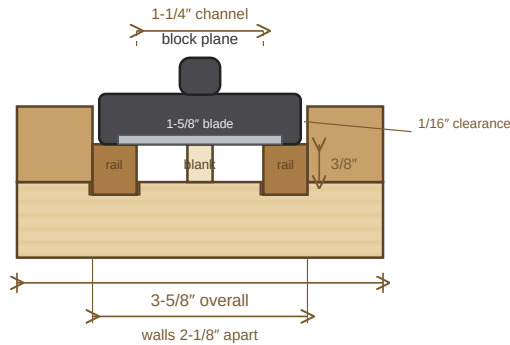


Brace-Planing Jig

One jig, seven rail pairs — every Session 1 brace part, thickened with the Veritas low-angle block plane.

THE IDEA

The plane rides **sole-down on two rails**; the brace blank lies on the bed between them. The blade cuts the blank flush with the rail tops, so **exposed rail height = finished dimension**. Swap the rail pair to change dimensions — the base never changes. The rails drop into shallow dadoes in the bed — no fasteners, no fuss. The outer walls sit 2-1/8" apart to fence the 2"-wide plane body, so the plane can't wander sideways. Width passes are done the same way with the stick stood on edge.



End cross-section (3/8" rail setup, UTB/MTB blank). Sole bridges the channel; blade cuts the blank flush with the rail tops.

PARTS

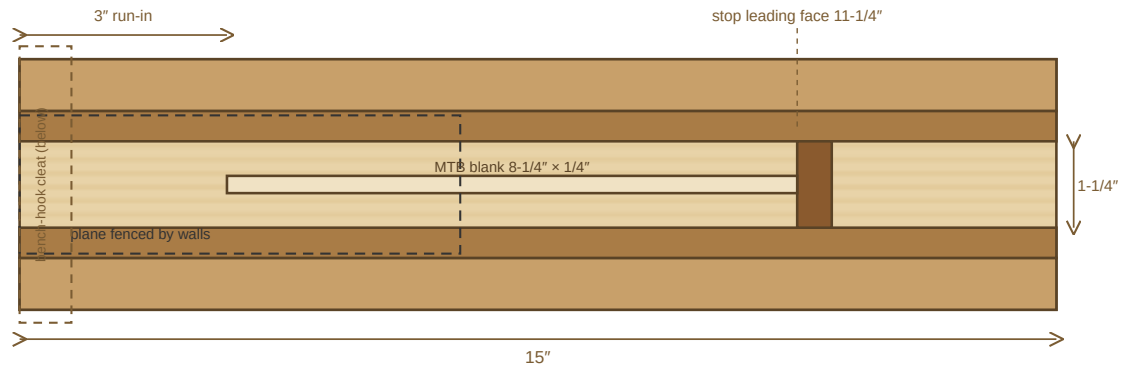
Part	Qty	Dimensions	Material / notes
Base	1	15" × 3-5/8" × 3/4"	Baltic birch or MDF; flat. Rout two 1/2" × 1/8" dadoes for the rails before gluing the walls
Outer walls	2	15" × 3/4" × 3/4"	Hardwood; glue + screw from below. Inner faces parallel, 2-1/8" apart — fences the 2" plane body (1/16"/side; verify against your plane)
Rail pairs	7 pr	15" × 7/16" × (H + 1/8")	Hard maple. Exposed H = 2 mm, 3/32, 1/8, 3/16, 7/32, 1/4, 3/8" (extra 1/8" buries in the dado). Mill each pair together; label both sticks
End stop	1	1/2" × 1-1/4" × 1/16"	Hardwood strip glued across the channel bed, 1/16" proud, leading face 11-1/4" from the start end
Bench-hook cleat	1	4" × 3/4" × 3/4"	Under the start end, flush with the start edge; hooks the bench edge — the jig is its own bench hook
Double-stick tape	—	—	Holds the blank on the bed (consumable)

RAIL SETUPS PER PART

Part	Height pass (flat)	Width pass (on edge)
Upper transverse brace (UTB)	3/8" rails	1/4" rails
Main transverse brace (MTB)	3/8" rails	1/4" rails
Fan braces (×3)	7/32" rails	1/8" rails
Soundhole reinforcements (×2)	2 mm rails	3/16" rails
Bridge plate	3/32" rails	Rip on bandsaw; edge-clean freehand (too tippy on edge)

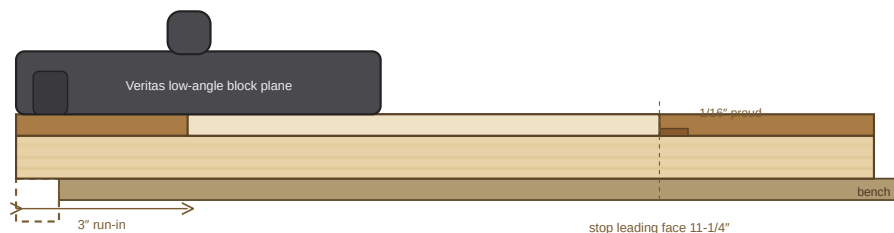
Notes. The 1-5/8" blade overlaps each rail by about 3/16", so rails are wear items — expect witness marks, flip or re-mill as needed. The bridge plate is thickened flat in the jig; rip its 1-1/8" width on the bandsaw instead of standing it on edge (too tippy). Plane direction matters: flip the blank end-for-end if the grain tears.

