

Photography Lab Cookbook

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PHOTO LAB STANDARD OPERATING PROCEDURE (SOP)

PORTCALL (on coming)

Onboard ship:

- Find off going Marine Lab Specialist's, Photo Lab and begin X-over.

X-over

- Read lab reports from previous leg.
- Discuss with off going marine specialist any changes in equipment status, software or procedures.
- Check supply levels in photo lab and hold refer. You are responsible for this inventory. Estimate amount of film, paper and chemistry needed for each particular type of leg. If you do not feel you have enough supplies necessary (after checking oncoming shipments), notify LO to purchase film/paper/chemistry in port.
- You are responsible for knowing the status of ALL equipment in your lab by the end of the x-over. If you need additional days to complete your x-over, notify the LO ASAP so that arrangements can be made.

Other:

- Assist with loading/unloading freight and other tasks as directed by LO/ALO.
- Attend security, safety and introduction meetings (usually held at the same time)
- All Marine Specialists' must be aboard ship by the time posted at the ship's gangway.

PRIOR TO FIRST SITE (or in PORTCALL if time permits):

- Move over to your assigned shift (check with the L.O.).
- Shoot Mug shots of scientists and marine specialists, usually after one of the first meetings. Distribute mug shot contact sheets.
- Give the photo policy talk to scientists, this covers current core and close up photography policy.
- Meet with microscope users and find out how they would like the microscopes configured. Designate someone to be photomicrograph librarian.
- Give class in use of the close up copy stand to scientists who may wish to take their own close ups with personal cameras.
- Mix chemistry for B&W and color processors.
- Calibrate core and close-up cameras for exposure and color balance. Load 4x5 film holders, and then place in core lab photo drawers.
- Talk with Shipboard Physician about the handling of medical X-rays so you are on the same page.

ON SITE / Daily Requirements

1. Go to core lab; pick up close-up request sheet from photo area.
2. In photo lab make labels for request using Seagull Bar Tender.
3. Pull and photograph each requested core and interval. A maximum of 16 cores can be photographed each day.
4. Remove all exposed film from film drawers in core lab photo area that have collected in the past 24 hours. Take all core photos and close-ups to photo lab.
5. Process all color & black and white film for the day.

6. Print all required black and white core and close-up photos. Distribute as necessary.
7. Mix any needed chemistry for black and white or color processing.
8. Check in with paleo scientist occasionally to make sure all microscopes are functioning correctly.
9. Photograph any needed PR or engineering photographs as requested.
10. Perform all necessary cleaning and maintenance on machinery and equipment.
11. Maintain inventory for both labs.

END-OF-LEG:

- Shoot Group, Tech and Science group photographs at appropriate time (usually shot after abandon ship drill - work with Captain on timing). Print and Distribute to all shipboard members. Can be done mid-leg.
 - Create silkscreen for t-shirt printing.
 - Clean lab (and other areas as assigned) and remove all trash. Run Systems Cleaner on Kreonite print processor.
 - Pack up the negatives and photographs being returned. The core photo and close-up slides and negatives are to be hand carried. All else is given to the storekeeper for shipment.
 - Pack up equipment being returned for repair. The storekeeper will need the following information:
ODP inventory number, value, weight, serial number, model number, vendor's name, vendor's return authorization number (if available) and country of manufacture. Also, make sure to include a note with the equipment explaining the problem and what is to be done (i.e. return to vendor, to be repaired by ET's on shore, etc.).
 - Provide return to work date to LO three weeks before end of leg.
 - Write end-of-cruise lab report. Turn in a RTF format copy to the LO, then burn one copy onto CD for Photography Supervisor on shore along with all other data collected (close-up spreadsheet, inventory, microscope inventory, etc...).
- NOTE: Your lab report should contain (if applicable):
- 1) Introduction paragraph that summarizes lab activities for the leg.
 - 2) The number of samples or data points collected.
 - 3) Specific problems encountered and how they were overcome.
 - 4) Current equipment, software and database status.
 - 5) List of equipment returned for repairs.
 - 6) Notes about any changes made to manuals
- Give port purchase lists to LO (if any).

