STEADLEAF PRESS
MAKE / PRINTING, STENCILS & COLOR

Create a Hand-Cut Letter Stencil



O + N / KEEP THE COUNTERS CONNECTED

14 practical steps · Draw · bridge · print

Original diagrams and two printable maker records

Illustrative plans — not physical test results

Before you start

Letter stencils require a little more planning than plain shapes because some letters have enclosed counters: the space inside an O, for example. This project makes a geometric two-letter ON sample, with two breaks in the O that keep its middle attached to the sheet. N is one open polygon with no enclosed counter. The result is a small decorative lettering exercise for paper, not equipment marking, a safety sign, a brand logo or a commercial font.

Materials: 120 x 80 mm smooth firm paper stencil stock and matching offcut, a pencil, metric ruler, printed master pattern, suitable cutting mat and an adult craft knife with a suitable cutting straightedge, or a pre-cut service if safe hand cutting is not possible; a paper-compatible water-based stencil paint, sponge or stencil brush, non-food tray, low-tack removable tape compatible with the paper, and trial sheets. Use a well-lit stable work surface and follow tool and paint labels. Keep fingers away from the blade path; cap or retract the knife when not cutting.

Plan the project

The original sheet is 120 mm wide and 80 mm high. Both letters are 40 mm tall, from y = 20 to 60 mm. O occupies x = 20 to 50 mm, with an inner retained rectangle x = 26 to 44 and y = 26 to 54. Two 6 mm wide bridges run across the left and right sides at y = 37 to 43. Remove the upper and lower U-shaped opening separately. Upper opening polygon: (20,20), (50,20), (50,37), (44,37), (44,26), (26,26), (26,37), (20,37). Reflect it vertically about y = 40 for the lower opening. The retained centre stays connected at both sides.

N occupies x = 70 to 100 mm, with one connected opening described by polygon vertices (70,20), (76,20), (94,49), (94,20), (100,20), (100,60), (94,60), (76,31), (76,60), (70,60), closing at (70,20). Both outside margins are 20 mm; the gap between letters is 20 mm. The nominal vertical stroke width is 6 mm. Use the original full-size Pattern 1 with its separate 50 mm scale check. This is a geometric sample; adapt stroke or bridge width to actual stock and do not force a narrow cut.

Steps 01–02

1. Choose the intended lettering use

Use the two-letter ON sample as a decorative card, notebook or practice label. Do not use it to mark switches, emergency equipment or other functions where legibility or material suitability has safety consequences. Keep the word simple and the size practical. The exercise teaches counters and bridges rather than recreating a protected commercial logo or typeface.

2. Select stencil stock and tools

Choose firm smooth paper stock you can safely cut. Practise on scrap if its thickness is unfamiliar. Use a suitable adult cutting tool, mat and cutting straightedge on a stable table. Keep the cutting hand and supporting hand away from the blade path. If you cannot make the interior cuts without force, arrange pre-cut service or use a ready-made stencil.

Steps 03–04

3. Verify the printed scale

Print Pattern 1 at Actual Size. Measure the separate 50 mm line and the 120 x 80 mm sheet outline. If scaled, redraw from the given coordinates on actual stock. The drawing’s grey-green shaded areas are the paint openings; white stays. Do not cut the scale line, dimension annotations or the outside border unless trimming the sheet before transfer.

4. Mark the letter boxes and spacing

Use an upper-left origin on the sheet and mark the two 30 x 40 mm boxes at x = 20 and 70, y = 20. Their top and bottom edges align. Leave the 20 mm inter-letter gap intact. This clear spacing makes two separate letters; adjust it on a fresh larger sheet if you change the letter widths.

Steps 05–06

5. Draw the O counter

Inside the O box mark the retained 18 x 28 mm rectangle at x = 26–44 and y = 26–54. The nominal ring band is 6 mm. Leave the 6 mm bridges at y = 37–43 through the two side bands. Use the upper U polygon in the plan and its vertical reflection for the lower U. Shade both openings, not the middle or bridges.

6. Draw the open N polygon

Plot the ten listed vertices within the N box in the given order, connect consecutive points with a ruler, then close the polygon. This makes two vertical strokes joined by a diagonal. It contains no enclosed island. Shade the inside of this one opening; do not remove the triangular-looking outside areas above or below the diagonal. Compare with the original template.

Steps 07–08

7. Check the kept material before cutting

Trace the retained sheet, O bridges and centre visually. They must remain a single connected piece. Verify that the O has two separate openings and the N one opening. Check the narrow areas against your actual stock. Widen bridges or scale up the pattern if required; do not add a loose counter after cutting. Keep the uncut master separate.

8. Practise a safe interior cut

On a spare piece of the same stock make a small straight-edged opening using the cutting mat and appropriate tool. Use light controlled passes, stopping at corners. Turn the paper to keep the tool travelling away from yourself. Do not push a blade through paper held in the air. If the tool catches, stop and change the stock or use a pre-cut method.

Steps 09–10

9. Cut the two O openings

Cut around the upper U-shaped opening only, preserving both side bridge regions. Remove the cut piece without tugging any incomplete fibre. Repeat with the lower U opening. Never extend the cuts across the bridge strips. Inspect the retained centre before proceeding. If either bridge is damaged, recut the stencil from the master rather than relying on a loose centre.

