WS-014 Adjustable two-position reading rest

Support a lightweight printed manual at two trial-selected reading angles.

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

No maximum book weight is established; not a tablet mount, ladder or restraint.

This is a fit-selected geometry, not a guaranteed fixed angle.

Materials and finished cuts

Part	Qty	Size to cut	Material and detail
A Face panel	1	12 × 10 × 1/2 in 304.8 × 254 × 12.7 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 1/2 in.
B Rear leg	1	7 × 3 × 1/2 in 177.8 × 76.2 × 12.7 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 1/2 in.
C Page ledge	1	12 × 1 × 1/2 in 304.8 × 25.4 × 12.7 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 1/2 in.
D Base panel	1	12 × 8 × 1/2 in 304.8 × 203.2 × 12.7 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 1/2 in.
E Rear stops	2	8 × 3/4 × 1/2 in 203.2 × 19.05 × 12.7 mm	Sanded birch plywood with sound, void-free receiving edges. Measured actual thickness 1/2 in.

Hardware and consumables

3 × 1 in surface hinges. 3/8 in mounting screws selected for actual hinge.

7 × #6 × 3/4 in wood screws. 3 ledge, 4 stops.

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

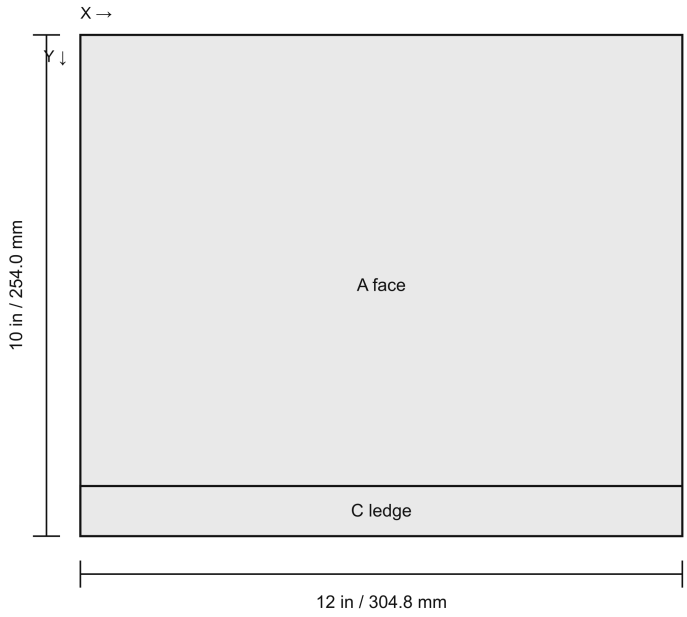
Context references; not design endorsements or certifications.

WS-S01 · Hand and Power Tools · OSHA

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 Cut A 12 × 10, B 7 × 3, C 12 × 1, D 12 × 8 and two E 8 × 3/4 in, all measured 1/2 in plywood.

02 Set A face up with its 12 in width horizontal. Fit C across its lower front edge so C projects 1/2 in above the face to catch the book; use three #6 × 3/4 in screws from behind at X = 1,6,11 in, centered on C.

03 Connect the lower back edge of A to the front of D with two 1 in surface hinges at X = 2 and 10 in; use manufacturer-supplied 3/8 in screws that do not emerge through 1/2 in panels.

04 Hinge B to the back of A on its vertical centerline, with B’s upper end 2 in below A’s top. Use a 1 in surface hinge and 3/8 in screws.

05 Swing A up and B down onto D. With the actual closed manual in place, test two stable angles without drilling stop locations yet.

06 Mark B’s foot contact line on D at each selected angle. The two marks must be at least 1 in apart and inside D’s rear edge by at least 1 in.

Complete the assembly

WS-014 Component dimensions

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



12 × 10 in

A Face panel QTY 1

12 in / 304.8 mm × 10 in / 254.0 mm
thickness 1/2 in / 12.7 mm



7 × 3 in

B Rear leg QTY 1

7 in / 177.8 mm × 3 in / 76.2 mm
thickness 1/2 in / 12.7 mm



12 × 1 in

C Page ledge QTY 1

12 in / 304.8 mm × 1 in / 25.4 mm
thickness 1/2 in / 12.7 mm



12 × 8 in

D Base panel QTY 1

12 in / 304.8 mm × 8 in / 203.2 mm
thickness 1/2 in / 12.7 mm



8 × 3/4 in

E Rear stops QTY 2

8 in / 203.2 mm × 3/4 in / 19.0 mm
thickness 1/2 in / 12.7 mm

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

07 Place each E immediately behind its corresponding foot line, centered across D. Fix each from under D using two #6 × 3/4 in screws at X = 3 and 9 in on that stop’s measured centerline.

08 Mark the final measured Y coordinates beside both stops. The diagram gives panel sizes, while these two fit-selected coordinates are recorded at construction.

09 Set B against one stop and load only the actual light manual. Turn pages slowly; move to the other position by unloading first.

10 Fold the empty rest and check that hinges do not trap fingers or gouge another panel. If it tips or the leg disengages, do not use until redesigned.

Acceptance and intermediate checks

Three ledge screws have only 1/4 in penetration into C and no exposed points.

Both selected foot lines are recorded and stops fit behind them.

The actual light manual rests stably at both selected positions during a supervised trial.

Cleaning and maintenance

Inspect hinges and ledge before use.

Keep dry and unload before folding.