PORTCALL (off going):

- See the LO about transportation arrangements to the Hotel.
- Find the oncoming marine specialist and begin x-over. Have a copy of your report ready so that they can read it immediately. Make sure that the marine specialist(s), who is replacing you, is aware of any changes made to the lab, procedures, current equipment status, and if port purchases are necessary.
- When the oncoming marine specialist is satisfied that the cross-over is complete, check with the on-coming LO before leaving the ship.
- Check into hotel.

NOTE: You must check into the hotel appointed by ODP travel as soon as possible after departing the ship and must remain checked in until released from official duty which is based on departure time for the ideal “trip”.

Lab Manuals

Document Name/Title/Number	Source	Type	Revision No. Publication Date (if any)	Associated Instrument's
Water Temperature Controller Series Service Manual	Wing-Lynch, Inc.	Service Manual	Manual # 10-0007-55 Rev. 2, Jan 1989	Wing Lynch Water Controller
Model 5 Photographic Processor Installation and Operation Manual	Wing-Lynch, Inc.	Installation and Operation Manual	Manual # 10-2000-00 Rev. 3 Jan 1992	Wing Lynch E-6 Processor
Kreonite Systems Manuals	Kreonite	Installation and Operation Manual	Various	Print Processor
Kreonite Systems Manuals	Kreonite	Installation and Operation Manual	Various	Chiller
Kreonite Systems Manuals	Kreonite	Installation and Operation Manual	Various	Sink & Accessories
Kreonite Systems Manuals	Kreonite	Installation and Operation Manual	Various	Temperature Blenders
Kreonite Systems Manuals	Kreonite	Installation and Operation Manual	Various	Porta Mix
Kreonite Systems Manuals	Kreonite	Installation and Operation Manual	Various	Film Drying Cabinet
Kodak DCS Manuals	Kodak	Instructional and Operation Manual	Various	Kodak DCS Camera
Kodak DCS Manuals	Kodak	Instructional and Operation Manual	Various	Nikon N90S
Silk Screening	Ulano	Instructional and informational manuals	Various	Ulano Silk Screening Inks, film, Screen and Screening Frame
Non Photographic Appliances	Various	Installation and Operation Manuals	Various	Panasonic PV-8500VHS
Non Photographic Appliances	Various	Installation and Operation Manuals	Various	Panasonic WV-3230 Video Camera
Non Photographic Appliances	Various	Installation and Operation Manuals	Various	Sony Trinitron Color TV,
Non Photographic Appliances	Various	Installation and Operation Manuals	Various	Sears Kenmore Refrigerator manuals
Fargo Primera Pro Printer	Fargo	Installation and Operation Manuals	Various	Primera Pro Printer
Advanced Process Management Course Book	Kodak	Process Management Manual	Dec-82	E-6 Processor

Microscopes	Various	Instructional and informational manuals	Various	Zeiss Microscopes
Microscopes	Various	Instructional and informational manuals	Various	Spot Camera
Microscopes	Various	Instructional and informational manuals	Various	Photomicrograph Cameras
Microscopes	Various	Instructional and informational manuals	Various	Axioplan 2 Microscopes
Microscopes	Various	Instructional and informational manuals	Various	Microscope Illuminators
Microscopes	Various	Instructional and informational manuals	Various	Lamp Controllers
Microscopes	Various	Instructional and informational manuals	Various	Microscope Camera Manuals
Photo Camera Manuals	Various	Instructional and Operation Manual	Various	Hasselblad
Photo Camera Manuals	Various	Instructional and Operation Manual	Various	Nikon f-5 camera
Enlarger, X-ray, Barnstead Xrite	Various	Instructional and Operation Manual	Various	Ilford Enlarger
Enlarger, X-ray, Barnstead Xrite	Various	Instructional and Operation Manual	Various	X-ray film
Enlarger, X-ray, Barnstead Xrite	Various	Instructional and Operation Manual	Various	Barnstead Water Filtration
Enlarger, X-ray, Barnstead Xrite	Various	Instructional and Operation Manual	Various	Xrite Silver recovery unit
Photo Cookbook	In-house	Cookbook and SOP	Various	Black and White film processing
Photo Cookbook	In-house	Cookbook and SOP	Various	E-6 processing
Photo Cookbook	In-house	Cookbook and SOP	Various	Black and White paper processing
Photo Cookbook	In-house	Cookbook and SOP	Various	SOP of Photographer's duties.

