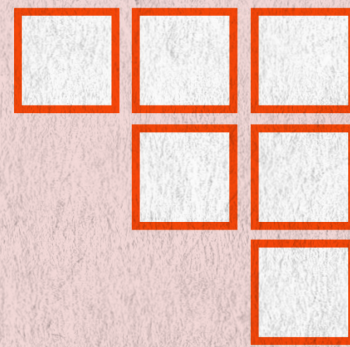


About RISO!



The RISO is a digital duplicator created by Noboru Hayama and manufactured by the Japanese Riso Kagaku Corporation - "RISO" meaning ideal, & "Kagaku" meaning science! The first risograph stencil machine was released to the public in 1980.

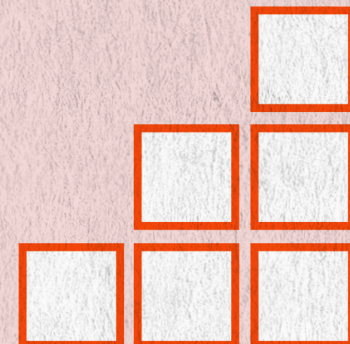
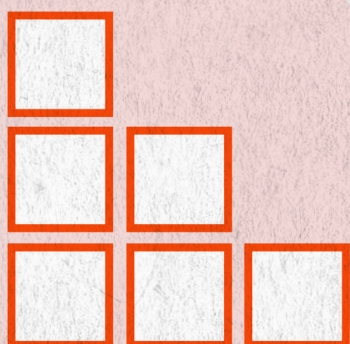
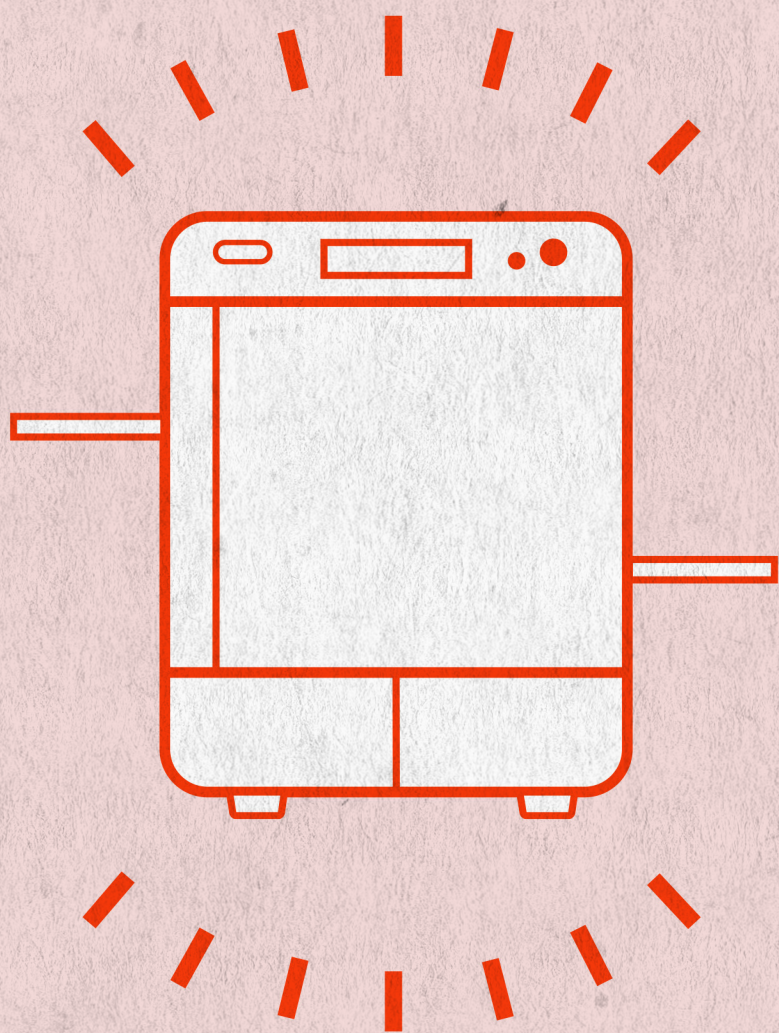
Let's learn a little about the machine!

