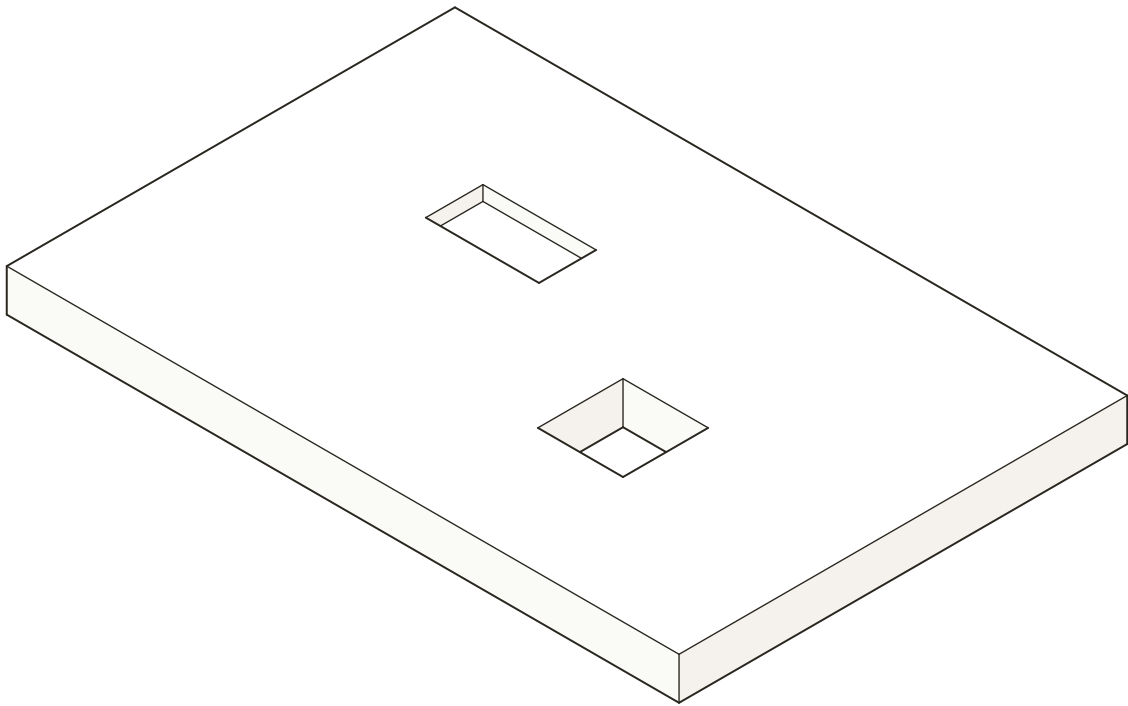


Your woodworking build

1 part / 0 joints / Shaper Origin



Overall 12" wide x 8" deep x 3/4" high

How to use this guide

1	Shopping list	Buy the stock, hardware and tools.	p. 2
2	Cutting list	Cut every blank to size and write its P number on it.	p. 3
3	Part layouts	Mark DATUM 0 on each blank, then every joint from it.	p. 4
4	Machine setups	Cut every joint that shares a setting together. Test on scrap first.	p. 5
5	Review & index	Settle the open items before you cut. Find any part or joint.	p. 8

Review before cutting: 0 joint errors; 0 warnings; 1 part without modeled attachment; 0 software geometry notes. Details are in Review & coverage.

Dimensions are inches to the nearest 1/64. * marks a value finer than 1/16: set it with a gauge, a test cut or the mating part, not a tape. P01 names a part, J1 a joint, S1 a machine setup. Drawings are not to scale: use the numbers.

Shopping list

Stock, hardware and tools for this build

Solid lumber

Stock	Parts	Net board feet	Buy about	Longest part	Widest part
Neutral Wood, 3/4" thick finished	P01	0.50	0.7	12"	8"

Buy about adds 30% to the net board feet for defects, milling and saw kerf. It is a rule of thumb; adjust it for your lumber. Buy boards at least as long and wide as the longest and widest part in each row.

Wider than most boards (over 7-1/4"): P01 Practice board. Glue up a panel from narrower boards or buy wide stock.

Cutting list

Finished sizes. Cut every blank, then write its P number on it.

Ref	Part	Qty	Length	Width	Layout page
Neutral Wood / 3/4" thick					

P01	Practice board	1	12"	8"	p. 4
-----	----------------	---	-----	----	------

Blanks are the finished sizes. Leave room for the saw kerf between parts when you mark up a board; never add it to a part.

Mill each board flat, straight and square before marking it. Label every blank with its P number and keep it through machining and assembly.

Part layouts

Mark DATUM 0 on each blank, then every feature from it

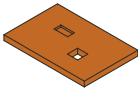
DATUM 0 is the corner every number on a card starts from: L along the length from the datum end, W across from the datum edge, T into the board from the datum face. The DATUM line on each card says which corner that is in the finished piece.

Each view looks straight at the named face. Filled areas open on that face; dashed outlines are on the far side. * = finer than 1/16.