Film Process: E-6 Processing Procedure

Wing-Lynch Processor

Model #5

Purchased 3/13/1992

The ODP photographer is responsible for processing the color core transparencies taken by the core lab technicians, all color close-ups and any other PR work on the ship. You also may be requested to process one roll of color transparency close-ups or microphotographs taken by the scientist (with their own film) to check exposure. You should not provide the science party with film for their personal photographs.

The Wing-Lynch processor is a simple machine that needs some baby sitting at times. I do not recommend you leave the photo lab while it is processing. This is especially important during high seas. The machine will make a loud quick beep if there are any problems. You may run the risk of ruining film if you are not there to tell the machine to continue during any draining problems.

E-6 Processing Steps:

1. Reach in back of sink and turn water taps to correct placement for color processing.
2. Turn on Wing-Lynch Processor.
3. Open orange valve next to Wing-Lynch Water Temp Controller (above Wing-Lynch) so that the valve is perpendicular with the pipe.
4. Turn on Water Temp Controller.
5. Choose proper holders for film:
 - For Roll Film
 - a.) Check length load metal reels into tube to make sure your film will fit. (take out reels and set aside)
 - b.) Set up dams and/or check to see if auxiliary dam is needed. (See chart on door next to spare tubes.)
 - c.) Place film tubes into tank for preheating.
 - For Sheet Film
 - a.) Gather needed number of sheet holders for correct amount of sheets.
 - b.) Set up proper dams if needed.
 - c.) Do not place sheet holders in tank for preheating. The film will stick to the side if you do this.
6. Using the up and down arrows select proper water level for amount of film. Refer to chart on Wing-Lynch.
7. Using up and down arrows select proper process for specific film. If you are processing roll film select "E-6", if you are processing sheet film select "Sheet E-6".

8. Set Wing-Lynch to pre-heat using arrows to select on LCD display. Hit the enter button then be sure to turn off LCD display light!
9. TURN OFF ALL LIGHTS IN DARKROOM!
10. Begin Rolling film onto reels or loading onto sheet holders.
11. Without turning on the lights hit the enter key and the processor will dump hot water.
12. Wait until the processor finishes turning then load film reels into the pre heated tube and then into the tank. I usually lightly place my hand against the right hand side of the tank to feel the crank stop.
13. Close tank lid – check to make sure it is securely on the machine and no light will be able to get in.
14. Hit the enter key to begin the processor. If for some reason you do not feel comfortable or need to change something turn the processor off with its main toggle switch. Turn it back on. It will prompt you to decide to continue with the process or abandon the current process.
15. After process is over you will hear a loud long tone. Take film out and dunk into stabilizer. Do not allow stabilizer to touch reels or film holders. This may contaminate future runs.
16. Hang in dryer, turn dial past 55 then turn back to 55. (If you do not turn it back it will not turn off).

Control Strip:

Control strips should be run after each new mix of chemistry, before each leg and after long intervals of it not being used. The strips should always be loaded on the front reel. Always refer to your Kodak guides to correct any chemistry imbalance.

E-6 Chemicals

to make 10 liter working solution

	10 Liter Mix	STARTER
First Developer	NEW CAT#831 3611 2.0 LITER Mix with 10L water, add starter Add 525ml additional water	OLD CAT#156 4871 -65 ml NEW CAT#167 1577 -53ml
Reversal Bath	300ml	This is a 60% solution as recommended in z- 119 for rotary tube processors See Page 10-1 **
Color Dev.	Part A - 1 Bottle (mix with water first) Part B - 1 Bottle	Starter 50ml NaOH 20ml
Pre-Bleach	Old Cat # 830 8416 2.0 Liter New Cat #128 6228 1.0 Liter	
Bleach	5 Liter	200ml
Fixer	1 Liter	
Stabilizer (to make 4 liters - not put in wing lynch)	Old Cat#828 1602 30ml New Cat # 8140279 40ml	

rev. 12-00

Film Process: Black and White Film Chemistry and Development

Kreonite Sink

Model #200

Purchased 11/26/1984

Black and White chemistry should be freshly mixed before each leg and replenished as needed. New chemicals should be mixed ½ way through the leg to avoid exhausting the chemicals.

