STRETCHLEARN · WORKBOOK

Risograph Design — Workbook

This workbook turns the course into hands-on practice. You will choose an ink palette, separate a real design into spot-colour layers, build halftones at the right LPI and angle, and assemble a press-ready file pack for a riso studio. Work through one section per module, fill the worksheets with your own project details, and use the templates to track inks, separations and your studio quote.

How the Risograph Actually Prints

Ground yourself in the process and the physical envelope of a real studio before you design anything.

Exercise: Read the medium

Find scans from at least three riso studios (for example Risolve, Perfectly Acceptable, Hato Press, Tan & Loose, Colour Code) and study them closely at full zoom. Write notes on what you see and want to reuse.

• Where can you spot registration drift, and does it help or hurt each print?

• Which texture or grain effects look intentional and worth stealing?

• How many inks does each print appear to use, and where do overprints create extra colours?

• What would you do differently if this were your job?

Worksheet: Studio envelope fact sheet

Contact or research one riso studio you might actually use and capture their hard constraints. You will design within these numbers for the rest of the course.

Studio name and location

Maximum sheet size (mm)

Safe printable image area (mm) and margin all round

Paper weight range accepted (gsm)

In-stock drum colours (full list)

Minimum and typical run size

Setup fee per colour

Per-copy per-colour print rate

Typical lead time

Checklist: Pre-design constraints confirmed

[ ] I have the studio's exact list of available drum colours
[ ] I know the maximum sheet size and safe image area in millimetres
[ ] I have an ink chart printed on the paper I intend to use, or have requested one
[ ] I have confirmed paper weight is within the machine's feed range
[ ] I understand the per-colour and per-copy pricing for my planned run

Spot-Colour Layer Thinking

Commit to an ink palette and rebuild your design process around separate channels and overprint.

Worksheet: Palette decision sheet

Lock your ink palette before detailed design. Choose a base ink, a second ink whose overprint you want, and only add a third if it earns its cost. Record the intended results.

Base ink (e.g. Fluorescent Pink)

Second ink (e.g. Federal Blue)

Intended overprint colour of the two inks

Optional third ink and its justification

Paper stock and colour

Number of passes and total setup cost (leave blank to calculate)

Mood or reference the palette should evoke

Exercise: Separate an existing design

Take one of your full-colour designs (or a simple new concept) and re-author it as greyscale ink layers, one per drum. Assign every element to exactly one ink and express tone as a grey percentage.

• Which elements belong on which ink layer, and why?

• Where do you want two inks to overlap and overprint into a new colour?

• Which tints (e.g. 30 percent Blue) extend your palette without a new drum?

• Where might registration drift cause a problem, and how will you overlap or knock out to handle it?

Exercise: Overprint swatch study

Build a small grid that maps your two inks against each other at varying tints so you can predict every available colour before printing.

• What colour results at 100 percent of each ink overlapped?

• What do 25, 50 and 75 percent tint combinations produce?

• Which overprint mixes are usable colours you would actually design with?

• Did you enable Overprint Preview to simulate, and how close is it to the studio ink chart?

Checklist: Channel setup is clean

[ ] Each ink has its own greyscale layer or named Spot swatch
[ ] Every element is assigned to exactly one ink
[ ] Spot swatches are true Spot type, not CMYK builds
[ ] Overprint Fill and Stroke are turned on wherever inks should mix
[ ] No layer relies on two inks meeting on a hairline without overlap or knockout

Halftones, Textures and Tonal Control

Convert tone to dots correctly, set frequency and angle per ink, and add deliberate texture.

Worksheet: Halftone recipe sheet

Record the halftone settings for each ink layer in your project. Keep angles well apart to avoid moiré and cap shadows so dots do not clog. Save this recipe to reuse on future jobs.
Project name and studio

Ink layer 1 name

Ink layer 1 LPI and screen angle

Ink layer 2 name

Ink layer 2 LPI and screen angle

Dot shape (round, elliptical, line)

Shadow cap (max percent before clogging)

Notes on the test print result

Exercise: Duotone photo build

Take one greyscale photo and split it into two ink layers (for example shadows on the cooler ink, highlights on the warmer ink). Halftone each layer at a different angle, add a touch of grain, and review.
• How did you decide which tonal range goes on which ink?