TOP VIEW



Top view. Blank butts the stop; the plane starts fully on the rails and travels toward the stop.

SIDE VIEW



Side view (3/8" rails). The 1/16" stop sits below every rail height, so the sole passes cleanly over it. The cleat under the start end hooks the bench edge — the jig is its own bench hook.

BUILD IT

1. Cut the base 15" × 3-5/8" from flat 3/4" stock. Rout two 1/2"-wide × 1/8"-deep dadoes full length, centered 27/32" each side of the base centerline (1-11/16" apart). Then cut the walls and glue + screw them to the base from below — #8 × 1-1/4" screws, 3 per wall, every screw piloted — inner faces **parallel**, 2-1/8" apart, flush with the base edges. (If the plane binds between the walls, ease to 2-1/4" and wax the inner faces.) Test-fit the plane body between the walls before the glue sets.
2. Mill each rail pair together: rip 7/16" wide, then plane the pair to identical **overall height of H + 1/8"** (see the milling checklist) — the buried 1/8" seats in the dado, so the **exposed** height is the finished dimension. Check with calipers in several spots. Label both sticks ("3/8", "7/32", ...). The rails drop into the dadoes with a slip fit — don't chase snug, seasonal movement will bind them.
3. Glue the 1/16" stop strip across the channel bed at 11-1/4" from the start end.
4. Screw the bench-hook cleat under the start end, centered across the base (3/16" overhang per side) and flush with the start edge — screws from above, piloted. Seal MDF parts against moisture.

USE IT

1. Set the jig with the start end overhanging the bench edge so the cleat hooks it — planing force jams the cleat against the edge.
2. Drop the rail pair for the target dimension into its dadoes. Rip the blank a hair oversize in thickness/width and ~3/4" over final length (the excess trims off at the end).
3. Set the blank flat-reference-face down (joint it first if it rocks — tape won't flatten a rocking blank). Tape it to the bed with high-tack carpet/turner's tape, one end against the stop, grain running lengthwise.
4. Set the block plane for a fine shaving. Start with the sole fully on the rails, toe at the base end; push steadily toward the stop, **with the grain**.

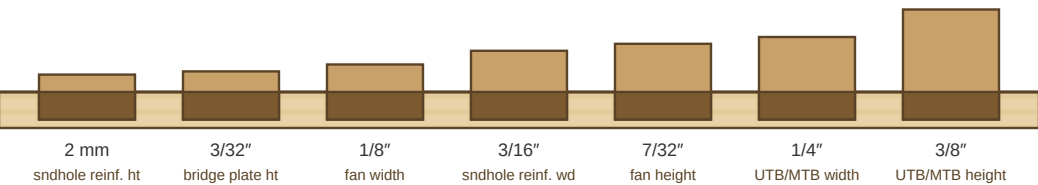
Bench planing jig — design sheet

5. When shavings go wispy across the full width, the blank is flush with the rails — check with calipers along the full length, not just the ends.

6. For the width pass: fresh tape, stand the stick on edge, swap to the width rails, repeat

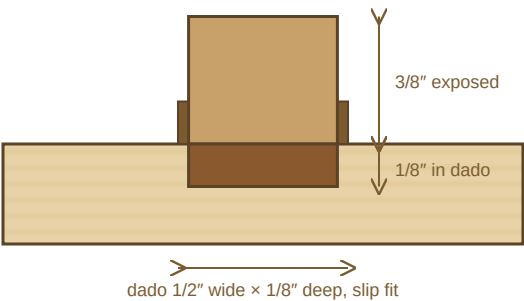
THE RAIL SET

Seven pairs — one per finished dimension. Mill each pair together so the two sticks match, and label both. Every rail is 15" × 7/16" × (H + 1/8"): the extra 1/8" buries in the bed dado, so the **exposed** height is the finished dimension.



The full set at true relative heights. The darker 1/8" seats in the bed dado; exposed height is the finished dimension.

DADO DETAIL



One rail seated in its dado (3/8" setup shown). The dado locates the rail; the walls back it up.

MILLING CHECKLIST

Exposed height H	Mill rails to (H + 1/8")	Used for
2 mm	5.2 mm	Soundhole reinforcements — height pass
3/32"	7/32"	Bridge plate — height pass
1/8"	1/4"	Fan braces — width pass
3/16"	5/16"	Soundhole reinforcements — width pass
7/32"	11/32"	Fan braces — height pass
1/4"	3/8"	UTB / MTB — width pass
3/8"	1/2"	UTB / MTB — height pass