Making a zine

and

riso printing it

with

Spectrolite

and

Google Docs

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anemone.studio
spectrolite.app

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You can make a simple zine

Are you a writer, poet, artist, publisher, and/or photographer who wants to make a zine, book or booklet *yourself*? It's so fun, and way less difficult than you might imagine. This zine will teach you:

- How to make a PDF with your pages using Google Docs.
- How to lay out the pages for printing double-sided (this is called imposition) using Spectrolite, a free Mac app.
- Tips for printing on a regular printer or copier.
- Optional: Learn about how risograph machines work, and how to lay out your PDF and get it ready to print on a risograph machine. Includes prepping the grayscale files the riso needs (this is called color separation) and printing on bigger paper.

We'll also talk a little bit more about our process for publishing risograph zines as ANEMONE, along with other tips.

A huge tip if you're learning the skills of making a zine/booklet for the first time: Don't worry about making a masterpiece, instead "just" put some things in and make a PDF! And then PRINT IT OUT! Learning the *process* and holding a zine/book/booklet you've made in your hands, no matter how simple it is, is a big shift that often unblocks the creation of a whole bunch of ideas that had seemed out of reach. Let yourself learn how to make a booklet and print it: that's a skill of its own. The "making the content" and "making it beautiful and well designed (to you)" parts can come later! Make the first PDF as short, simple, and silly as you want. Then print it, and bind it; this is not a "waste" of paper or time. You deserve to learn, to play, to make mistakes in the process.

Books and zines don't have to be complicated, or big, or long, or professionally designed, or "perfect" in any way. It may seem like you need to be selected by a publisher, but really, you can be an *artist publisher* and make them on your own or with collaborators, and they can be about anything you'd like.

If you can put things in a Google doc, drag and drop a file, and send a file to print double-sided, then you already know all you need to know all the skills you need to put together a zine this way.

Let's walk through it together. The next two pages have an overview of the whole process. Then the rest of the book goes into more details and options you might want to know about or try out.

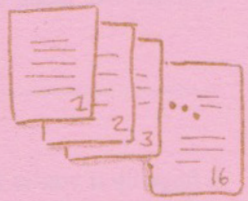
Make a PDF

1. Let's start by making a PDF. In Google Docs, make a new document. (Or you can use Pages, Word, or another program to make a PDF if you prefer.)
2. It's nice to begin by making the page the size you want your book to be. Go to `File > Page Setup` and make your page A5 (or whatever size you want your finished book to be — we'll use A5, the page size of this zine, for example). You can adjust the margins in page setup too, maybe make them a little smaller.
3. In Google Docs, write! Perhaps copy in things from your notes app or notebook.
4. Maybe add some Headings (`Format > Paragraph` styles) or change the fonts in the top bar. (Lots more tips on using Google Docs on page 16.)
5. Maybe add in images and photos. (use `Insert > Image`, or just drag and drop them in from Finder.) Perhaps make a drawing on paper, take a picture on your phone, and add that in.
6. When you have a handful of pages (ideally, 8 or more, to get a good sense of booklet making) and you're ready to try printing a draft, go to: `File > Download > PDF Document (.pdf)`
7. **Now you have a PDF!**

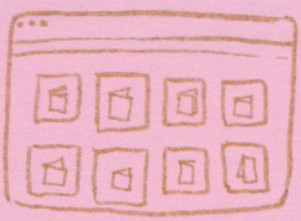


Print and assemble your zine

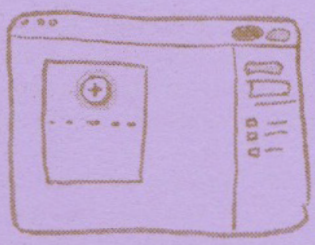
Next, it's time to arrange the pages in the PDF out in the layout to print, a process called **imposition**. And then print them out, fold them in half, bind them, and you have a zine!

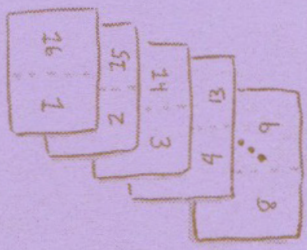


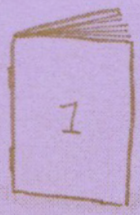
1. Open up **Finder** and locate the PDF you just downloaded from Google Docs. (It's probably in your Downloads folder.) Open in Preview and scroll through it to have a look: All the pages are in a row: 1, 2, 3, 4, …, 16. (Or however many pages.)
2. In order to print, you need to make a print layout file, which will have *multiple* pages printed on each side of the sheet of paper. You can do this by putting the PDF into Spectrolite. It is a free app for Mac: *spectrolite.app/download*
3. In Spectrolite's Toolbar, go to **Layouts**.



4. In Layouts, use the filter bar to set Sheet Size to **A4**, then click on **A5 Portrait Zine** to open the layout.
5. Drag and drop the PDF from Finder into the + area in Spectrolite. (Or click the + choose your file from a file browser.)
6. Spectrolite will arrange the pages of your file in the order for printing a zine. In the Inspector sidebar there are lots of other options, but you can ignore them for now.
7. Press the **Export** button in the toolbar's top right corner.
8. Find your newly imposed file in Finder: open it and have a look! There are two pages of the book per page of the PDF, the pages are ordered differently, and some of them are rotated. Perfect, that's just what you want them to look like.
9. Print them out on a regular printer. (Double-sided, long-edge binding. More detailed instructions on page 4.)
10. Fold in half, and bind with staples or sewing.
11. Make edits, keep going, make another version! When you're ready, print and bind a few copies and put them out in the world! Show some friends!







That's the basic process. You don't even necessarily need to read further to try it! Make a simple zine out of the simplest and silliest content you can, make a test print, and see how it feels to hold in your hand.