A digital duplicator is a type of printing technology designed for both high-volume and cost efficient print jobs. It works like a cross between inkjet and screen printing!

The riso scans your b&w originals, then burns them into a master template. The master is wrapped around a cylinder, which rotates across paper. Ink is then drawn through perforations in the master, creating the print.

It can only print one ink color at a time (the ink is housed in large drums which are switched out to change the print color of each layer)!

The machine reads contrast, not color. The saturation of black in an original corresponds with the color saturation in your resulting print.



WHY RISO?

RISO printing can be confusing but we are here to help!

RISO PRINTING VS. TRADITIONAL PRINTING

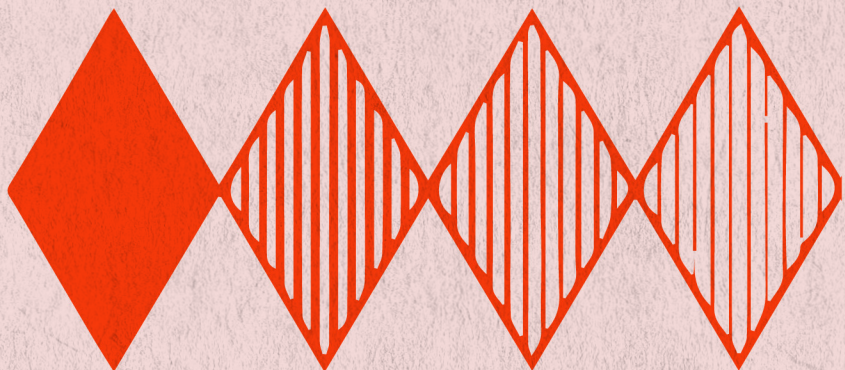
- RISO printing requires multiple passes through the printer, one color at a time so you gotta be patient
- Separate process to prepare for printing that includes master making (more on that later)
- Ink is available in florescent shades, unique layering of ink
- High volume, high-speed, and low cost :)

PROS:

Has vibrant colors that cannot be achieved with traditional printing, unique overlapping and offsets. Soy-based inks make the RISO more sustainable than traditional printing. Meant for creating multiples, cost-effective when printing large quantities. Unique printed texture.

CONS:

Paper constraints, not friendly for larger than 11 x 17. Limited color selection available, varies at different print shops. Unique inconsistencies may not be desired. Dry time between color layers ranges from 15 minutes to 2 hours (less dry time risks colors bleeding). Ink never fully dries and can lead to finger smudges (tip: to avoid this, spray with hairspray to seal)



How to make a master:

You can create a master digitally using practically any drawing/design software! (Illustrator and Photoshop are recommended for the purpose of this workshop, but other programs such as Procreate, Fresco, Sketchbook, etc. can be used, as long as you're able to create multiple layers.)

1. Create your design, making sure to separate each color into its own layer
2. When you're ready, export layers individually as black & white/grayscale PDFs at the size you intend to print

or

collage, cut paper, or use analog drawing tools to create a master by hand!

Colors available:

Studio Two Three:

RZ390 -

Black, Teal, Cornflower, Sunflower, Fluor Pink, Fluor Orange, Light Lime

EZ220/1 -

Red, Flat Gold, Light Grey, Aqua, Blue

GOlab:

Blue, Black, Bright Red, Hunter Green, Fluor Orange, Fluor Pink, Yellow, Purple, Green, Flat Gold, Brown

Remember:

Each layer will only be ONE color when printed

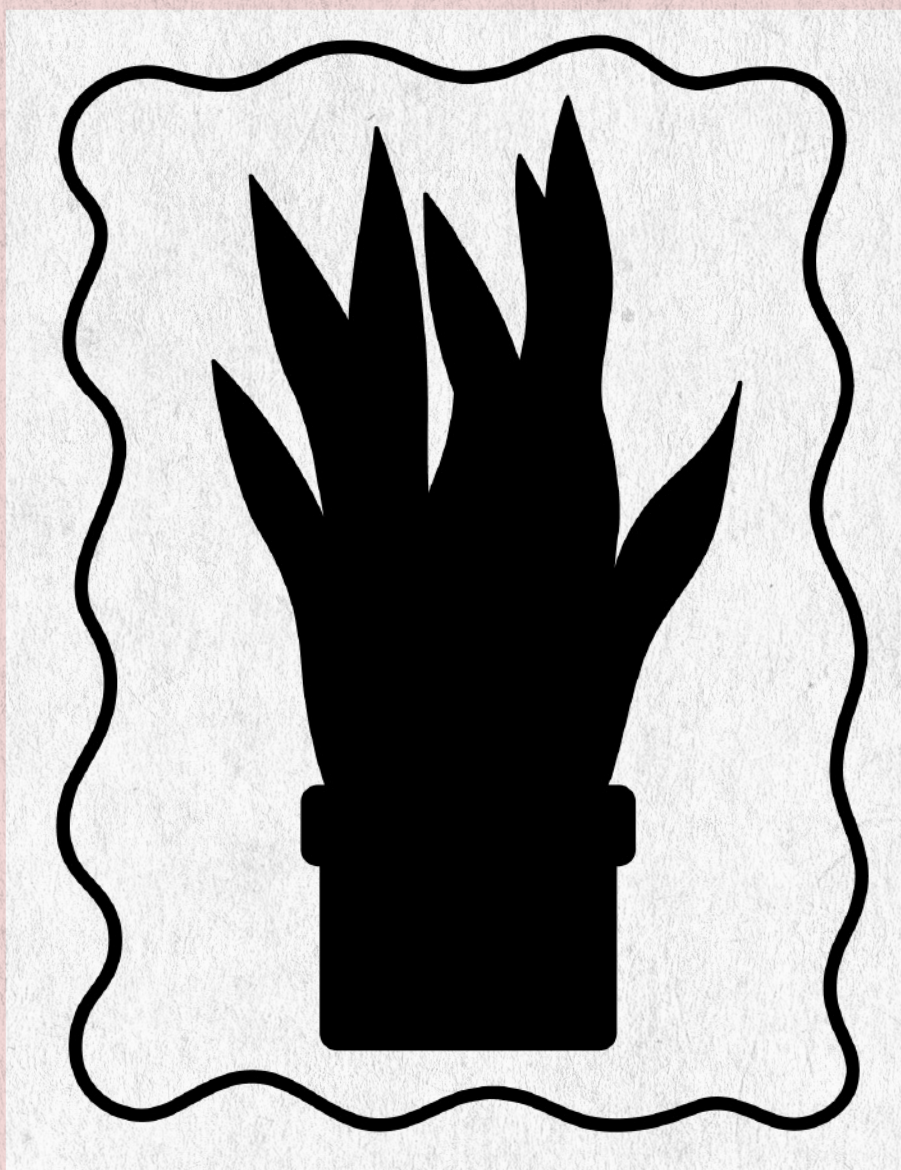
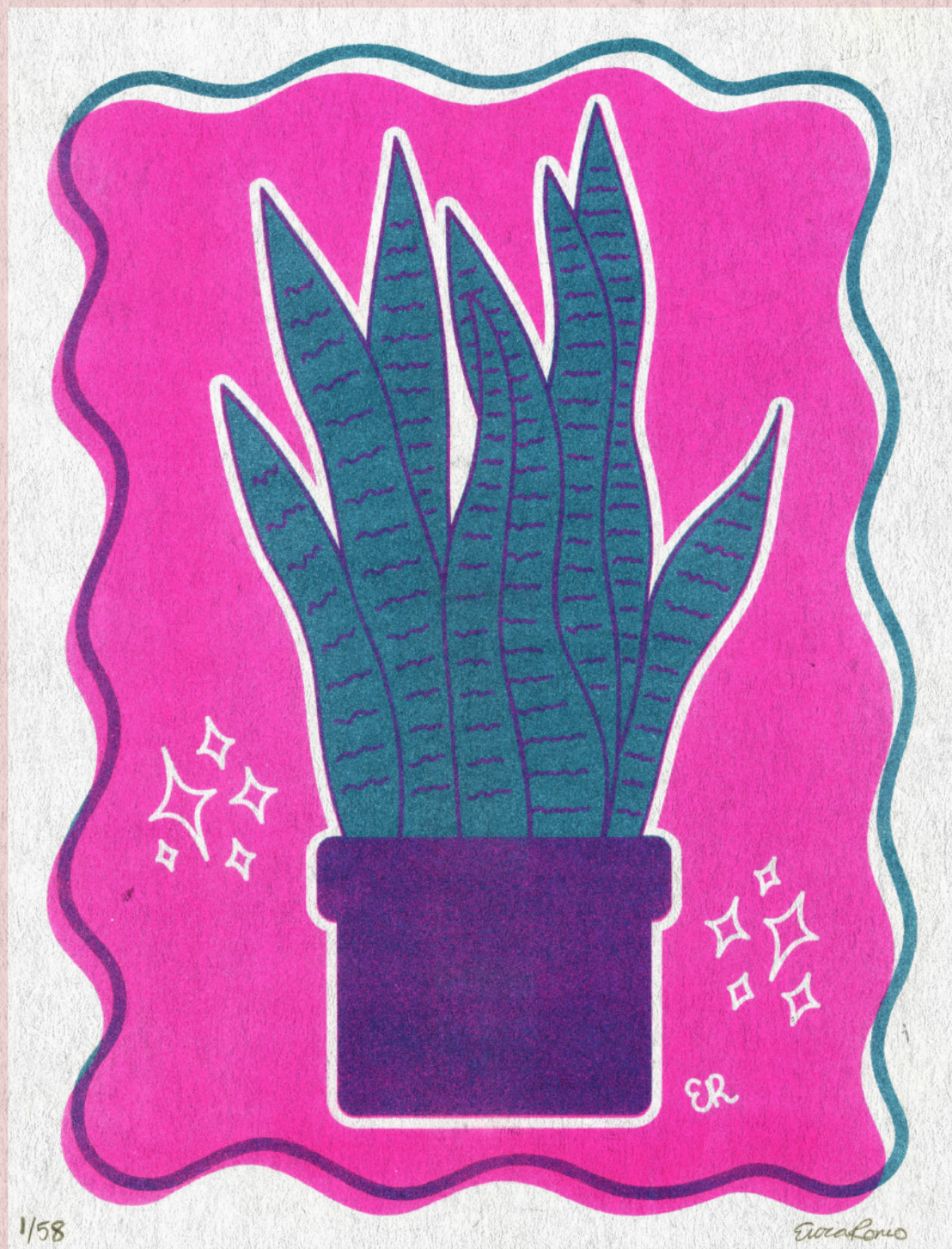
Where colors overlap, new colors will be made (ex: pink and blue overlapping will create purple)

