

Polyester Plate Lithography / Pronto Plates

CREATING YOUR IMAGE

DRAWING MATERIALS

Ball Point Pen, Sharpie or Permanent Marker, China Marker/ Litho Crayons, Photocopier Toner (Must be heat-set in an oven or on a hot plate at 225° - 250° for 10 minutes.)

PHOTOCOPIED AND DIGITAL IMAGES

Using Adobe Photoshop and a laser printer you can easily scan and print images onto polyester plates. A 1200dpi laser printer such as an HP 5000, a GCC Elite XL or a Xante printer will work best. However, it is best to make a few adjustments to your print settings to make polyester plates print easily and accurately at the press.

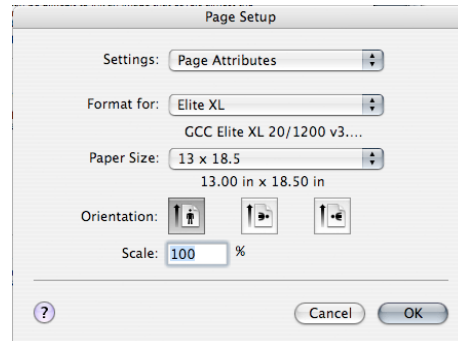
By default most laser printers will print images over 133 lines per inch. Lines per inch (lpi) is a measurement of how many lines of small varying sized halftone dots are used to create the illusion of a continuous tone image. Since printing these plates by hand requires more ink and pressure than offset printing, which is what these plates were intended for, we need to decrease the lpi to 75. If you did not do this, the ink sitting on top of all the very tiny halftone dots would likely run together, or 'bridge'. To prevent this from happening, lower the lpi to maintain a balance between the amount of ink that is needed to print and the space around the dots to hold water that repels the ink. As you gain more control over your printing the easier it will be for you to print higher lpi images. 95lpi is fine for hand printing, but can still be manageable.

Another good thing to keep in mind is the size of your image. Although the plate size may be 11x17" or 13x19", it can be difficult to ink an image that covers almost the entire plate. I would recommend at least 1" margins on each side and printing no larger than an 9x15 image on an 11x17" plate, and a 11x17" image on a 13x19" plate.

These are the steps you should follow to properly image your polyester plates:

1. Check your Page Setup.

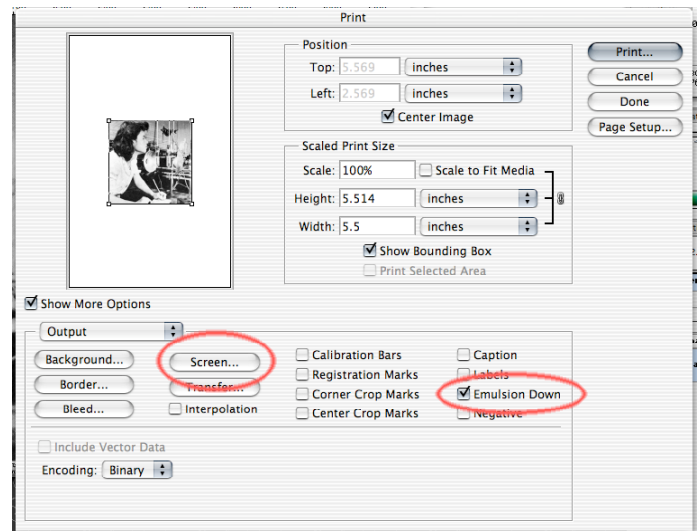
MB > File > Page Setup...



Set the Format to the printer you are using and the Page Size to match the size of the polyester plates. Orientation (portrait or landscape) should also be set at this time.

2. Set your Printing Options

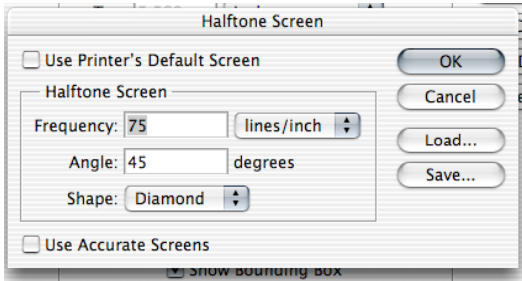
MB > File > Print with Preview...



Use this dialogue box to flip the image so it will be backwards on the plate by checking the 'Emulsion Down' box. This is also where you will access the Screen settings to change the lpi of the printed image.

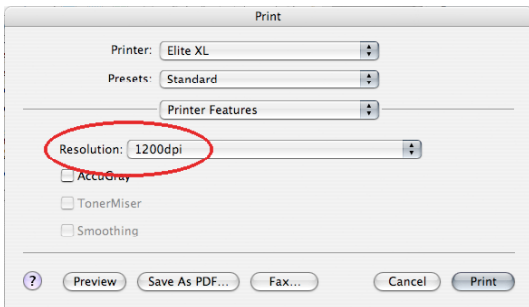
Set your Halftone Screen's Lines Per Inch to 75.

Angles for 4 Color images: Black/Darkest Color: 45°, Cyan/Next Lighter: 15°, Magenta/Next Lighter: 75°, Yellow/Lightest: 90°.