If you want to **risograph print** and assemble a larger edition (50-100+ copies) of your book/zine/booklet, there are a few more steps:

1. Learn about risograph printing and what it's great at (and not so good for) – adjust your design and expectations accordingly. See pages 6 and 20.
2. Impose your zine onto a sheet size that matches the machine, such as placing four A5 pages onto A3, instead of two A5 pages onto A4. See pages 11-13.
3. RISO-ify the files to make them grayscale in the way the riso needs (and color separate, if you're printing with more than one ink color). See pages 8-10.
4. Print each side and each color on the risograph, then cut the stacks of sheets, collate, fold and bind. See page 18.

Why make simple artist zines?

Why use these methods to make zines? Can you make the process simpler? Can you make a more complicated book? Can you use different tools? Yes, absolutely! *This is just one set of methods among many*—but it is one that we've found works for us and for our collaborators. Here's what we like about it:

- ➔ Working in Google Docs is especially good for writing with collaborators, and for working efficiently with editors and other early readers. We also like to focus on the content; minimizing the work required to go from creating/editing to printing allows us to make more draft prints and spend more time improving the content, and put work out more quickly.
- ➔ More complex tools can produce book print files that are more complex and specifically designed. (Such as color separation with color profiles or by hand in Adobe Photoshop, and book layout and imposition with Adobe InDesign.) However, this software is expensive, has a steep learning curve, and the process can be time consuming even for experienced professionals. If you are getting started, or working on a project with a collaborator who does not already have these skills, or have limited time/energy for a project, a simpler set of tools may be better, or perhaps all you need for a first version.
- ➔ Simplicity is a relative thing. Think about what you want for this iteration of the project and also the skills, energy, equipment, and time you have for it. Don't let an expectation of perfection stop you from making something. Start by making the content, and by the time you finish, you may decide that the Google Docs + Spectrolite process is perfectly adequate.
- ➔ Making artist zines can be an iterative process—your first iteration of a zine can be simple: one ink color, basic paper, minimal design. Get it out into the world, let it marinate, and go onto the next project. You can always come back someday to make the next version with expanded content, better materials, more beautiful design, or whatever you want for it at that time.

Printing with a regular printer

When you have an imposed layout file, find a printer that lets you print on A4 paper. Maybe you have one at home, at your office, at a friend's, at the local library, or at a copy shop. It can be a laserjet, an inkjet, a xerox copier; it can be black and white or color. Whatever you can use! Take the imposed PDF file (A5 arranged 2-up on A4, in the example on the previous page) and print it double-sided, with long-edge binding (usually a printer's default setting for double-sided printing).[1]

[1] Most modern printers default options will just work, but if you are working with an older printer that doesn't print double-sided ("duplexing"), you might have to print all the even pages first, then feed them through flipped over to print the odd pages on the back. This is very possible, but also enough of an annoyance that it might be worth finding a printer you can access for printing double-sided, if you want to make a bunch of copies.

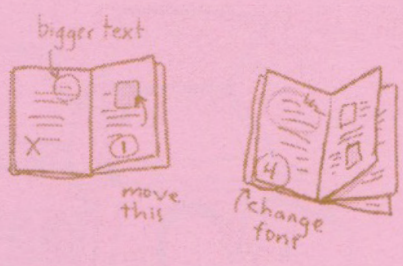
To assemble your zine: fold the pages in half, and bind them (you can staple with a long arm stapler, or sew them with a 3-hole pamphlet stitch). A zine!!! Hooray!!



Optionally, you can trim the fore edge (the side of the book on the other side of the spine). This is to remove the page creep (page 14) where the inner sheets are sticking out more than the outer sheets. Doing this makes longer booklets look and handle a little nicer, but it's up to you.

Why make dummies and test prints?

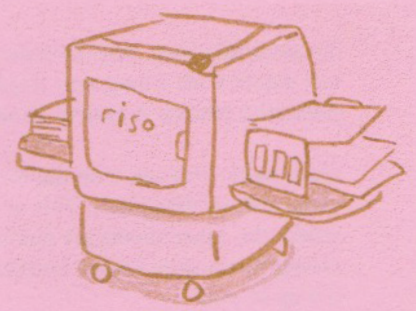
When you are first getting started or want to experiment with a format that's new to you, it helps to make a book dummy with some placeholder typographic content. You can also use Spectrolite to create basic dummies with just page numbers: in Layouts, click the **Info** button for a layout, fill in the number of pages you want, click **Layout with numbered pages**, and then Export that imposed file to get the dummy print file. Print it out on a "regular" printer and assemble your dummy zine. You can also just start with completely blank sheets, assemble them, and then draw or write on the dummy pages. A physical dummy lets you experience what potential design choices (size, paper, number of pages) for a book feel like to interact with.



It also really helps to print early drafts. Print your first draft well before you feel ready — don't wait until you're done, make a test copy on a regular printer as soon as you have 8+ pages. Do a little test print!!! With it in hand, you can proofread, mark it up, make notes, and continue to make edits and create more content. Make changes, get suggestions from early readers, create more content in response to what feels missing. Design the typography, change the fonts, colors, page size or orientation. Pay attention to the rhythm of the pages: maybe you want to add an image there, or the margins feel too big or too small. You can see how the flow of turning the pages will go. Check to see how big that font really looks. How does the thickness of paper and number of pages and size of book feel in your hands?

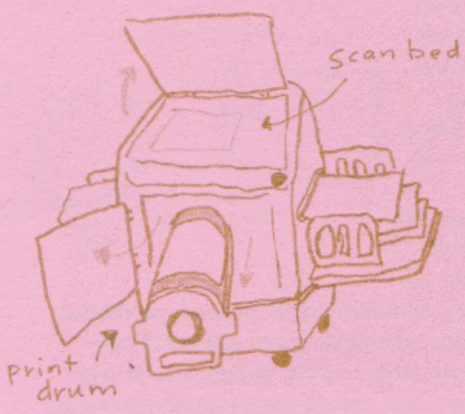
Even when you plan to risograph print your books/zines, a regular printer still has an important part to play. At ANEMONE, we risograph print most of our publications. But we still print a handful of draft copies on a black and white laserjet printer for proofing, marking up, and making draft versions to give to early readers and friends. Make so many dummies, test prints, and early drafts! They may seem like a waste of paper, but they are an important part of the process.

