STEADLEAF PRESS
MAKE / PRINTING, STENCILS & COLOR

Layer Two Stencils without Losing Alignment



TWO LAYERS / ONE SHARED ORIGIN

14 practical steps · Register · print · align

Original diagrams and two printable maker records

Illustrative plans — not physical test results

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Before you start

The easiest way to align two stencils is to give them the same reference edges before either touches paint. This project prints a square in one colour and three contrasting bars inside it. The second stencil does not have to touch the first colour while it is wet. Make a small paper decoration and learn to distinguish a shifted layer from an intentionally open margin.

Materials: two pieces of suitable firm paper stencil stock, each 120 x 100 mm, a metric ruler, pencil, paper-compatible water-based stencil paints in two colours, separate applicators, a dedicated non-food palette, trial paper, low-tack tape suitable for the paper, and a cutting mat and suitable adult craft knife with a safe cutting straightedge (or have the openings pre-cut). Work in good light on a stable surface. Keep hands out of the blade path and store the tool safely before printing.

Plan the project

Use a 160 x 140 mm paper sheet. Both stencils measure 120 x 100 mm and sit with their upper-left corner 20 mm from the paper’s upper and left edges. Layer A has one square opening x = 30–90, y = 20–80 mm (60 x 60 mm). Layer B has three separate 8 x 36 mm vertical rectangular openings x = 42–50, 56–64, 70–78 and y = 32–68 mm. The three bars have 6 mm horizontal gaps and the outer two bar edges are each 12 mm inside A. All coordinates refer to the stencil’s upper-left corner.

Draw a paper outline and a stencil outline on a sacrificial support sheet. Mark two adjacent reference edges for the paper and the two identical stencil edges. The layer B bars are designed to overprint colour A, so choose compatible paints with enough contrast and coverage; do a dry-layer trial before committing. If the first colour is not dry enough for overprinting, wait according to the actual directions. Pattern 1 is a measured schematic, not a full-size cutting pattern: redraw from the coordinates.

Steps 01–02

1. Select the printing surface

Use smooth firm paper that tolerates the chosen paint and the removable tape. Prepare the 160 x 140 mm final sheet and at least two matching trial sheets. Label the back of each with an orientation arrow. Use only expendable paper; do not tape or paint a valuable original. Read the paint and tape labels and identify the drying and overpainting conditions.

2. Prepare two identical blanks

Cut or obtain two 120 x 100 mm sheets of appropriate stencil stock. Mark A and B and a top arrow outside the planned openings. Check that both edges sit squarely against a ruler. If one blank is distorted or a different size, replace it; matching registration edges are the starting point rather than something to correct by eye during printing.

Steps 03–04

3. Draw the layer A square

Measure from the upper left of A. Plot the square corners (30,20), (90,20), (90,80), (30,80) in millimetres. Shade the inside as REMOVE. The surrounding stock stays intact and provides the holding margin. Compare the widths and diagonals; if the square is skewed, redraw it on a fresh blank instead of widening one edge at the print station.

4. Draw the layer B bars

On B use the same origin and orientation. Mark the three rectangles at x ranges 42–50, 56–64 and 70–78, all extending from y = 32 to 68. Shade only these openings. Confirm that the 6 mm spaces between openings stay uncut. The bar group spans 36 mm, centred within A’s 60 mm width, leaving 12 mm on each outer side.

Steps 05–06

5. Cut or obtain the two stencils

If hand cutting is suitable for you, use the supported mat and appropriate knife with the cutting straightedge; make light passes away from yourself with fingers clear. Stop at each corner. Practise first on spare stock. Do not force a blade through material held in the air. If safe cutting is not practical, use pre-cut openings from a service. Remove only the four shaded shapes and cap or retract the tool.

6. Build a shared registration guide

On a larger waste sheet mark the 160 x 140 paper outline. Draw the stencil outline 20 mm inward from its top and left. Mark short extensions of the top and left guide edges so they remain visible with a sheet in place; tape removable edge stops outside the painted region if the materials permit. Confirm that A and B independently return to the same outline without touching one another.

Steps 07–08

7. Rehearse without paint

Put a trial paper sheet against its references. Place A on the stencil references and note the 20 mm inset. Remove A and position B without moving the paper. Hold B over A only for this dry rehearsal, then separate them. Check top arrows and the centred bars against the square sketch. If either sheet moves, improve the stops or use a new guide.