To Print:

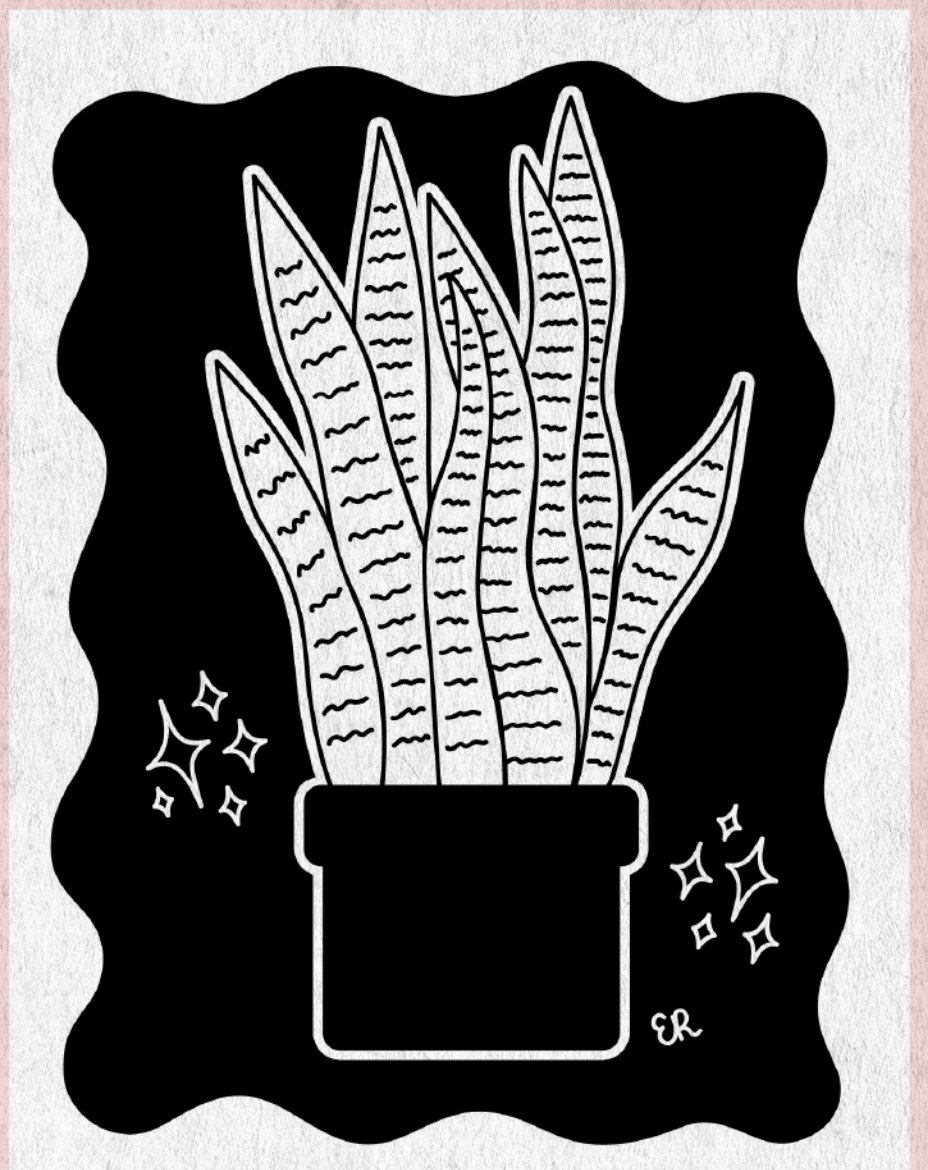
See our Resources page for an instructional video from the GOlab!



Master Examples:



teal

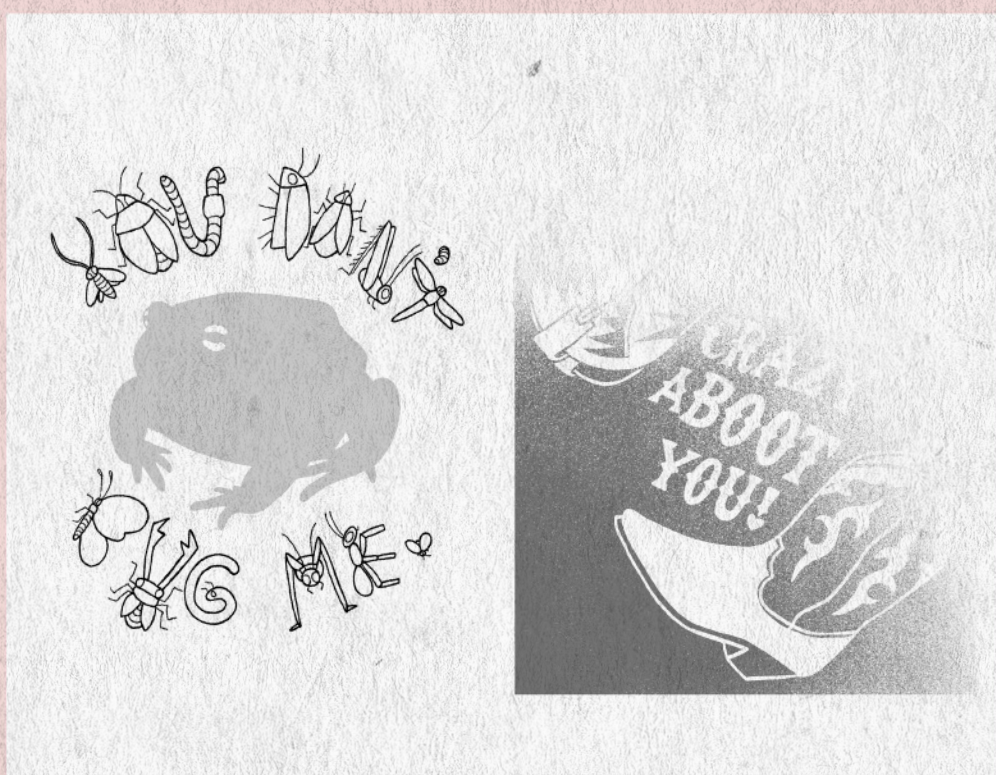
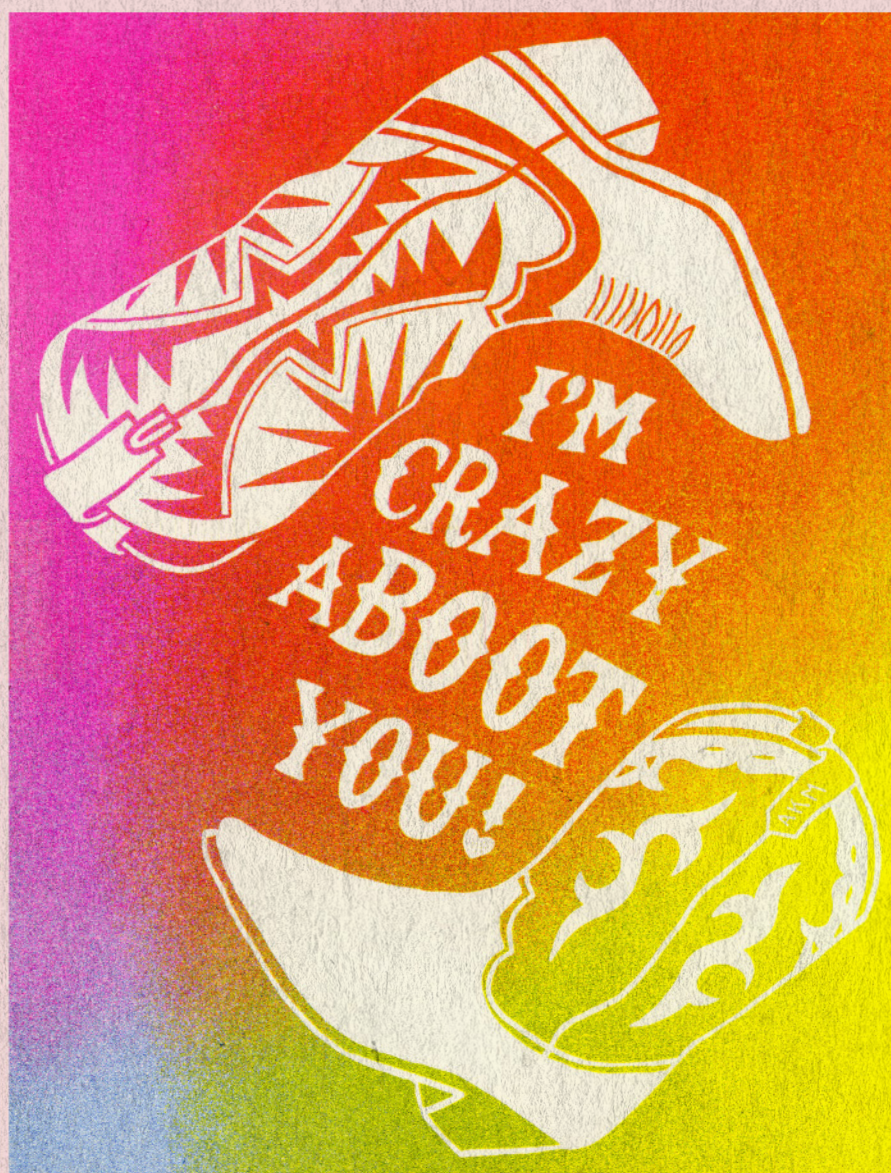