Risograph printing



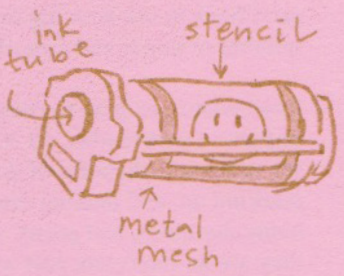
Risograph printing is a great option for artist publishers who want to print and bind zines and small books. And it has such bright spot colors! You can use interesting papers, play with formats and trim sizes and generally have an artistic hand in the process in a way that's often hard to do with copiers or professional printshops/binderies.

Deciding if you should riso print a project also depends on the size of the print run you want. Each layer of ink adds to the cost in materials (stencils and ink), and in time (for loading the paper and registering the ink onto the correct position on the page). If you want less than 50 copies of zine, then don't use riso: print it on a home/library/office printer. You can also go to a copy shop and have them print them — some copy shops have printers / copiers that will collate, fold, and staple your booklets for you, which is a big time-saver. When you want something more like 100-500+ copies, then risograph can be a great option. (Beyond 1,000 copies, you might consider offset printing.)



Though the risograph looks a bit like a copy machine, the process is more like a digital version of screenprinting. Each color of ink is printed individually through a stencil onto the paper. The thin waxy paper stencil is wrapped around a drum that is covered with a fine metal mesh screen, with a tube of ink inside. Some machines have two drums inside, and let you print two different ink colors in one pass through the machine. The drum spins, the machine feeds paper under the drum as it spins and the ink is transferred through tiny holes in the stencil onto the paper. You switch the drum each time you switch ink colors.

It takes a minute or two to make the stencil, and a few minutes to align and register your print to the correct position on the paper. But once you've got everything set up, you can print hundreds of pages in just a couple minutes—WAY faster than a regular home printer. When you want to print more colors, or print on the back of the sheet, you wait for the ink to dry a bit, then jog the sheets into a neat stack, which goes into the feed tray to go through the machine again.



Inks

Riso inks are really nice – they absorb into the paper and are more of a matte look than shiny, plastic-y xerox. You can also use a tint or opacity to print a lot of different looking shades using just the one ink color. When you first download Spectrolite, start by picking the **Inks** you'll be working with out of the list of all the available RISO colors. Click on an ink in the **Available inks** section to choose it, and put it in your ink set.

Though there are many beautiful colors shown in Spectrolite, you can't simply print with *any* of the available inks: you need to use the inks available on the machine you're printing with.[2] You can drag to reorder the inks in your set, and click the x on the ink to remove it from your set. There are also some special buttons at the bottom of the Inks, where you can load or save an ink set, or download a Procreate or Adobe Swatch file.

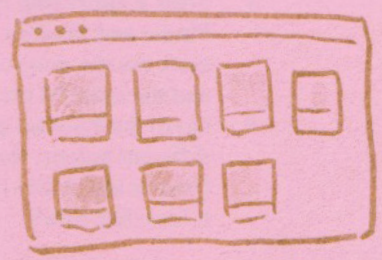
Palettes

Once you've chosen your ink set, it's time to make some **Palettes**. When you print your artwork, you'll use one or more layers of ink – that's your color palette. Spectrolite will use the palette you have selected for your project to create a print file for each ink color. For example, this booklet is printed in a two color palette. Most riso inks are semi-translucent; they can overlap with other inks to create mixed colors, like pink+blue = purple, or pink + yellow = orange.

In **Palettes**, you can see color overlay charts that show you a preview of what the colors of inks printed on top of each other may look like. You automatically get a single-color palette for all your inks. When you are just starting out with Spectrolite, make a few palettes to try out pretty multi-color combinations of the riso inks.

Here's how to make a new palette:

1. Click the **New palette** button.
2. Click on 2-4 inks (from your ink set below) to choose them.
3. Press **Save**, and the Palette will appear on your Palettes page.
4. A tiny gradient of the palette you're currently using shows in the toolbar at the top.



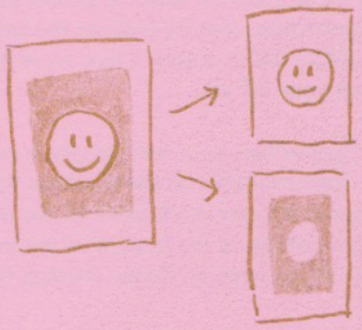
If you want to change to a different color palette, go to the Palette page, click on a palette to select it.

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[2] The inks are purchased pre-mixed in tubes. Each drum is specific to one ink, so each riso print shop only has a specific set to choose from at any given time. Drums are expensive and take up a lot of space, so printshops tend to choose wisely and add color drums over time, as space and budget allow.

Color Separation

To make a stencil, the riso takes the image of what you want to print (either from a file on your computer or from the scan bed), and a laser inside burns tiny holes in waxy paper, called a "master" stencil. The ink goes through these tiny holes and out onto the paper to make your design. [3]



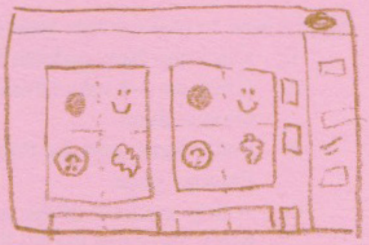
The riso needs a special type of print file — it isn't thinking about images, it just wants to know where to make the holes in the stencil. These print files are grayscale, with each ink color handled separately.

You don't want to send it a full color image, because the tones of the color, when they're converted by the riso into grayscale, won't necessarily give you a good result. Color separation is the process that takes your full color image, and turns it into these grayscale print files for multiple colors of inks.