8. Print the first layer on scrap

Choose the background colour and apply a thin film through A with a vertical dabbing motion. Keep paint off the guide edges, avoid excessive wetting, and lift A from its outer margin without sliding. Leave the trial paper aligned if the drying setup permits; otherwise mark its orientation and restore it later. Dry for the stated overpainting interval before handling the printed region.

Steps 09–10

9. Print the second layer on scrap

Once the A film can receive the second colour as directed, return the paper to the same reference edges. Place B independently on the stencil references. Dab the second compatible paint lightly through the three openings. Lift without moving the paper and allow the result to dry. Check opacity, edge bleed and the margins around the bars; do not expect opaque coverage from every paint.

10. Diagnose any misalignment

Measure left and right distances between the outer bar edges and the square edges, and the top and bottom distances from the bar ends to the square edges. The planned four outer margins are 12 mm. A small difference may be aesthetically acceptable; choose a personal tolerance before comparing. If margins differ noticeably, review paper placement and guide orientation separately rather than shifting the stencil during a wet pass.

Steps 11–12

11. Choose the final method

Record the trial’s actual result and one change if needed. If colour B does not cover A, choose a more suitable compatible product or lighter background; if edges bleed, use a thinner film or improve contact. Use another trial before printing the final sheet. Do not keep applying paint to a wet failed impression to disguise a registration error.

12. Make the final two-layer print

Place the final paper in the guide and print A with the selected technique. Let A dry to the product’s permitted overpainting state, restore the sheet to its references if removed, and print B using its own applicator. Lift from an outside edge. Keep the paper flat and separate until the final paint is dry as instructed. The guide establishes repeatable placement but cannot eliminate paper swelling or hand variation.

Steps 13–14

13. Clean and preserve the master

Follow the paint maker’s cleanup and disposal directions. Do not soak a fragile paper stencil or scrape a bridge or edge. Retire curled, torn or softened stock. Store dry usable stencils labelled A and B with their uncut coordinate sketch and registration guide. Keep the print flat and protected from moisture and strong light; avoid food-contact or safety marking uses.

14. Document the two layers

Complete the two records with actual paper and stencil sizes, guide offsets, paint products, drying intervals, margin observations and any shift. Mark READY FOR DECORATIVE USE, CHANGE/REMAKE or HOLD. Note which guide edges were used and whether the first layer was repositioned after drying. This is a design exercise, not a tolerance certification or claim of physical performance.

Fix, care and preserve

Bars are shifted. Restore the same paper and stencil reference edges; check both orientation arrows.

Second colour lifts the first. Hold the print; verify compatible paint and the required overpainting interval.

Edges bleed. Use a thinner film on fresh scrap and check stencil contact.

Guide becomes wet. Replace it using the original coordinates before another pass.

Stencil curls. Retire the damaged sheet and recut from the master.

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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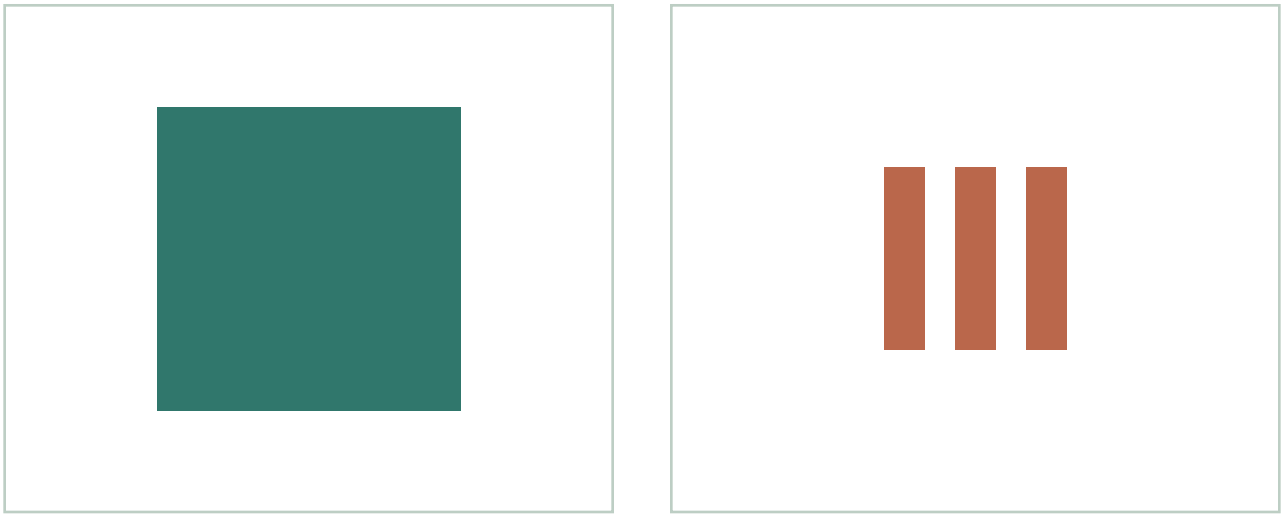
Two stencils, shared coordinates