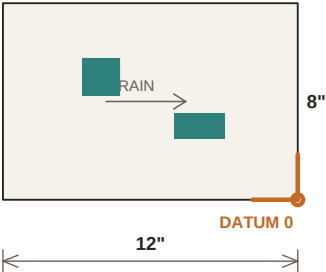
P01 Practice board

12" long x 8" wide x 3/4" thick / Neutral Wood

DATUM 0: left end / back edge / bottom face of P01 as it sits in the piece, seen from the front.



LOOKING AT THE TOP FACE (datum end on the right)



Ref	Feature	Where, from DATUM 0	Size	Setup
E1	Shaping cut	top face / L 2-63/64"* to 5-1/64"* / W 2-31/64"* to 3-33/64"* / T 31/64"* to 3/4"	2-1/64"* × 1-1/64"* × 17/64"* / see -	shaping pages
E2	Shaping cut	inside the board / L 7-15/64"* to 8-49/64"* / W 4-15/64"* to 5-49/64"* / full thickness	1-33/64"* × 1-33/64"* × 3/4" / see -	shaping pages

Operation	Where to continue
E1 / Rectangular cut	2" × 1" profile / Fixed distance / 1/4" deep
E2 / Profile cut	1-1/2" × 1-1/2" profile bounds / 3-point closed contour / Fixed distance reaching through current stock / 3/4" deep

Machine setups

Shaper Origin / set the machine once, then cut every part listed

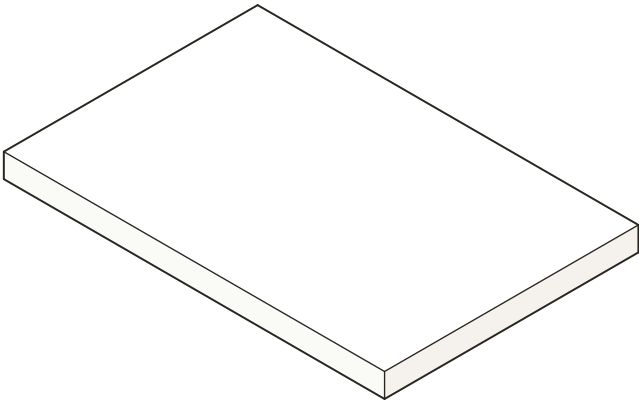
Before any joinery

1. Mill every board flat, square and to the finished thickness on the cut list before any joinery is cut. Joinery referenced off a twisted board is twisted.
2. Mark a face side and a face edge on each board and take every measurement from those two surfaces throughout.
3. Cut every part to its finished length before any joinery: tenon shoulders are set from the ends and every layout is measured from DATUM 0.

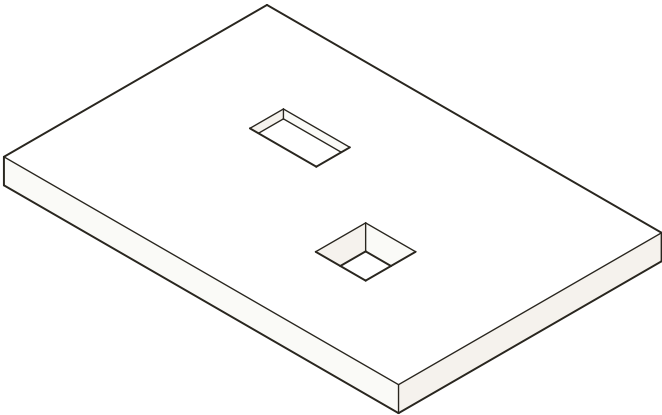
Shaping and cut result

P01 / Practice board

SOURCE SHAPE / BEFORE DOWNSTREAM CUTS



FINISHED / ALL MODELED CUTS



Ref	Result and operation specification
BLANK	Purchase/mill one blank for P01. Multiple retained pieces do not multiply stock quantity.
P01.piece-1	KEEP / 12" x 3/4" x 8" in local X/Y/Z extents; 69.731 cubic inches. Minimum corner X/Y/Z: 0" / 0" / -0" from blank minimum.
E1	Rectangular cut: 2" × 1" profile / Fixed distance / 1/4" deep Top entry / centre X/Y/Z 4" / 3/4" / 3" from minimum stock X/Y/Z corner / local direction 0.000, -1.000, 0.000 / verify cutter, workholding and release order
E2	Profile cut: 1-1/2" × 1-1/2" profile bounds / 3-point closed contour / Fixed distance reaching through current stock / 3/4" deep Top entry / centre X/Y/Z 8" / 3/4" / 5" from minimum stock X/Y/Z corner / local direction 0.000, -1.000, 0.000 / verify cutter, workholding and release order