RISO-ifying your files

Here's how to RISO-ify an image or PDF (to make the grayscale files the riso needs for printing):

1. Go to the **Canvas** in Spectrolite.
2. Drag and drop a single image or a PDF from Finder into the Canvas (or click + to choose from the File Picker).
3. Press the **RISO-ify** button in the top right corner. On the left, you'll see your original, on the right, you'll see a preview of how the image might look when you print it in various ink color(s).
4. Press **Export** (top right corner) and use Finder and Preview to look at the files: there are the grayscale layers for the riso, and the colorful preview.
5. Go to the **Palettes** page, switch to a different palette, then come back to the Canvas and RISO-ify again. What does it look like now?



[3] The holes are very very small: 300-600 per inch, depending on the machine. That's up to about 200 tiny dots per centimeter, which is super tiny. You can get much higher resolution with these prints than traditional stencils for screen printing, which has a bigger mesh.

6. Look at the tiny ink color layer(s) to the right of the Preview. Toggle the color on and off to see the grayscale files underneath. Click the color layer(s) to turn them on or off in the preview.
7. Take some time to play around with different palettes (see page 7) and styles (see page 10) to get a sense for how it works. Try Halftone, Dither, Posterize.

You can also export the separations, then keep editing in other software. From the Spectrolite Canvas, check boxes in the inspector sidebar to export PNG or PSD photoshop files instead of PDFs. You can take these images and edit them further, or combine them with other artwork to get the color separation you want, or draw on top of them or collage them into other designs.

Make the riso print files for your zine

To get your zine or booklet ready for riso printing, we're going to go back to the **Layouts** screen. Before making riso print files it's very important to check the machine size and ink colors available at your riso printer. If you're printing at a riso print space, go to their website and check. If you are not sure, ask! Let's use Pamflett as an example: we'll go to *pamflett.no/riso* and we see that you can print on an A3 machine, with nine different ink options for that machine.

1. Instead of putting our zine 2-up onto A4, for the riso we're going to print on A3 sheets so we can get more sheets printed on each side of the page. In **Layouts**, use the filter bar to set Sheet Size to A3 — then click on **A5 Portrait Zine** to open the layout. (This layout is very common for RISO. There is lots more information on layouts on pages 11-13.)
2. Drop your file in to impose it. It's going to look a little funny, because the bottom pages are upside down— it's supposed to be that way. It's a little trick to help make the zine easier to assemble.
3. This time, instead of exporting that file, press the **Send to Canvas** button in the top right corner so we can turn the imposed file into the grayscale files the riso needs for making the stencils.
4. Choose your ink(s), your palette (what ink or combination of inks you are using), and then push the **RISO-ify** button to make the layers. TIP: If you are making your first zine on riso, you might want to start simple: use just one ink color, or maybe two, if you are printing with a two drum machine.
5. Then press **Export** to save the print files. You'll get one grayscale PDF page for each ink (one for each stencil).

Print these files: more about printing and assembling books for riso on page 18.

More color separation options in Spectrolite

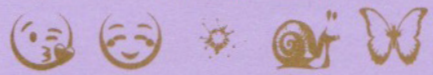
Halftone converts an image into small dots; it is useful for taking darker images and reducing ink coverage, or as a style. For a color image, the dots of different inks overlap to form the color you see. There are two sets of controls for halftoning: the angle of the dots for each ink and the spacing of the dot grid.



Dithering converts an image into small black and white patterns. Like halftoning, it is a process for taking a grayscale image and converting it into black and white. Instead of forming dots on a grid, it creates small varying patterns of black and white pixels.

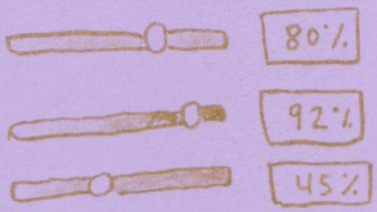


Posterize is a style that gives an image a more graphic look, often with big blocks of color. Images that are well suited for posterizing have high contrast and a range of tones, and/or large blocks of similar tones, rather than a busy or noisy image with lots of small areas of color.



Trapping is a process to improve the print quality of illustrative work by expanding a segment of the artwork design to add a small overlap at the border between two adjacent color blocks. This helps avoid gaps where you see a flash of paper color between those color blocks in the print if there is slight mis-registration. Trapping is most common for spot colors or designs with areas of color that touch each other. (In general it is not intended for photographic work.)

Opacity is a simple way to adjust the results of a color separation, by making it lighter or darker.

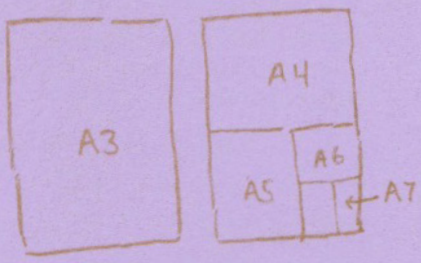


If you have images that are very dark, they might be too inky when printed. To avoid this, you can decrease the opacity or try halftoning.

Some tips on image editing for riso

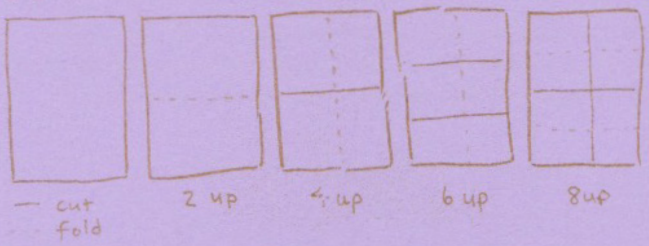
To get a sense for what an image will look like in riso ink(s), you can drag it into the canvas and RISO-ify it. If you're using colorful paper, you can set the paper color in the Paper section to preview that too. If an image doesn't look good on your screen, it's probably not going to look good printed. It's often helpful to pre-edit images to look a bit exaggerated, by editing detail and contrast using curves or profiles in photo editing software (such as the free Adobe Lightroom mobile app).