10. Cut the N opening

Cut each straight segment of the marked N polygon, stopping at the vertices. Reposition the sheet and cutting straightedge rather than reaching across the blade. Carefully remove the single shaded opening; the surrounding paper remains intact. Cap or retract the tool and clear the cutting area. Confirm there are exactly three openings on the finished stencil.

Steps 11–12

11. Make the first lettering trial

Place the dry stencil on matching scrap paper. Secure its outer margins with compatible removable tape if appropriate. Apply a thin film of compatible paint using a sponge or stencil brush, removing excess on the palette. Dab vertically through the openings. Avoid pooling around the O bridges or brushing paint underneath the N diagonal.

12. Lift, compare and adjust

Lift the stencil from its edge without sliding through wet paint. Observe the two unpainted bridge gaps across O, the N diagonal and the separation between letters. Let the print dry before comparing. If edges bleed or the N diagonal is incomplete, adjust one factor such as film or contact on a second dry scrap. The visible gaps are deliberate, not mistakes to paint over while wet.

Steps 13–14

13. Reuse only while the stencil remains sound

After trial printing, check that the O bridges, corners and N diagonal edges remain flat and intact. Do not soak a paper stencil or scrape wet paint from a fragile bridge. Replace distorted or torn stock using the retained master. Use a clear dry print for the decorative project and follow the paint directions for drying, handling and disposal.

14. Document the lettering method

Complete both records: actual scale, boxes, bridge widths, cutting observation, paint and dry trial comparison, stencil condition and chosen outcome. Mark READY FOR DECORATIVE USE, CHANGE/REMAKE or HOLD. Store the master and dry usable stencil in a labelled flat folder. The lettering is original geometry, not a certified sign system or a promise of permanence.

Fix, care and preserve

O centre detaches. Remake and retain both bridges.

N diagonal cuts beyond a vertex. Redraw or recut; do not rely on a torn edge.

Letters bleed together. Dab a thinner compatible film and maintain the gap.

Bridge gaps appear in O. Keep them: they are intentional stencil connections.

Stencil wears out. Use the master to recut on appropriate stock.

Source & evidence boundary

Original Steadleaf English prose, calculations, vector artwork, diagrams and maker records. The following sources provide factual context, not certification of this design. Follow actual product instructions and local disposal guidance.

Health Canada, Arts and crafts safety

https://www.canada.ca/en/health-canada/services/home-garden-safety/use-arts-crafts-materials-safely.html

Canadian Conservation Institute, Caring for paper objects

https://www.canada.ca/en/conservation-institute/services/preventive-conservation/guidelines-collections/paper-objects.html

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Full-size ON lettering template

120 x 80 mm sheet. O and N are 30 x 40 mm, separated by 20 mm. Two 6 mm bridges retain O’s counter. Three shaded openings to remove; verify 50 mm scale line.

A / ACTUAL-SIZE CUTTING TEMPLATE — SHADED = REMOVE



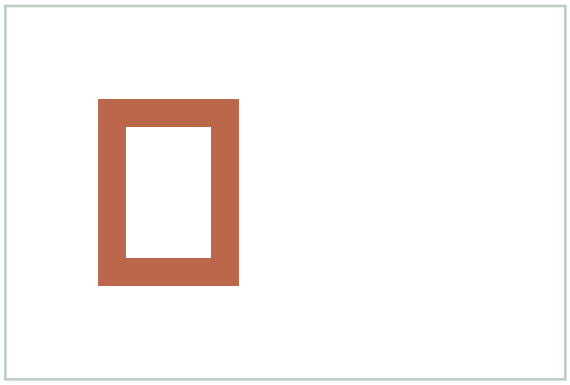
120 x 80 mm sheet · Keep all white areas

50 mm calibration line — print at Actual Size

Counter bridges and trial impression

An unbridged O would lose its centre; the retained side bridges leave intentional gaps. The N opening has no enclosed counter. Compare two actual impressions on scrap.

A / CONNECTED COUNTER



NO BRIDGE — CENTRE DETACHES



KEEP THE BRIDGES

The shaded openings make the print. White bridges are retained, so their gaps remain unpainted.

Letter geometry and cutting

Enter actual observations only. Mark missing information UNKNOWN or NOT CHECKED. This is a craft record, not a safety or performance certificate.

Stock / cutting tool / scrap condition

Actual 50 mm calibration

Actual letter boxes and spacing

O counter and bridge widths

N polygon / three openings

Cut edges / connected centre

Paint product / instructions

Decision: PROCEED / CHANGE / HOLD

Letter impression and reuse

Enter actual observations only. Mark missing information UNKNOWN or NOT CHECKED. This is a craft record, not a safety or performance certificate.

First print / O bridge gaps

N diagonal and edge condition

Single adjustment / second impression

Letter spacing / observed bleed

Drying / date

Disposition: DECORATIVE READY / CHANGE-REMAKE / HOLD

Master and stencil storage

Unresolved issue / review trigger