3. Set the image Quality Settings

MB > File > Print



4. Load your polyester plate into the manual feed tray on the printer and click Print.

Viola!

PRINTING YOUR PLATES

MATERIALS

- Printing Paper, Newsprint
- Two Bowls one filled with 1 L water and 30ml Gum Arabic
- One large sponge cut in half
- Felt & Toothpaste
- Inking Brayers
- Lithography Inks: Black(Graphic #1796), Handschy Yellow, Magenta, Cyan, White, Tint Base/Transparent Base
- Magnesium Carbonate or #8 Varnish.

GENERAL SETUP

Prepare newsprint, and printing paper, making sure to add the 'T' and Bar registration marks on the back of the paper. Mix and modify your inks as needed and roll out your slab of ink with the brayer. Fill one bowl with about 1L water and 15ml of Gum Arabic. This will help reduce the Ph of the water. Ideally, polyester plates work best with a dampening solution between 5.5 and 4.5 Ph, but I find that the small amount of Gum Arabic in the water is adequate. Rinse your sponges. Setup the press, checking pressure, and registration on your plates.

MIXING AND MODIFYING INKS

Polyester plates print best with inks that are moderately stiff with a fair bit of length. True lithographic inks for hand printing are very stiff and moderately short. An ink such as Daniel Smith's Crayon Black is too stiff for polyester plates and should be modified by adding a lighter varnish, such as #3, or by adding Handschy CS800 transparent base to make it more pliable for printing these plates. The Graphic Chemical Litho Black #1796 works well, but may need a small amount of mag or #8 varnish. Color Litho inks, such as the Handschy line of inks, may work well out of the can but will often need to be modified with Magnesium Carbonate. Slowly fold it into your ink until it is mixed in well and then check the consistency to determine if it is correct. It should hold its shape as it sits on the slab rather than immediately relaxing into a blob. If the pigment 'bleeds' from your ink while printing, such as it will do with magenta and cyan, adding #8 varnish or body gum to the ink will help greatly. Color mixtures using mostly Handschy Tint Base will require more mag.

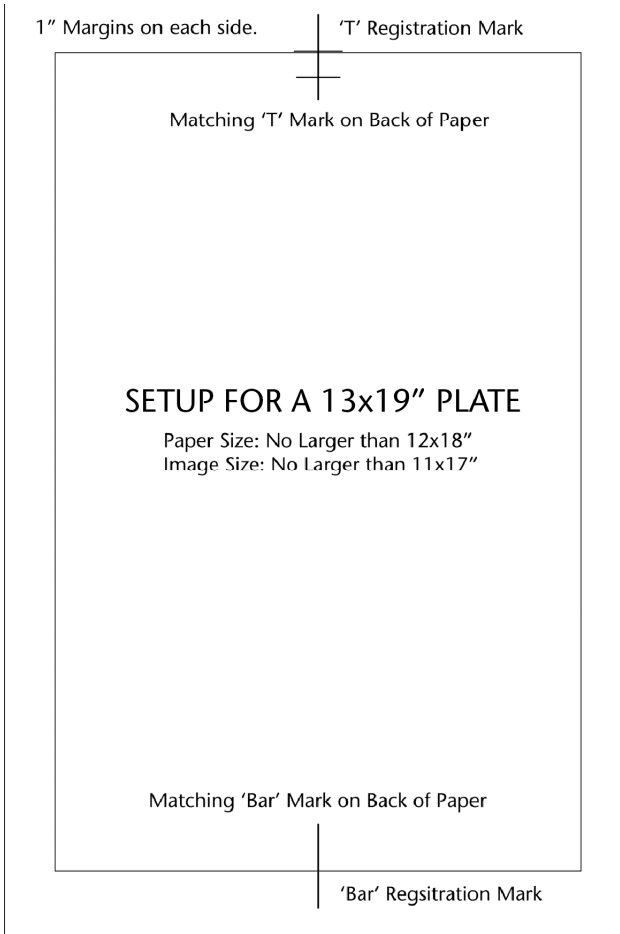
PRESS SETUP

Printing using an etching press

To print on the Brand etching press, set the pressure to -1|0, so the roller is just in contact with the press bed. It is easiest to ink your plate on a separate glass slab before printing. Once it is inked, place the dried plate face up on the center of the bed and your paper face down on the plate. Cover the plate and paper with 2 sheets of newsprint. Place a tympan on top and run them through the press. Felts are not needed.

Printing using a litho press

To print on a litho press, lay your plate centered and face up on the press. Place your paper on the plate according to your registration marks, and cover with two sheets of newsprint. Cover with a greased tympan and print. You should only use as much pressure as needed to pull a good impression. The plate will break down quicker if excessive pressure is used. Before you print, set up the litho press by centering your plate, setting the pressure, and marking your start and stop points (traverse marks).



This can be done by running your paper back and forth through the litho press 2 times between newsprint. Once this is done, draw your corresponding registration marks on the back of your paper. Tear down 1 sheet of newsprint for every sheet of paper you will print, plus 4 extra sheets, all at least 1" larger than your paper.