A: 60 x 60 mm square, x = 30–90 and y = 20–80. B: three 8 x 36 mm bars, x = 42–50, 56–64, 70–78, y = 32–68. Both sheets 120 x 100 mm; redraw to actual size.

TWO MATCHING STENCIL BLANKS / SCHEMATIC



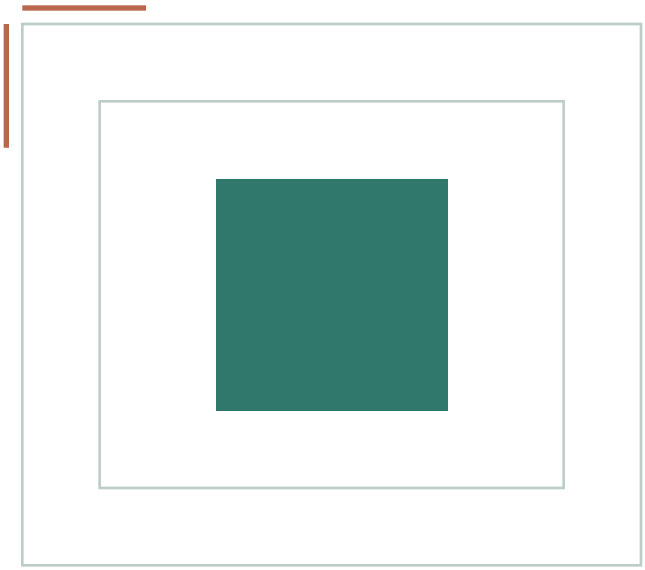
LAYER A **LAYER B**

120 × 100 mm each • coloured areas are openings to remove

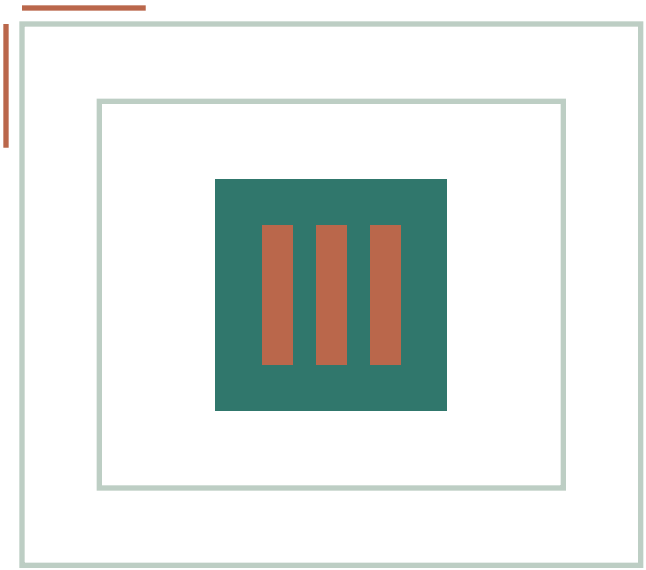
Registration and layer comparison

160 x 140 mm paper; both stencils use 20 mm upper and left offsets. Print A, let dry as directed, register B and overprint. The planned outside margins around the bars are 12 mm.

REGISTER EACH LAYER TO THE SAME PAPER EDGES



A ONLY



A + B

20 mm stencil inset • 12 mm margin around the bars

Registration plan

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

Paper size / orientation

Stencil A and B blank dimensions

A opening / B openings

Guide offset and reference edges

Dry rehearsal result

Paint A and B / compatibility

Drying and overpainting conditions

Decision: PROCEED / CHANGE / HOLD

Layer comparison

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

Trial A drying / date

B placement / actual observation

Left / right margins

Top / bottom margins

Single adjustment and new trial

Final dry condition

Disposition: READY / CHANGE-REMAKE / HOLD

Stencil and master storage