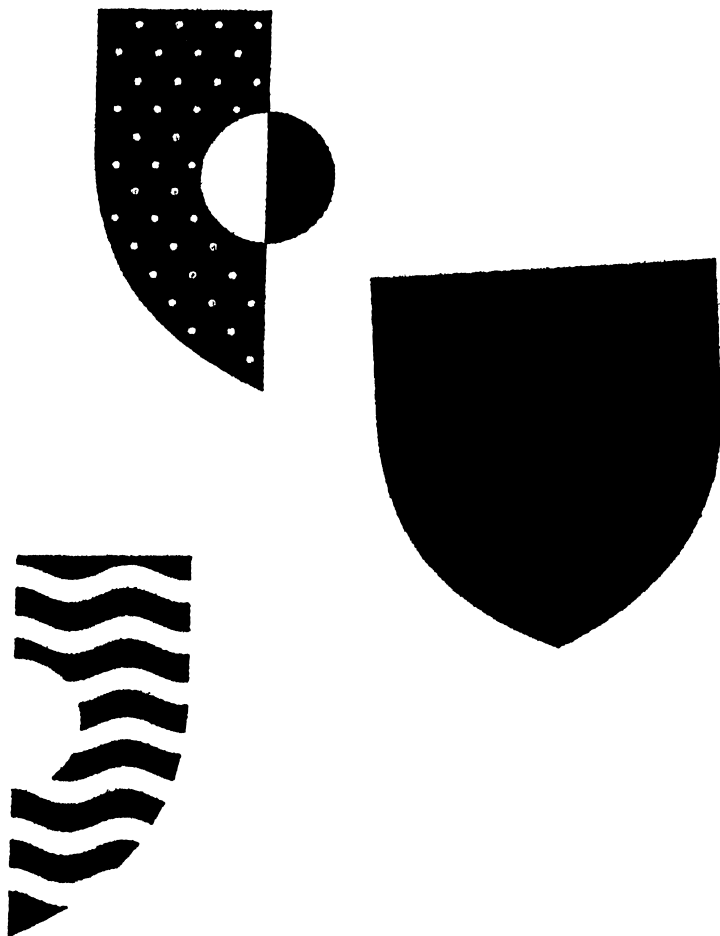


“HOW TO DO IT”



SCREENPRINTING

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WHAT IS SUPPLIED?

EMULSION Emulsion is a light sensitive liquid (usually purple or green) that gets spread onto the mesh of a screen with a scoop coater. Once dry, light is used to harden the emulsion. Water is used to wash away what doesn't get exposed to light, resulting in an area on a screen that allows for ink to travel through. The emulsion we use needs to be stirred before each use. There should never be any light around when a container is open.

SCOOP COATER The scoop coater is a metal trough that is used to spread emulsion onto the mesh. It has a basin that gets filled with emulsion and is pushed against a screen and 'scooped' upwards to lay a very thin, even amount of liquid. This is done on both sides of a screen, and it is necessary that the coater only touches mesh (not any part of the frame or tape that connects the mesh to frame)

EXPOSURE UNIT This is the big machine in the darkroom that I used to transfer the image you want to print onto the screen you will use to print. It works by utilizing a vacuum, sandwiching the transparency in between the mesh of the light-sensitive emulsion-coated screen and a sheet of glass. The light floods around the image on the transparency hardening the areas you will not print, boom, you shot a screen.

TRANSPARENCIES This is an invisible paper! Your image will probably go on these invisible papers. There is a pretty large scale printer you can use, but computers are for cheaters.

RECLAIMER After the emulsion has hardened into your mesh, it becomes difficult to remove with water. Reclaimer is the chemical that counteracts with the emulsion to 'reclaim' it to it's liquid form. It gets put onto a screen when you want to have your screen be used anew; after you've finished printing an image and are ready to get started on a new one. Remember, after you reclaim your screen, you should immediately use degreaser.

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DEGREASER Basically: soap. Makes a clean mesh suitable to be coated with emulsion.

WASHOUT SINK The big sink in the room adjacent to the darkroom is used to wash emulsion from your screen after shooting an image, reclaim a screen after you've printed, remove ink from your screen, squeegee, spoons, an everything. It gets messy in there, so it should be watered down after each use to prevent all of these things getting washed away from backsplashing onto the next persons shit.

HIGH-PRESSURE WATER NOZZLE High pressure water is used only to reclaim a screen. Regular water pressure is used for everything else.

SQUEEGEE This is the wooden-handled piece of plastic that distributes an even amount of ink through open mesh. Ink is placed on a screen and will not pass through hardened emulsion. A squeegee pulls the ink over the surface of the mesh and forces it through the open area, leaving a small layer of ink on the surface below (hopefully your paper). Wash these thoroughly after using them! Treat them like your own because they won't be replaced.