Contour coordinates

P01 / reference dimensions, not a machine toolpath

Contour	Definition / U,V inches
E1	Closed contour. Top entry. U/V coordinates in inches relative to cutting-profile centre. Entry centre from blank minimum X/Y/Z: 4" / 3/4" / 3". Depth 1/4"; fixed distance. Local depth direction 0.0000, -1.0000, 0.0000. Profile U direction 1.0000, 0.0000, 0.0000; V direction 0.0000, 0.0000, 1.0000 in local X/Y/Z.
E1	1: -1.00000, -0.50000
E1	2: 1.00000, -0.50000
E1	3: 1.00000, 0.50000
E1	4: -1.00000, 0.50000
E2	Closed contour. Top entry. U/V coordinates in inches relative to cutting-profile centre. Entry centre from blank minimum X/Y/Z: 8" / 3/4" / 5". Depth 3/4"; fixed distance. Local depth direction 0.0000, -1.0000, 0.0000. Profile U direction 1.0000, 0.0000, 0.0000; V direction 0.0000, 0.0000, 1.0000 in local X/Y/Z.
E2	1: -0.75000, -0.75000
E2	2: 0.75000, -0.75000
E2	3: 0.00000, 0.75000

Review & coverage

Settle these before you cut; every part and operation is accounted for

Decide before you build

Ref	Item
P01	Practice board: no modeled attachment. Decide how this part is held.

Part & joint index

Part	Name	Joints	Page
P01	Practice board	None	p. 4

Joint	Type	Parts	Setups	Page
-------	------	-------	--------	------

Setup index

Suggested bit-grouped order; confirm dependencies and workholding.

Setup	Part / cutting face	Bit / maximum depth
1	P01 Practice board / back face	Operator bit / 49/64"

Setups

One card is one clamp-up: tape once, datum once, Z-touch once, cut everything shown.

■ pocket ■ datum / this board ■ keep clamps off

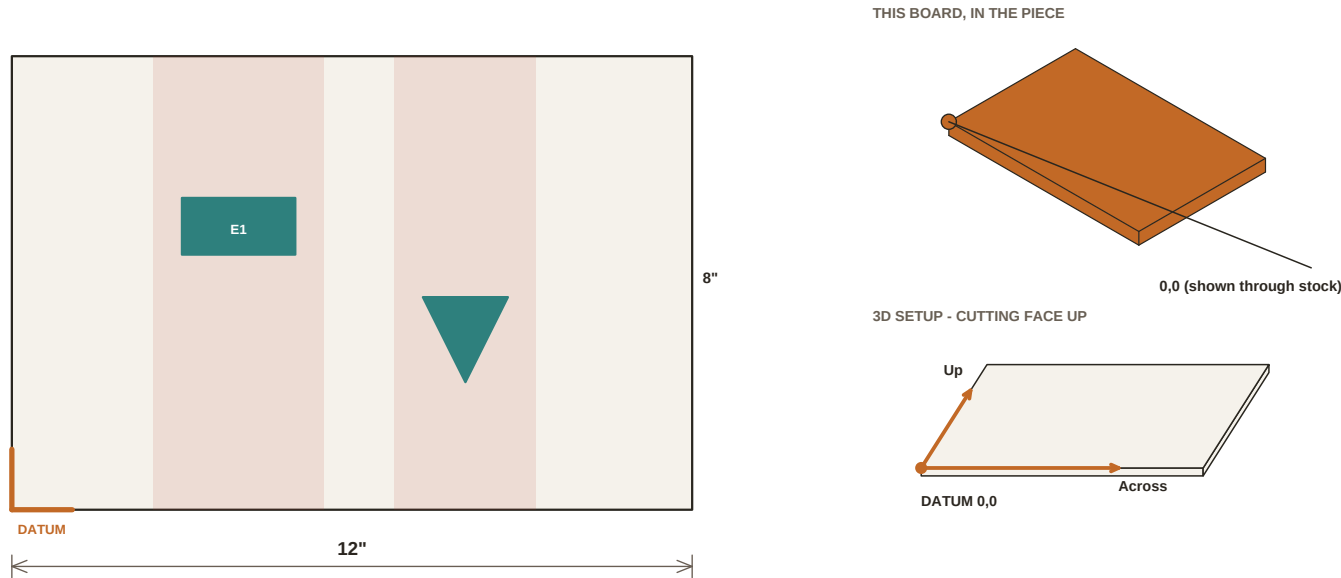
SETUP 1

P01 Practice board

Back face toward the cutter. Datum is the marked 0,0 corner in the 3D setup view. Mark this corner on the stock; Across and Up match the flat drawing.

- Bit: operator choice
- Max depth 49/64" - see each cut
- Cut type Mixed
- 2 cuts

File: graindraft-p01-setup-1-back-face-practice-board.svg



Feature	Operation / depth	From DATUM 0,0 / checks
CLAMPS	Across from datum	Keep clear of 2-1/2" to 5-1/2", 6-3/4" to 9-1/4". Shading marks cutter and tape territory; verify actual tool clearance.
CHECK	First article	Cut and dry-fit this one before repeating the setting.
E1.1	Inside cut / Pocket / depth 1/4"	Rectangle: 3" across, 4-1/2" up to lower-left; 2" wide x 1" high.
E2.1	Profile cut / Inside / depth 49/64"	Contour: follow the supplied SVG path; this reference drawing is not a cutting template.