• What LPI and angles did you use for each layer, and why?

• Where did you add grain or texture, and what problem did it solve?

• Does the combined result read as a believable, characterful riso image?

Exercise: Fix a banding gradient

Create a smooth digital gradient on one ink layer, confirm it would band on a riso, then convert it to a print-safe halftone or diffusion dither and compare.

• How visible was the banding before conversion?

• Which method (halftone, diffusion dither, noise) gave the best riso feel?

• Did you keep all values under about 90 percent to avoid over-inking?

• Is the grain visible but not gritty at 100 percent zoom?

Checklist: Tonal control verified

[ ] Every continuous-tone image is halftoned per ink layer
[ ] Each ink layer uses a clearly different screen angle (about 30 to 45 degrees apart)
[ ] LPI sits in a riso-safe range (roughly 43 to 53 to start)
[ ] Shadows are capped below roughly 85 to 90 percent so dots do not merge
[ ] No source image was double-halftoned (scanned halftones were descreened first)

File Prep, Studio Hand-off and Proofing

Assemble a flawless layered file pack, brief the studio, and approve the edition from a real proof.

Worksheet: Studio brief sheet

Fill this in and send it to the studio with your previews to get a fast, accurate quote. It tells them exactly what goes on each drum, on what paper, how many times.

Inks (exact drum colours and print order)

Trim size and oversize margin

Single sheet, folded, or page count if a zine

Paper stock name and weight

Run size (number of copies)

Finishing (trim, fold, saddle-stitch, none)

Deadline and earliest delivery date

File delivery format (separate greyscale files or one spot PDF)

Checklist: Press-ready file pack

[ ] Confirmed the studio's preferred format: separate greyscale files or one spot-colour PDF
[ ] Each ink exported as its own greyscale layer or named spot channel, ink area in black
[ ] Document set to trim size plus the studio's specified oversize margin
[ ] All fonts embedded or type outlined, images placed at 300 dpi or higher
[ ] Files named unambiguously by colour and print order
[ ] Included a flattened colour preview, crop marks and a registration or ink map

[ ] Opened the final PDF in Output Preview and toggled each separation to verify

Exercise: Read a riso quote

Obtain or reconstruct an itemised quote for your project and break it down so you understand the cost drivers and can value-engineer.

• What is the setup or master fee per colour, and how many colours are you paying for?

• What is the per-copy per-colour rate, and how does it change across run sizes?

• What do paper and finishing add?

• If you needed to cut cost, would you drop an ink, shorten the run, or change paper, and what would each save?

Checklist: Proof and approval

[ ] Requested a printed proof copy on the final inks and paper
[ ] Checked overprint colours against my intended palette
[ ] Confirmed halftones read cleanly with no moiré or clogged shadows
[ ] Inspected registration on tight areas, accepting normal drift
[ ] Checked heavy areas for smudging, set-off or show-through
[ ] Approved in writing only after the printed proof looked right
[ ] Filed a finished copy, inks, paper and halftone recipe as a future reference

Your Action Plan

1. Pick one real riso studio and complete the studio envelope fact sheet (drums, sheet size, paper, pricing).
2. Lock a two-ink palette whose overprint colour you actively want, and request an ink chart on your chosen paper.
3. Choose or sketch a single project and author it as separate greyscale ink layers from the first thumbnail.
4. Build an overprint swatch study so you know every colour your two inks can make at varying tints.
5. Halftone each continuous-tone image per ink at a riso-safe LPI with clearly different angles, and record the recipe.
6. Replace flat or gradient areas with halftones or textured tints kept under 90 percent coverage.
7. Export the press-ready file pack in the studio's preferred format and verify every separation in Output Preview.
8. Send the studio brief sheet with previews, then read the itemised quote and decide on inks, run size and paper.
9. Get a printed proof, check colour, halftone, registration and coverage, and adjust the file if needed.
10. Approve in writing, then archive a finished copy, the inks, paper and your halftone recipe as a reference.