CLAMPS These hold your frame to the table, allowing it to move up and down to replace the paper that you are printing on. It also ensures that your screen will stay in the exact same spot each time you need to do this.

DRYING RACKS The metal-wired drying racks are the place to store your just printed paper.

TABLES These are tables.

NEWSPRINT Use this to do test prints and save your money on fucking up expensive paper.

4. WHAT DO I SUPPLY?

FRAME & MESH The frame is the heavy part of a screen. Actually, the screen is probably just the mesh, so this is the thing that just holds that fabric. Mesh is the fabric. It used to be silk—hence: silkscreening. But now it is all synthetic fibers and works better and lasts longer. The mesh has trillions of tiny little holes that allow for liquid (such as ink) to pass through. Different mesh sizes (called mesh count) determine how large or small the tiny holes are. The smaller the number, the bigger the hole. So if you were to print on a tshirt, you would print with more ink since the tshirt material would more easily soak up the ink than a less porous surface. For a smooth paper, you can print with a higher mesh count. This maybe starts to get a little tricky, because even if you're printing on paper, depending on the type of image you have, you may want a looser mesh - such as if you are printing large flat shapes. Higher mesh counts allow for better detail of an image, but are more difficult to control because ink will more quickly dry in the screen. Oh, you need to remember to tape your screen. There's white tape around. It's waterproof and prevents the wood of your frame from getting warped.

INK You need your own ink. We don't use oil based inks here, so keep it to the ink that have a water base.

MASKING TAPE You will need this.

TRANSPARENT TAPE This too.

SRT TAPE You must waterproof your frames.

SPOONS Spoons are great, you can use these to mix ink and scoop ink out of things to place on your screen and move around.

PAPER TOWELS Don't make a mess, but you will, so clean up after yourself.

PAPER You know.

5. WHERE CAN I GET THAT?

Frames (pre-stretched or the pieces if you get weird), ink, tape, basically any supply you could need can be purchased from Standard in New York. They are:

Standard Screen Supply Corp.

121 Varick Street

New York, NY 10013

Email: info@StandardScreen.com

<http://www.standardscreen.com/>

INTERESTING THINGS

FIRST AID You won't need it.

LOCKERS You don't get them.

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DO IT

PREPPING YOUR WORK

The majority of your time will probably be spent on your design (or art). It's important to know how to make your work ready to be transferred to a screen, and certainly the best way is by printing from a computer directly on to transparent film. There are other ways—drawing on clear acetate with ink or a China Marker, photocopying drawings onto clear sheets on transparency paper, cutting out shapes from construction paper—but the only thing you need to know is that whatever process you decide to go for in making a positive piece of film is that only the things that don't allow light to pass through will get printed onto paper in the end. If something on your film looks grey, not black, it's possible that it won't work (although, tweaking the exposure time is a way to get around imperfect films. Also, black is just used for the film. Once the image is on the screen, any color can be printed). The artwork on your film should also be smaller than the frame you are using—preferably with a comfortable two inches from edge of artwork to beginning of frame edge on the inside of a screen, with a little extra at the top and bottom.

PREPPING THE SCREEN

You should have a waterproofed frame now. The white tape should be all over the frame and at least one-half inch onto the mesh on all 8 sides (four on top, four on bottom). If your frame, which is probably made of wood, gets any water into it, the whole thing will quickly warp. Once the frame warps, it doesn't unwarped. When you try to print from a warped screen, one (or two) side(s) of the image will be further away from the paper you are printing on, and will result in an uneven layer of ink and look horrible.

Go into the darkroom and close the door behind you. Find a scoop coater that fits your frame. The metal of the scoop coater should not touch the frame or your tape—it should rest comfortably one inch inside the mesh. Grab

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the emulsion from the refrigerator. Grab a mixing stick and thoroughly mix the emulsion. Clean your mixing stick off to waste as little emulsion as possible. Fill your scoop coater with an appropriate amount of emulsion, moving the bucket back and forth to create an even dispersion. Place your screen (which should have been degreased and dried by now, but we'll get to that later) into the jig, securing it so that it doesn't move while you coat it. Hold your coater at a 45 degree angle resting against the mesh on the bottom of your screen. Watch as the emulsion begins to pour onto the mesh. Keeping the coater at that exact angle, bring it to the top without lifting away from the screen. You should apply an even amount of pressure as you do this. If you hold the screen up to the light and notice that it looks thicker in one part of the screen, you fucked up. If you notice a drip on the screen, you fucked up. It has to be a perfectly flat, even amount of emulsion. This has to be done on both sides of the screen. Don't fuck up.