Book design choices



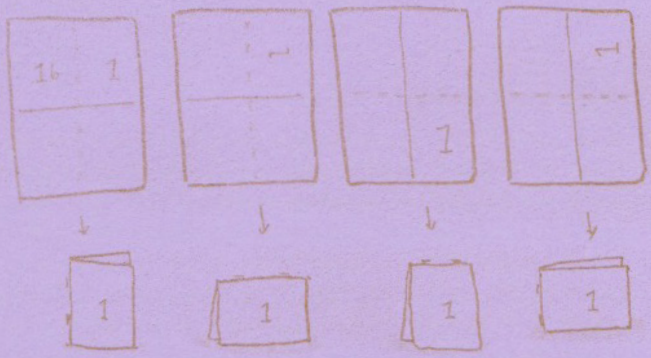
When you print zines and booklets on the riso, most of the time you're printing more than one page of the book on the sheet of paper. You arrange the pages of your book so that several pages fit on the bigger press sheet of paper you're printing on.

This is called printing "n-up", where n is the number of pages you print on one sheet side. For example, you're printing 4-up when you print A5 zine on A3 paper. Since you print on both sides, that means that each big sheet of paper holds 8 pages. Practically, the sheet size has some implications for picking your book's finished size: if you format your pages at a size that can fit into a 4-up layout, vs a 2-up layout, you'll use half as many sheets of paper, master stencils, and some amount less ink. The assembly also changes a bit for different n-up layouts. For example, this A5 booklet is printed 4-up on A3 paper; you then cut your sheets horizontally into two sections, and then combine the stacks before you fold and staple.



Spine on long vs short edge, portrait vs landscape orientation

When you print 2-up, you can put the spine on the side or the top, but the dimension of the book is determined by the size of the paper you're printing on.



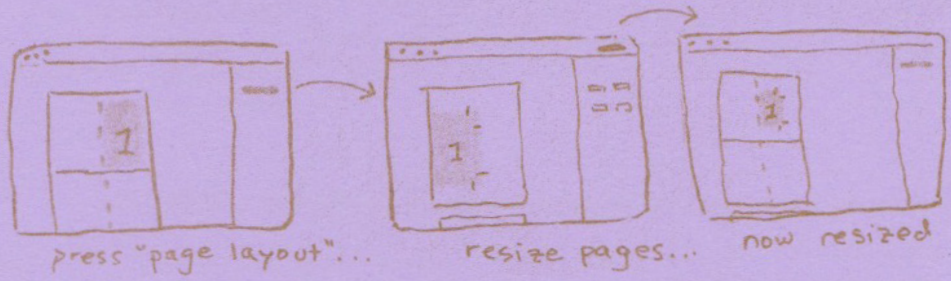
When you print 4 or 8 pages on each side of the sheet of paper, you can make four fairly different feeling zines/books. Is your content oriented portrait or landscape? Is the fold/binding on the short edge or long edge? The three less traditional book shapes can be very interesting to interact with. They're so fun!

Custom sized zines

You can make your page size whatever you like, within a layout: just because you're printing 4-up on A3 doesn't mean your page *has* to be A5 size. For each size of paper you're printing on, this chart shows the maximum page sizes for printing with 2, 4, 8, or 6 pages per side.

	2-up	4-up	8-up	6-up
A4	A5 (148 x 210mm)	A6 (105 x 148mm)	A7 (74 x 105mm)	105 x 99mm
A3	A4 (210 x 297mm)	A5 (148 x 210mm)	A6 (105 x 148mm)	148.5 x 140mm

You can make your pages smaller when you make the content pdf file, or you can use Spectrolite to resize pages, by pressing the button for "**Set page size and position**" and choosing a new page size. You can also add trim marks or bleed with this tool.



Page increments

How many pages go in a book is directly related to how many pages are printed on each "press sheet" when it's printed front and back. (Spectrolite can help you figure this out in the **Layout Information** section of each imposition layout.) For example, if you're printing on A4 sized paper, and folding it in half to make a zine… that means two A5 pages go on each side of the sheet (2-up). Printed double-sided, you have 4 pages of zine content for each sheet of A4 paper. This math goes for any n-up type layout: you multiply by two, to figure out how many pages go on to the sheet of paper you're printing on when you print front and back. For example, if you print an A6 size booklet 8-up on A3 paper, you get 16 pages per sheet, so you want to work in increments of 16.

Here are some common page increments:

2-up: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64...
4-up: 8, 16, 24, 32, 40, 48, 56, 64 ...
6-up: 12, 24, 36, 48, 60, ...
8-up: 16, 32, 48, 64, ...

It's good to end up with your content in increments of the right number of pages for your layout. But don't worry if you don't have the correct number of pages to use a layout, Spectrolite will just add some blank pages at the end for you.

Special page count increments

When printing zines or books 4-up, the most efficient use of paper is to have your page count be a multiple of 8 (eg 8, 16, 24, 32, ...). However, sometimes you are printing something with a page count that is more naturally something in between (like 12 or 20 pages long). Spectrolite has an option for making a single stencil that you print on both sides of the paper, instead of adding blank pages. Printing and collating these special increment zines is a little bit different than your standard workflow—note that for one sheet you will print only half as many copies. Detailed instructions can be found at: *spectrolite.app/zine/special-counts*

Covers

Cover design is very important for drawing people to the zines you make. You can make your zine even more special with covers printed on different paper (thicker, a different type, or in a different color than the interior), and with designs printed with more colorful inks. This means that you'll often be designing and printing covers separately from the zine interiors.

You can also use Spectrolite to impose and RISO-ify covers. Go to **Layouts** and select the Layout Type **Zine Cover**. You can drop in either a two page pdf (the front cover and the back as individual pages) or a pdf with the full spread, with the front and back together. When working with riso, covers for A5 zines are often printed with two copies on an A3 sheet, since it is easier to find A3 paper with the correct paper grain than A4. (You want the paper grain to run parallel to the spine of the book.)

If you're printing two covers at a time, just remember that you only need to print half as many sheets. For example, if your edition size is 500, you just need to print 250 copies of the cover sheets so that when you cut the stacks in half, you get 500 covers.

