeatable shop jigs over guesswork.

How Does Flatten Workbench With Router Sled Stay Flat?

Router sled cuts flat because two rails define one plane above the workbench, according to Highland Woodworking, accessed November 2026. The router rides inside a stiff bridge while the bridge slides along the rails.

What Parts Does Flatten Workbench With Router Need?

Workbench sled needs stiff rails plus a square router sub-base, according to Highland Woodworking, accessed November 2026. Rails use 3/4-inch stock 6 to 8 inches wide, according to Highland Woodworking, accessed November 2026. Sled sides stay 4-1/2 inches wide to resist bowing, according to Woodcraft, published April 2019. A scrub plane can knock down a severe high spot before routing.

Part | Size used in shop guides

Side rails | About 18 inches longer than bench, 3/4-inch stock 6 to 8 inches wide
Rail holes and screws | 3/8-inch holes with number 10 or number 12 screws plus washers
Sled sides | 4-1/2 inches wide
Router bit | 1-3/4-inch straight bit or 1-1/2-inch dado and planer bit
Winding sticks | Pair of 4-foot aluminum angles 1/8-inch thick

Table sizes follow Highland Woodworking, accessed November 2026, plus Woodcraft, published April 2019, for sled sides and sticks.

How Do You Level Workbench Rails With String?

Workbench rails level fast when two tight strings kiss at the bench center, according to Highland Woodworking, accessed November 2026. Rails mount on bench edges with screws at corners plus one center screw on long benches, according to Highland Woodworking, accessed November 2026. Shims adjust rails until the upper string barely touches the lower string without lifting it.

How Do You Cut Workbench Top Without Tearout?

Workbench top cuts clean when the router moves with bit rotation onto cut wood, according to Highland Woodworking, accessed November 2026. Overlap each pass by one-third to one-half of bit width, according to Woodcraft, published April 2019. When low-to-high spread exceeds 1/8 inch, rout in two passes, according to Woodcraft,

published April 2019. The Tage Frid router jig behind this method also appears in Tage Frid Teaches Woodworking Book 3 on pages 158 and 164, according to Highland Woodworking, accessed November 2026, and a related Tage Frid mortising jig shows the same simple-bridge thinking.

Flatten Workbench With Router FAQ

How deep should each flatten workbench with router pass cut?

Each flatten workbench with router pass should skim only the high wood. Set the bit to graze the lowest spot, according to Highland Woodworking, accessed November 2026. When low-to-high spread exceeds 1/8 inch, rout in two passes, according to Woodcraft, published April 2019. Overlap passes by one-third to one-half of bit width, according to Woodcraft, published April 2019.

Which bit suits flatten workbench with router work best?

A flatten workbench with router job works best with a wide straight bit. The classic guide uses a 1-3/4-inch straight bit, according to Highland Woodworking, accessed November 2026. Modern slab bits in 1-1/2-inch and 2-inch diameters use 1/8-inch corner radii to limit gouging, according to Rockler, published September 2024.

How do rails stay coplanar during flatten workbench with router setup?

Rails for flatten workbench with router setup stay coplanar through crossed strings plus shims. Mount rails with 3/8-inch holes and number 10 or number 12 screws with washers, according to Highland Woodworking, accessed November 2026. Adjust rails until the strings barely kiss at the center, according to Highland Woodworking, accessed November 2026.

What finish follows flatten workbench with router milling?

Finish after flatten workbench with router milling starts with scraping the bit marks. A number 80 handled scraper smooths the milled top, according to Highland Woodworking, accessed November 2026. A scraper plane or sanding block with 100-grit paper clears track marks, according to Woodcraft, published April 2019.