Put the excess emulsion back into the bucket. Use a piece of cardboard to get it all out. Seal the bucket and place it back into the fridge. Don't leave drops of emulsion places. Emulsion stains nasty.

Place your freshly coated screen into the box in the darkroom to prevent light from getting in. Take your scoop coater and hands to the sink and wash them, thoroughly. If any emulsion is left on the scoop coaters, it will ruin it! And they will NOT be replaced. Dry them and put them back to their place. Please respect the print shop!

Drying time for a coated screen is about 2 hours. If you need it quicker, attack it with a fan. Otherwise, a safe bet is 3 hours. Don't leave for more than a couple of nights, because the emulsion will harden and get exposed to minimal light that will effect exposure times and be difficult to control.

SHOOTING THE SCREEN

Once you are ready to shoot your screen you will need to have your transparency / film in perfect condition and brought into the darkroom. Open up the exposure unit. Take a look at the glass before putting your transparency down. If you notice any marks, from ink to dried emulsion or other random bits, make sure you remove them. It's a good habit to thoroughly clean the glass before shooting each time. Grab some paper towels and Windex and get the surface free of shit. Lay your image down on the center of the glass so that it is legible from above (do not have the image appear upside-down). Take your screen from the hidden container and give it a quick feel to make sure it is dry. If it feels sticky anywhere or cold to the touch it is not dry yet, and you should give it another hour. If it feels so sticky that you see emulsion on your hand, you fucked up and need to wash out the screen, degrease it, let it dry, and start over.

But if it's good, lay your screen with the mesh down on top of the transparency. It isn't the most important to have the image centered on the mesh (in fact, sometimes when working with multiple colors, it may need to be on a specific end of a frame in order to allow for the image to reach a certain place on the paper when you print), but it is important to have a few inches around your image to where your emulsion ends. Close the lid push down to secure a proper air seal. Turn on the vacuum switch to suck the vinyl cover onto your mesh. This pushes the mesh against the glass, preventing any movement of your transparency and also creating contact so that no light can get between your image and mesh. Grab the stopwatch and get it ready to go. At the same time you start the stopwatch, start the light on the exposure unit. You will be able to see the light peaking out, so you'll know it's on. Shoot your image for roughly two minutes. This will vary depending on your image source. Printing from the ink jet in the studio works best at 2 minutes, but if it's a halftone image, you may want to go a little

shorter. Same with an image whose blacks aren't solid. If you have a super solid image, you can go for a little longer.

What is happening now is that the light is shining on the emulsion that has dried in your mesh. That light makes the emulsion solidify in all the little holes, and water and ink will not be able to get that out. However, the areas that the light is not hitting, that is the areas that are being covered up by the image on your transparency, are able to be washed away.

Once your time is up, turn off the light and the vacuum and the stopwatch. Lift the lid and remove your screen (not the transparency—although you may want to take it out of the darkroom and place it somewhere out of the way quickly). Bring your screen into the washout booth and set it onto the stands in the large sink. Make sure the water is turned on and begin washing your screen. Use the regular water pressure from the water gun (do not use the high pressure wand). Keep washing as you turn the screen over to get the back, and keep doing this. You should start to see the emulsion where your image is supposed to be begin to wash away fairly quickly. Keep washing over the entire screen as some of the surface emulsion that is not supposed to wash out may loosen up after the fact and creep into your image area, so make sure you cover the entire screen with a thorough washing. For areas that seem troublesome, you can move your spray closer to attempt to free it up, but that may not always work. If it doesn't, you'll have to wash your screen out, degrease it, dry it, and start over. But if it seems to have worked, verify you don't have any tiny spots of emulsion in your image area that shouldn't be there (again, you can try and get them out with pressure and time). If you're good, move your screen to the drying area and let it go for about an hour and a half. Use paper towels to dry the frame if you need it done quicker, but don't use them on the mesh.

PREPPING TO PRINT

Take your dry screen on over to the light table with bottom of frame facing up. You'll need to make sure that any areas you don't want to print through are covered up. Along the edges of the mesh where your emulsion did not reach, it's good to line that area with some masking tape (use tape on the bottom of the mesh, not on the mesh in the inner well of the frame). Have a close look at the mesh that is near your image area. If there are any small dots of light peaking through that shouldn't be there, you can use a screen filler to paint in those areas, or use a tape. The best tape to use near an image area is Scotch Transparency Tape because of how thin it is. The thickness of masking tape near an area you're going to print will leave a weird edge on your ink. If you have large areas without emulsion or image areas you won't want to print, you can use masking tape to fasten some wax paper over that to trap the ink.

