WS-002 Hand-plane end-grain shooting board

Guide a hand plane beside a square stop to trim short end grain.

Controlling dimensions: US inches and feet. Metric equivalents are references. Original editorial design; no physical build, animal trial or load certification is claimed.

Before marking and cutting

US inches; feet where appropriate. Metric values are rounded references. Written inch values control.

3/4 in means measured 0.750 in actual thickness wherever used. Recalculate mating lengths for other sheet thicknesses; do not substitute nominal stock blindly.

Use limits

For the bounded stated manual task. Do not install it on a powered machine or use it to replace a guard.

No load, measurement-certification or protective-equipment claim.

Materials and finished cuts

Part	Qty	Size to cut	Material and detail
A Reference board	1	18 × 10 × 3/4 in 457.2 × 254 × 19.05 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 3/4 in.
B Raised work platform	1	18 × 6 × 3/4 in 457.2 × 152.4 × 19.05 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 3/4 in.
C Work stop	1	6 × 1 1/2 × 3/4 in 152.4 × 38.1 × 19.05 mm	Clear solid hard maple, straight grain along the listed length. Measured actual thickness 3/4 in.

Hardware and consumables

8 × Compatible wood screws. Selected length, pilots and locations are stated in the instructions; test on actual scrap.

Tools

Rule with fractional inches; Pencil or appropriate material marker; Reliable square; Saw suited to the specified stock; Clamps; Abrasive and dust-removal brush; Drill with the specified bit and depth stop where needed; Driver matching selected fasteners

Primary context and design record

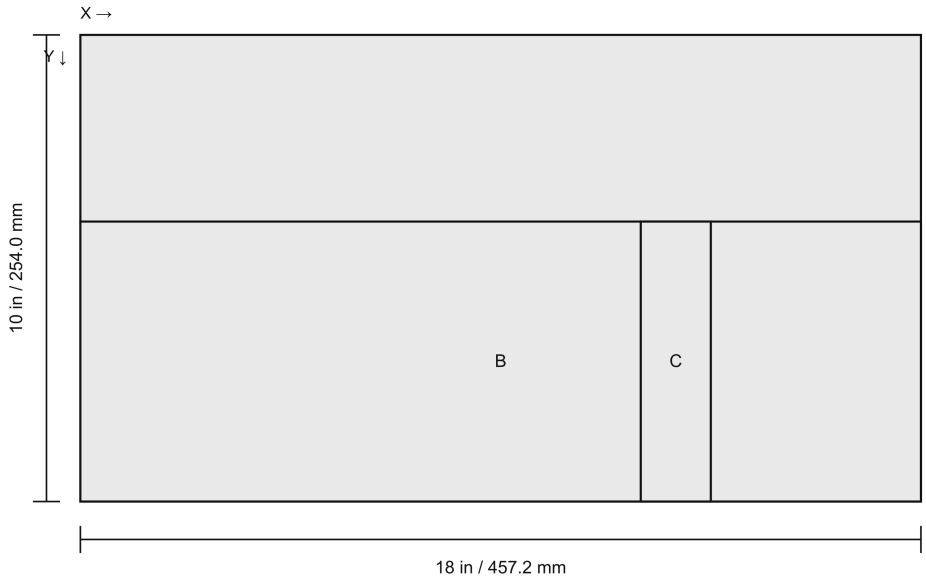
Context references; not design endorsements or certifications.

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Assembly and first checks

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PLAN / reference origin at front-left; not to scale. Inch values control.



Part letters identify the cut-list pieces. Dashed outline = underside part.
Coordinates in the method use the same X/Y reference.
Do not drill from the graphic: transfer the written center coordinates.
Original editorial design; no physical construction trial or certified load rating.

01 Choose a hand plane that can safely operate on its side. The right-hand version uses a 4 in wide lower runway at Y = 0–4 in and a raised platform behind it.

02 Cut A to 18 in / 457.2 mm by 10 in / 254.0 mm from flat measured 3/4 in stock. Mark one face UP and mark front-left X0 Y0; remove only the splinters, not the reference edges.

03 Draw the centerline and attachment footprints from the part positions below. Measure from the reference faces each time; do not add a chain of rounded conversions.

04 Cut B 18 × 6 × 3/4 in and C 6 × 1 1/2 × 3/4 in. On C the 6 in length runs along Y; its 1 1/2 in width runs along X.

05 Clamp B to A at X = 0–18, Y = 4–10 in. Mark its front edge as the reference along which the plane travels.

06 Dry-fit and clamp the assembly on a stable surface. Check the intended article against the clearances before drilling or gluing; correct the layout on paper if it does not fit.

Complete the assembly

WS-002 Component dimensions

Orthographic component reference. Quantities shown; not a sheet nesting plan or full-size template.



18 × 10 in

A Reference board QTY 1

18 in / 457.2 mm × 10 in / 254.0 mm

thickness 3/4 in / 19.0 mm



18 × 6 in

B Raised work platform QTY 1

18 in / 457.2 mm × 6 in / 152.4 mm

thickness 3/4 in / 19.0 mm



6 × 1 1/2 in

C Work stop QTY 1

6 in / 152.4 mm × 1 1/2 in / 38.1 mm

thickness 3/4 in / 19.0 mm

Measured actual stock controls. Read the written assembly sequence before cutting or fastening.

07 Drill from under A into B at (X,Y) = (2,5),(9,5),(16,5),(2,9),(9,9),(16,9) in. Fit six #8 × 1 1/4 in screws after clearance holes and pilots; heads must be below the runway plane.

08 Ease exposed corners and all edges that the operator will touch. Remove dust and any projecting point; countersink only to a flush head.

09 Set C on B at X = 12–13 1/2 and Y = 4–10 in. Square its working face X = 12 in to the platform front reference. Clamp; drill two #8 × 1 1/4 in screws down into B at X = 12 3/4, Y = 5 and 9 in.

10 Check the actual plane body clears the stop screws and that the cutting iron does not strike the hardware. Do not alter a powered plane for this jig.

11 Hold a small sacrificial test block against the stop with its end projecting slightly toward the runway. Plane away from the support hand in shallow passes.

12 Compare the cut end with a reliable square. Correct the stop position by refitting its pilots if required; mark the setting date only after the test.

Acceptance and intermediate checks

Runway clear width 4 in; platform thickness 3/4 in above A; stop working face square to the runway.

A scrap end checks square after a light hand-plane trial and the moving plane never contacts hardware.

Assembly is flat and free of splinters, exposed tips and loose parts.

A second operator can repeat the intended light-duty operation without being coached.

Cleaning and maintenance

Brush or wipe the unloaded assembly clean after use.

Inspect attachment fit and fasteners before each new task.

Replace a damaged contact surface; recheck the reference dimensions after repair.