fluo pink

Master Examples:



yellow



blue



fluo pink

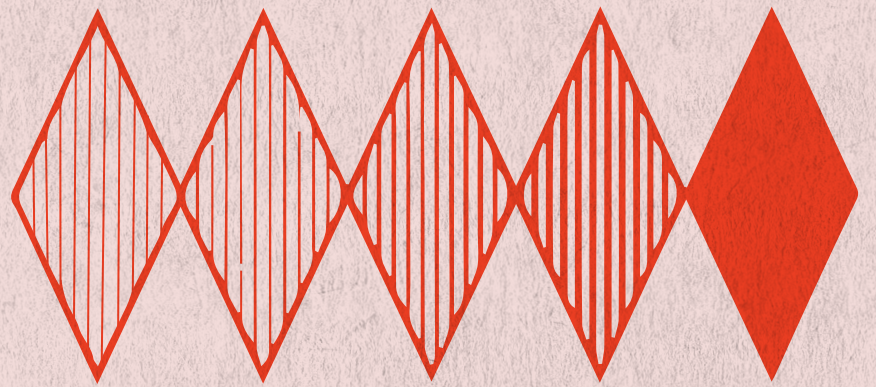


Color Chart:



created by Peacock Visual Arts

MOCKUP MAKING!



Preview your layers before printing, or create a digital faux RISO print!

FOR ILLUSTRATOR:

(Works for vector designs only-- if using any raster imagery, export master layers as .jpg files and open in Photoshop.)

1. Merge all objects on each layer using pathfinder, and change color to your desired RISO ink color (see "Resources" page for a link to RISO color hex codes).

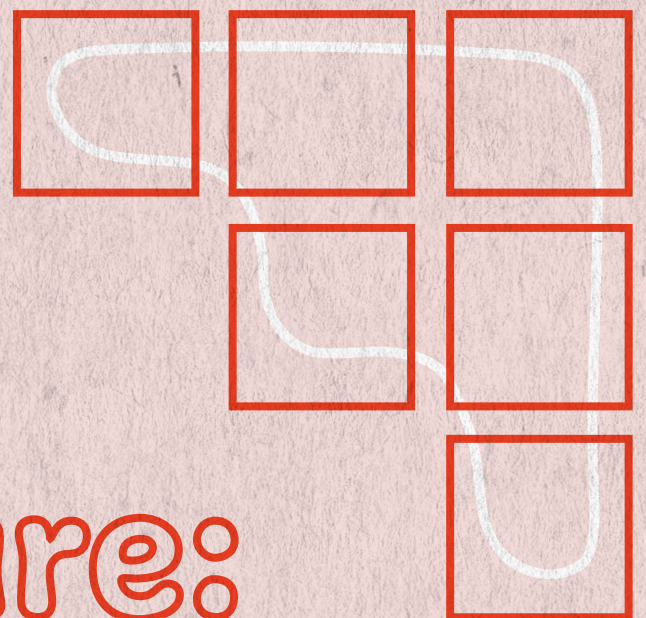
2. Change layer transparencies to "Multiply" to simulate overprinting (in the dropdown menu next to "Opacity" in the "Layers" tab).