Designing with printing in mind

There are a few printing concepts to know about when designing a longer or more elaborate book. Designing your book with an understanding of the physical printing process will make your printing and assembly easier and your book look better. For each of these concepts, there are settings in Spectrolite layouts, usually in the inspector.

Creep

In printing, creep is the movement of your page contents in a zine because of paper thickness and folding. If you are making an informal zine (or if your zine is short) you absolutely don't have to worry about creep. But when you have a longer zine, the pages sticking out the front edge can look a little sloppy, and you might want to use a guillotine cutter or stack cutter to square them up. For longer zines, creep will shift the content enough that you would end up trimming off content near the edges of the inner pages — which is no good! Adjusting for creep moves the printed content on the page to account for this before you print. This also makes your content line up across pages and results in a more polished look.

Other binding methods

So far we've just been talking about zines that are folded to make a booklet, but there are other methods of binding to be aware of for larger book projects. Perfect binding is an adhesive-based binding, used today for most paperback books. Perfect binding can be done by a professional bindery, or by bookmakers with special equipment. For longer books, you may also want to consider using signatures: a section of the book of 12 to 32 pages, folded together like a standard booklet. Multiple signatures are then stacked and bound to form the larger book, and bound together.

Center marks

These printers' marks are useful to align and register the printing to be centered on the sheet, lining the printing on the back of the sheet lines up with the front, and registering a second (or more) color to the first color.
spectrolite.app/zine/registration

Trim marks

For zines that will be trimmed down to make them smaller than the page size they are printed on (e.g. you are printing 4-up on A4, but you want your final zine size to be something smaller than A6, say 80x100mm), adding trim marks helps you know where to cut.

Page and sheet numbers in slug

For smaller than page sized zines, you can add page and sheet numbers to the printed area outside your final zine, known as the slug. They make it easier to keep track of what goes where during printing and assembly, then you trim them off at the end.

More on layouts in Spectrolite

Layout information

The Layout info box provides lots of useful details about a zine imposition: page templates for Google Docs, ideal sizes for design programs, and more. It also is the jumping off place for trying out a layout with a numbered mockup.

Demo with numbered pages

You don't even need to make your own PDF to get a sense of what a book design might look like. Spectrolite's layout info panel lets you make a PDF with numbered pages to test out your layouts. This is handy when trying out all the other imposition options to really understand what they do.

Overlays

On the Layouts screen, you can see overlays for cuts (in solid red) and folds (in dashed purple). These overlays won't be printed, they are just to help you visualize where the zine's spine will be and any cuts you will need to make.

There is also an overlay for the riso-specific areas (shaded in pink) to help you check for areas of heavy ink. This overlay shows the unprintable areas at the edges of the page all around the edges. For prints where you'll be putting the paper through the machine multiple times it is also good to try to avoid heavy ink coverage near the "lead edge" that goes in first, and along the center path where the feed roller goes.

Shifting your PDF content

Reading books that have wider margins near the spine can make it easier to see the content that is closest to the margins. Or you may want to allow extra space on the outside margin for taking notes. Either way, this is something that Google Docs doesn't support. But don't worry, Spectrolite can do this! More at: *spectrolite.app/zine/content-shift*

Clean margins

In riso printing, the machines will not and cannot print content right to the edge of the sheet—trying to do this can result in an inky mess. But sometimes people design their zine's PDF files this way. Don't worry, on the layout page the "Clean margins" box will be checked by default. When "Clean margins" is checked, Spectrolite will remove any content in the unprintable area.

Tools in Spectrolite

Spectrolite has a **Tools** section: a collection of little helpers that you might find handy in parts of the book/zine making process.

Images to PDF

This tool lets you make a set of images into a PDF — it can be handy if you have a lot of images that you want to RISO-ify all at once. You can also make all the pages of your zine as images (like in Procreate, or scans of sketchbook) and use this tool to make them into a PDF, before you use a Layout to impose them for printing.

PDF to images

This tool lets you make an image for each page of a PDF, which is nice if you want to draw on top of it. For example, maybe you want to draw on top of your pages in Procreate/Photoshop and add doodles and things on top of a mostly text PDF you made in google docs.

Split Spreads

Working in spreads (like in Google Slides or Procreate) can be nice, because it lets you have different margins on the left and right sides of the pages. Or make artwork that goes across the center of the spread! This tool splits the spreads into a PDF that has all the pages in a row, in reading order. Then you're ready to use the Layouts and impose for printing.

Make Spreads

This tool creates spreads from a PDF that has all the pages in a row. This is useful when you want to preview what a book will look like printed and bound.

ISBN barcode generator

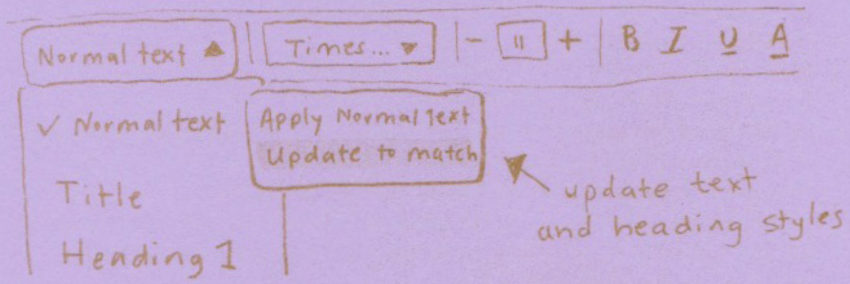
An ISBN is a unique identifier for a book that helps libraries and booksellers keep track of books, and read in their information from a bar code, which saves the people doing it a lot of time. If you are a small publisher or a self-publishing author, at some point you might want to deal with ISBNs. You buy them through Bowker in the US, or through an agency for other countries, and they are much less expensive when you buy in bulk. If you have an ISBN already, this tool helps you make a PNG or SVG barcode of it (price optional) to put on publication's back cover design.