PRINTING THE PRINT

This is the part that will always be different for everyone, but I'll try and give a few tips for things that may help, but mostly you just need to do it, a lot. Certainly, if you practice something it becomes easier. With silkscreening, there's such small things you need to experience to understand. I'll get on.

Take your taped screen over to a printing station. (Use one of the stations that have holes for the vacuum table if you're printing on a light material, like paper. The vacuum is meant to secure the paper on the table so as to prevent it from sticking to the screen's ink. Use one of the other stations for something heavier, like wood, cardboard, metal, plastic, fabric, and so on). Secure your frame into the clamps. On the two corners of the screen that are not in the clamps, but are near where you will be manually lifting and lowering the screen, you should tape some cardboard buffers. Usually about two pieces taped to the corner will

be good if printing on paper. These simply keep the mesh from resting on the paper before getting printed, so that it hovers just above and also snaps away from the paper after ink is pushed through.

Line up your paper underneath. Once you are sure you have it in the right place (there are many ways to do this, but not any easy way to explain, so I trust you'll be fine), you want to make an "L" wedge out of masking tape. This wedge will allow you to print on a piece of paper, remove it, and place a new piece of paper back into the exact same spot. To do this, have your paper in its correct placement and press down on the vacuum device with your foot to secure the paper. Take four pieces of tape and abut them to the paper on the table (don't tape onto the paper, just line it up to the edge of the paper). Place two pieces along the longer edge of the paper, and two along the shorter edge. Now, take 8 more pieces of tape and place two directly on top of each piece of four tape strips you have. This will make a wedge of four pieces of tape in an "L" shape that are the height of three pieces of tape. Make sure you have lined the tape on top of each other perfectly.

Now we are about ready to print. Have some newsprint next to your screen to lay your supplies onto. Have your tape handy, your ink (mixed to your specifications, with a spoon to help in pouring), a squeegee, some paper towels just in case, and something to place your squeegee on (I usually use another container of ink to prop it into the air as ink may drip off). Take your ink and put an appropriate amount on top of the mesh towards the top of the frame (not over your image area). Have your screen in the down position and make a test pull of ink on newsprint (this first print will always be very faint). Flood your screen by pushing all the ink back over the image area in an even manner with the squeegee. Make sure your screen is lifted off the table when you flood ink. Remove your newsprint and try

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one more time on newsprint, or until you start to get the image you want. You can use the drying rack to place your wet inked papers while your working, but remove them right after.

The best way to handle a squeegee is with both hands. Put a good amount (but not too much) pressure against the screen as you drag the ink in one quick, restless motion. Hold the squeegee at about a 75 degree angle, almost perpendicular to the frame. As you near the end of the frame closest to your body, slowly ease up pressure and lift away from the screen. Flood your ink. Place your squeegee down and lift your frame to remove your paper and replace it. Careful to not allow ink to overflow while it is in an upright position.

Keep at it. It takes awhile to get this right, but if you care, it will happen.

WASHING THE SCREEN

Once you are finished printing you will need to clean up right away. Make sure you wash the ink off of all the things you got them on such as squeegees, spoons, hands, etc. Dry those things and put them back into their place. Remove all the tape and cardboard from your screen and bring it to the sink. Use the regular washer to get all the ink out, front and back. Use your hands after a while to make sure you don't leave a ghost layer of ink on your mesh. If you are going to need to use this screen's image again, let it dry. If you want to wash the emulsion out, keep it in the sink and spray or scrub on some of the blue gel, which is the reclaimer. Thoroughly cover all the mesh on your frame, front and back, and let sit for a few minutes (but do not let dry). Take the high pressure washout nozzle, turn it on, and get to some loud spraying. This should very easily wash all the emulsion out of your mesh. If there is

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any leftover debris, carefully go back in and concentrate on those areas.

After you have that all taken care of, you need to degrease the screen. This is necessary before you go to coat your screen with emulsion next time. The hands you used to touch the screen, the ink, and everything have greases in them that stick to the mesh and prevent the emulsion from affixing properly. Grab the degreaser (which is basically soap) and use your hands to rub into the mesh, again, thoroughly. Wash this stuff out with the regular water nozzle pressure. Let dry, and we're back to zero.

BACK TO ZERO

Make sure you keep on top of your own shit. Don't leave your shit around. Clean up all the shit messes you make, and clean up ones that you don't make if they are going to interfere with your shit or if you are just nice and have the time. Put everything back in its place. Do not leave your drying work in the drying racks once they are dry. People will get mad and take them and move them very uncarefully. Also, don't go overboard on the things supplied that are communal. If you're rich, buy the shit you need for yourself, and for others.