FOR PHOTOSHOP:

1. Apply gradient map (with desired hex code for color on one end and white on the other) to black & white layers to simulate color: "Image" > "Adjustments" > "Gradient Map."

2. An alternative way to change colors: preserve opacity > paint bucket

3. Change layer transparencies to "Multiply" to simulate overprinting (in the dropdown menu next to "Opacity" in the "Layers" tab).



Tips for Texture:

To add texture and irregularities to your objects (give them a hand drawn feel): in Photoshop, select layer with desired shape, "Filter" > "Distort" > "Ripple," adjust preview menu until you have the desired texture.

To add noise to the edges of an object: in Photoshop, select object layer, "Filter" > "Stylize" > "Diffuse," play around with modes in preview menu.

To add noise/grain: in Photoshop, select "Filter" > "Noise" > add noise and adjust to your liking.

To add print texture/noise: find a high resolution image of the noise or texture you want to apply, put it on a layer above your shape and adjust contrast and coloring as needed, create a clipping mask, and play around with layer modes ("Dissolve," "Multiply," "Lighten," etc.)

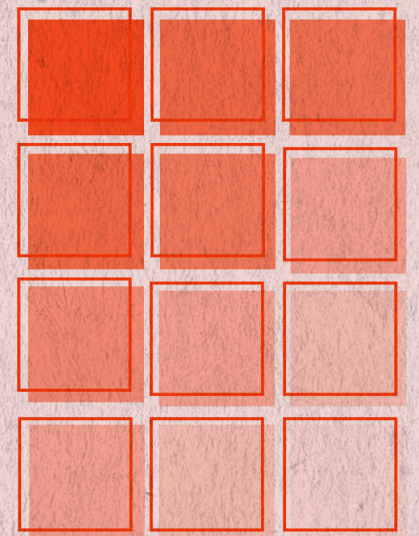
RISO RESOURCES

- [Are.na](#) for inspiration
- [Riso Ink Colors](#) (for hex code colors)
- [CMYK separation tutorial](#) (by Brooke Inman)
- [Texture Fabrik](#) (for paper textures)
- [Print Simulator - Ink Shift – RISOTTO](#) (RISO simulator)
- [Go Lab RISO Tutorial](#)
- [Go Lab RISO Prices](#)

Assignment! Assignment! Assignment! Assignment! Assignment!

Our RISO assignment for the class (should you like to participate) is to collaborate on a multi-studio class picture day poster!

Your homework is to create a self-portrait using what we've learned in this workshop to be combined into a foldable poster of all your classmates' work! The assignment of a self-portrait is open to interpretation, you can do anything from a selfie to drawings of your pets or anything you feel represents you.



- The colors chosen for you to work within are Fluorescent Pink, Sunflower Yellow & Cornflower Blue.
- You must use all 3 colors, & be sure to work in separate color layers!
- The dimensions of your artwork should be 2 x 2 inches, 300 dpi
- Export both the three separate grayscale files of each color layer, along with the original color version of your artwork (all as JPEGs)
- Title your work as the following: `LASTNAME_RISO_B/W(1-3)` and `LAST NAME_RISO_COLOR`
- Should you participate in our class picture day, have all 4 files uploaded to our google forms questionnaire by midnight of April 5th!

Then, the posters with everyone's work will be risograph printed at Studio Two Three, and mailed to all of you. Contact us if you have any questions in the design process.

Blue: 62A8E5

Yellow: FF8511

Pink: FF48B0



Happy risographing!