Tips for Google Docs/Slides

You can type the URL docs.new into the address bar of your internet browser to start a document. We usually make docs by going to drive.google.com and pressing the +NEW button, and selecting the Document type, making sure it's organized in the Drive in the correct folder. If you're collaborating on a project with someone, it can also be handy to make a shared folder in Drive, and put all the documents in them so you don't have to share each thing individually.

To set your page size, use `File > Page Setup`, you can also set portrait/landscape. Page size has limited options: A3, A4, A5, B4, B5 for ISO papers. But there is a workaround to make a page of any size: use Apple Pages or Word to create a blank document, set the page size and margins as desired, save it as .docx, and then open that file in Google Docs.

Use headings (in top bar or `Format > Paragraph Styles`)! Change their color, change their typeface or size or style. Then under the paragraph style you changed, hover over it and say "Update [style type] to match' and it will update everything in the document.



`Insert > Table of Contents` gives you a table of contents. Hover over it and push the little arrow to refresh it after you've updated the headings. And `Insert > Page Numbers` (or edit in the footer) gives you page numbers.

Add a custom color for text, highlight, by selecting the (+) under Custom. If you copy-paste in a hex code from Spectrolite's inks / swatches you can get colors that separate right from your document into the riso ink colors.This text is a different color!

Change the margins and spacing: changing the defaults can help make your zine look more interesting. Change the margins by dragging the little blue triangles in on the ruler at the top bar. If you want a fancy look and feel: `Format > Line & paragraph spacing > Custom spacing`. If you want to copy a style you like to somewhere else, you can also highlight some text, click **paint format** (the paint roller icon in the top bar) and then highlight the text you want to have the same style. You can also use two (or more) column layouts in Google Docs.

Google Docs and Slides limit the maximum dimension of an image to 2048 pixels. If you add a larger image, Google will resample it to make it smaller. For most images, the effect of this is minimal. But if you have large images (with print dimensions larger than 2048px, which is 86.7mm at 600dpi), sometimes resampling can cause artifacts like blurry edges. If you run into trouble with this because you're printing big images and they don't look good enough, you may want to use different layout software.

Print and assembly for risograph

Every riso printer is different, and every printmaker has their own way of doing things. There is no right way – there are so many ways to make a book on riso. But we love hearing about the details, to help make a new process seem real, or to add to our own process… so for reference, here is the way we make a 4-up zine at ANEMONE.

- Put the correct ink color drums in the machine.
- Jog the paper (we use a jogger machine; or you can do it by hand).
- Open the grayscale pdf file for the first sheet side in Mac Preview.
- Send the file to the riso via the printer driver. See: *spectrolite.app/zine/driver-printing*
- Align the page to the center mark. See page 14.
- Print all the copies you need, plus some extras.
- Jog the stack and place it to the side, and label it, for example, "sheet 1 front" on a sticky note that's placed in the top right corner.
- Repeat the process to print each front side for all the sheets.
- Wait 1-24 hours for the ink to dry, then print each back side. Or, if the project requires multiple passes through the machine, repeat for the next pass.

Assembly often goes something like this:

- Jog the stack to get it neatly aligned, and cut each stack down the center along the short edge to make the 4-up stacks into 2-up stacks.
- Lay out the stacks of pages on a long table in order. Leave room for the collated results at the end. Fan each stack to make picking up the pages easier.
- Collate! Make a test book first so you make sure all your pages are in the right order. Then, collate and make a stack, but as you set each one down, rotate the set of collated pages by about 20 degrees from the one before, so they are slightly offset. This makes them easier to pick up again. Collating takes some time, so we recommend tuning your setup. Use a high table that allows for good posture. Use "finger tips" and anti-fatigue mats if you can get them.
- We use a booklet maker, a machine that folds and staples. If you don't have access to a machine, you'll need to fold, then staple. For this, we recommend using a bone folder, and a long-arm or electric stapler.
- Trim the fore edge and the bottom edge of each book. We often design the book so we don't need to trim the top edge of the zines, but you can cut those too. You can trim 5-10 zines at a time on most stack cutters.
- Pack the zines tightly into boxes, alternating the spines to face up or down every 5-10 zines. Packed like this, over the next few days they will relax into their form as small books. (You can also press the books many other ways!)



Other apps you can use

There are so many options besides Google Docs for PDF making! Pages, Word, Google Slides, Powerpoint, Canva, Procreate, Sketch, the Adobe Suite, Apple Notes (or write there, then open in Pages to format). Basically any way you can make a PDF, you can probably use that to make the pages to lay out to print.

Or draw, write, and collage, then scan them in. (You can use Spectrolite's Images to PDF tool to make a PDF for layouts. You can also use your phone to photograph or "scan" to make a file. For example, the Dropbox scan app is great for bringing in drawings or text, if you don't have a scanner.

You'd be surprised what you can do with just the built-in phone image editing… amping up the contrast and changing the white balance can really help images print well. We also like the free Adobe Lightroom mobile app for photo editing, because you can save common presets.

If you are really into dithering, Stochaster has a lot of options, *stochaster.app*.

RISO resources

- **Spectrolite** is a free Mac app to make colorful risograph prints and zines more easily. You can do color separation, halftoning, posterizing, layouts for art prints, zine and booklet imposition, and a bunch of other fun things. There's an extensive how-to section. *https://spectrolite.app*
- **Stencil Wiki** — *stencil.wiki* for a map of riso studios, and *stencil.wiki/fairs* for a listing of fairs.
- **color/shift** — Free, open source riso color profiles *colorshift.theretherenow.com*

RISO Scandinavia

★ **Bergen Art Book Fair** *babf.no*
Norsk Risoforening *risoforening.no*
Oslo Zine Fest *oslozinefest.no*
Copenhagen & Odense Zine Fests *@cph_zine_fest*