Using an additional litho plate and pin registration

Printing your pronto plates when they are laying on top of an old litho or photo-litho plate, will help the pronto plate stay stuck down, as well as keeping the area around the plate damp and ink free. The litho plate, the pronto plates, and your paper can all be punched to use pin registration. Be sure to punch your plates face-up and the paper face down. For tight registration, pre-stretch your paper and then punch it.

INKING AND PRINTING

Roll out your ink with a brayer so you have a satiny ink surface with a slight sizzle sound as you roll the ink. If you have too much ink the surface of the ink will look velvety and make a loud sizzling sound. 8x2.5" or 10x2.5" Brayers work well for inking polyester plates.

Lightly dampen either a glass slab or the press bed with the water and gum mixture and place your plate on the wet surface. Dampen the plate with even horizontal and vertical strokes leaving a thin film of water on the plate with no water streaks. Using a 'wet' sponge to dampen the plate and a 'dry' sponge to thin the film of water works well.

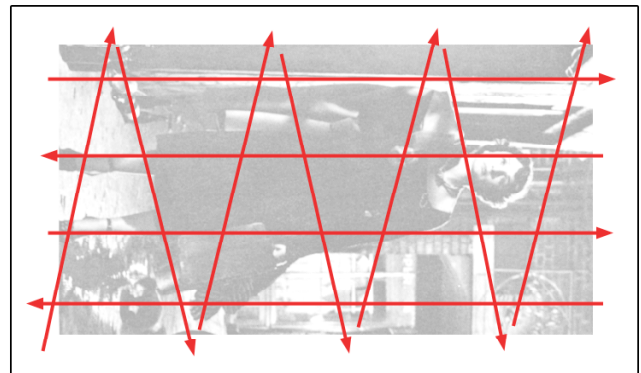
PRINTING METHODS

Collage or Freeform Printing

You can print polyester plates using a 'free-form' collage approach, without worrying about correct registration or paper stretch. When working this way, you may find it best to print with the paper face-up and position your plate face down onto the paper. This will allow you to see where you are placing the image, and minimize the embossment from the edges of the plates. You will most likely want to wipe the edges of the plate down with a felt and toothpaste to prevent the ink that has collected there from transferring to your print. I find this method works well for plates that I have cut into shapes or for a more free form approach to layering images. This method works well when using an etching press.

Registration Setup / 'T' & Bar Marks

You can put T & Bar registration marks on the back of your plates with a ballpoint pen; the marks will be visible from the printing side. You can register multiple plates easily on a light table. If printing multiples colors where correct registration is important, you will need to pre-stretch or 'calendar' your paper.



Begin inking your plate using moderate pressure on the brayer while alternating your rolling pattern. Once you have rolled ink across the entire plate and back again, charge your brayer with more ink, dampen the plate again and complete another pass of ink from a different direction. After doing this about 4-6 times you can print a proof of your inked image on newsprint. You may find that you will need to alter your rolling pattern quite a lot and complete quite a few passes to have a fully and evenly inked image, especially if it is a dark or large image. Scumming

areas and edges of the plate that have collected ink can be cleaned with a small piece of felt, toothpaste and water.

Based on the appearance of the newsprint proof you may want to add pressure, add ink, vary your inking pattern more or continue as before printing on good paper.

Continue inking and dampening 4–6 times for each print. If your image is still light you most likely need to add ink to your slab. If it is too dark scrape ink from your slab to reduce the amount of ink you are placing on the image.

CLEAN UP

To save a polyester plate, print it several times without inking it to remove the excess ink. Rinse the plate with water and store between newsprint. If needed you can clean it further with water and toothpaste before rinsing. The next time you want to print it, use it as you would any other polyester plate. To clean up your ink and brayers, etc:

Put on you Gloves.

Scrape the excess ink off the slab with a razor scraper and wipe it onto phone-book pages.

Pour a small amount of vegetable oil onto the slab. Roll the brayers in the oil until the ink begins to dissolve.

With a dirty rag, wipe up the oil and ink on the slab and then use the same rag to wipe down the brayers and ink knives.

Pour a small amount of solvent onto a fresh rag and thoroughly clean your brayers until they are spotless. Put this rag in 'Rag Hell'.

Use simple green and a fresh rag to clean up the oil and ink residue on the ink knives and glass slab. Also clean down the press bed and tympan with simple green.

Rinse out your sponges with water and clean out the bowls with a powdered cleanser if needed. Rinse out your felts too.

THANK YOU for leaving the studio clean and tidy for the next person!

SIGNING THE EDITION

An edition of prints is usually an image that has been consistently printed on the same type of paper. Prints are always signed in pencil starting with the edition # in the lower left, the title in the center, and initials/signature and sometimes date in the lower right. If you do not want all of the distracting information on the front, just put it on the back.

Other numbering you may see on a print are as follows:

AP x/x: Artist's Proof

PP x/x: Printer's Proof

x/x EV: Edition Variable

RTP: Right to Print

BAT: Bon a Tirer

If your image is unique or there is only one of them, don't bother marking an edition of 1/1.