Risograph printmakers, printshops, and publishers

★ **Pamflett** *pamflett.no/riso*
Spektakel Tryk & Grafik *spektakelpress.com*
The Print House *theprinthouse.dk*
Hverdag Books *hverdagbooks.com*
Oonda *oonda.co*
&soWalter *diediebe.be/soWalter-usw*
Kristian Blomstrøm Johansson *kbj.enterprises*
Plantas Press *@plantas.press*
Elisa Halvorsen Castillo *elisahalvorsencastillo.bigcartel.com*
KRAFT *kraftbergen.no/kraft-press*
Kunstskolen i Bergen *kib.no*
Kurt Johannessen *zeth.no*
Fredrik Rysjedal *fredrikrysjedal.no*
Northing *northing.no*
TEXST / Vibrational Semantics *texst.xyz*
BOK-BOK *@boooooooook_bok*
Mandarin Forlag *@mandarin_forlag*
Quick Fox & Lazy Dog *quickfox-lazydog.dk*
Trippelpunkt *trippelpunkt.no*
Mori Press *moripress.se*
Beast Studio *beaststudio.se*
Risoo Print *risooprint.se*
Peow *peowstudio.com*
Fantasy Printhouse *fantasyprint.house*
Highly Intellectual Press *@highly.intellectual.press*
Art Lab Gnesta *artlabgnesta.se/risograph*
If By Magic *ifbymagic.space*
Mondo Books *mondobooks.no*

Bookshops & Places

Bergen: Tekstallmenningen, Bergen Kunsthall, Hordaland Kunstsenter, Boksalongen, Elephanten
Oslo: Prismatic Pages, Torpedo, Tronsmo, Gullberg & Bostadløkken
Copenhagen: SUPeR, Bladr, Vildnis

ANEMONE

ANEMONE is a collaboration and artist initiative by Amelia Greenhall and Adam Greenhall. We work on publishing, sewing pattern production, printmaking and risograph, research, consulting, software development, design, mapmaking, and other projects. *https://anemone.studio*

Studio process notes on publishing, sewing, risograph, design, maps, making Spectrolite, and other parts of creative projects. Plus links & recommendations: *www.newsletter.anemone.studio*

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Make your own version of this book! The print files are free to download and print. You can also copy the google document and edit it, to make your own version with notes from your own practice or print studio, or translate it into a new language. You can also use this material to teach workshops. CC-BY creative commons license. All the details at at *anemone.studio/simple-zinemaking*

Bergen Art Book Fair & Pamflett

BABF is the longest running art book fair in Scandinavia since 2013. The fair is organized by Pamflett - a publishing workshop, mediator of artists' books and publisher since 2011.

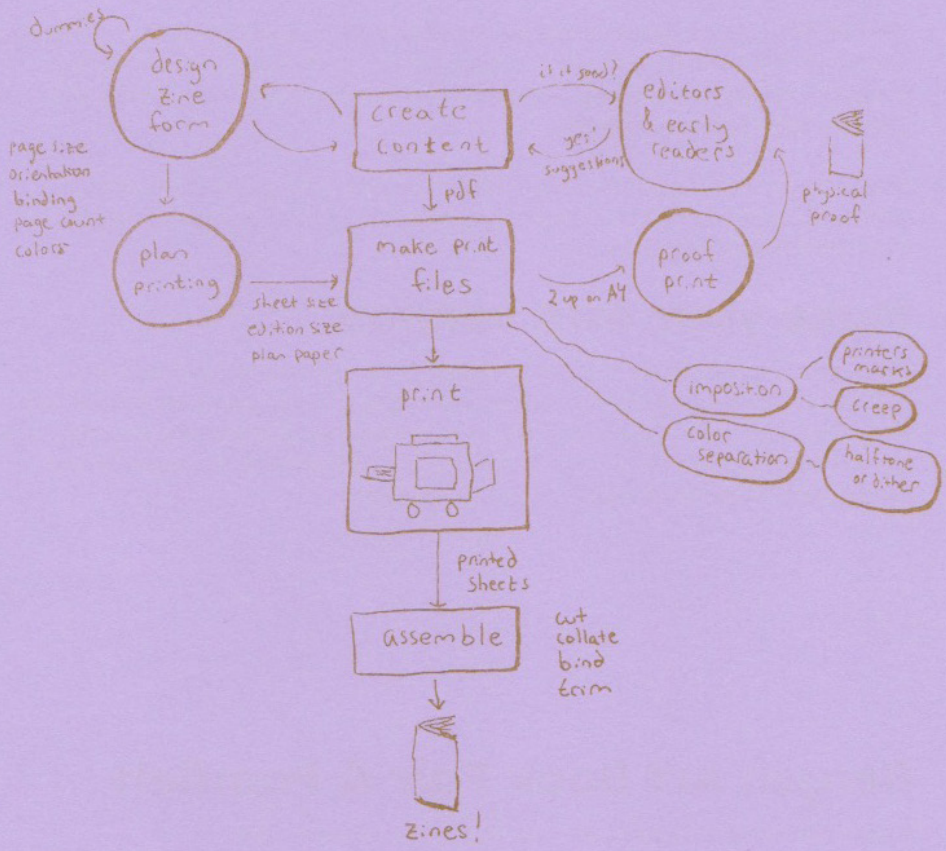
BERGEN ART BOOK FAIR

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The 2025 edition of BABF is kindly supported by Arts and Culture Norway, The Royal Norwegian Embassy of New York and Tokyo, Bergesenstiftelsen, Vestland fylkeskommune and Bergen kommune.

This printing of 250 copies was made at Pamflett on the occasion of the *Making A Zine with Google Docs and Spectrolite* workshop by ANEMONE, presented at **Bergen Art Book Fair 2025**.

babf.no
pamflett.no



Making a zine and riso printing it with Spectrolite and Google Docs
Making a zine doesn't have to be complicated! This guide will help you learn to make your own small books front start to finish, using tools that are free. You'll learn about writing and designing in Google Docs, laying out for printing in Spectrolite, printing on a home/office printer, how to do color separation and file prep for risograph printing, and lots of tips and ideas along the way.