Each tank in the Kreonite sink holds 5 gallons of chemicals. Always check taps under sink to make sure they are closed. We use Kodak T-max RS developer, Kodak Stop Bath and Kodak B&W fixer. Each chemical should be mixed in order of use (developer, stop, fix) in the designated stainless steel mixing graduates to avoid contamination. Chemicals should never be cross mixed in incorrect graduates. This type of contamination will contaminate any further chemicals mixed in graduates. Mix all chemicals according to manufacturers instructions. Any remaining chemicals should be stored under the sink in the temperature controlled area. It is always a good idea to have extra bottles of working solutions for replenishment. Clearly label all chemicals stored under sink.

Before developing film you should set your timer for 30 min past your development time to accommodate for stop, fix and wash time. Nitrogen is used to agitate chemicals in burst. Check Nitrogen bottles to make sure you have enough for full run. Check temperature of developer and adjust development time accordingly. Next, remove all lids to the tanks and get racks, reels and all necessary items organized for easy access while lights are out. Flip on main nitrogen burst switch. Turn on chill water and close tap under sink. Lock all doors and then turn off all lights. Give yourself a few seconds for your eyes to adjust to the darkness the look around paying attention to any light leaks in the room. Never ever open film if light leaks are present.

Load film onto stainless holders or reels and process according to directions. Flip on designated nitrogen burst switch before placing film in each tank. Lower film into tank. Hold film holder or reel above tank 15 seconds before time is up to allow for drainage. This will prevent over exhaustion. After you developer, place in stop bath, then fixer. Place in water bath for 20 min, Perma wash clearing agent for 1 min, then back into water for 1 min. Mix 1 cap full of photo-flo with water in small developer tray. Place film in photo-flo for 1 minute then hang in drying cabinet. Turn timer for drying to 60 then turn back to 55. If you leave it at 60 it will not shut off. Drain chill water after you are finished.

Full process as follows:

Developer - mfg. recommended time (approx 6 1/2 min for roll film, 12 min for sheet film)

Stop - 30 seconds

Fixer - 8 min

Wash - 20 min

Perma wash - 1 min

Wash - 1 min

Photo Flow - 1 min - squeegee with fingers then hang to dry.

Paper Processing: Black and White Paper Development

Kreonite Paper Processor

Model Number KBW16-MSX

Purchased 9/21/1994

The ODP photographer is responsible for printing several copies of each core photograph taken during each leg. (See the distribution chart for details.) The photographer should also print one copy of all group photos for each person in the group. (Leg Group Photo which includes all available shipboard personnel, Science party photo, Tech photo, and others as requested). Each shipboard member should also receive a printed copy of the leg's logo. (Logo printed from negative made for silk screen)

Kodak Systems Cleaner should be run either at the end of the previous leg or at the beginning of the current leg before the processor is used. See the specific instructions on the Systems cleaner bottle before using. Kreonite chemical filters should be changed during this process also.

Make sure all taps are closed under the processor before filling tanks.

Illford paper developer is used in the processor & replenisher tanks. 5 gallons is mixed using the porta-mixers. (see Porta-Mixer directions)

The processor should be allowed to warm up and water levels should be allowed to get to working levels before each use. To warm up processor turn on main power switch, transport and dryer switches. Turn water pump switch on wall to manual allowing water tanks to fill. It is recommended that you take the vent suction hose off so that you can hear the water filling. When tanks are full you will hear a distinct "sucking" noise. When you hear the sound turn the water pump to "Automatic". This will feed the water only when needed. Replace vent suction hose on top of machine.

It is recommended to feed a few sheets of unexposed paper through the processor at the beginning of every day to remove any build up.

At the end of each day open only the water tank valves. This will allow them to drain and dry out.

Never use processor without water tanks being full.

Porta-Mixer

Porta-Mixers

Model# PM5

To mix chemicals for Kreonite processor:

Set the capacity level rings to 4 gallons.

Set pump to “mix”

Close drain.

Fill tank with 4 gallons of Reverse osmosis water.

Fill designated 1 gallon graduate with either Illford chemical. (do not cross contaminate) I highly recommend you mix developer first to avoid any contamination by fixer.

Add chemical to water.

Turn on Porta-mixer and mix well to make working solution.

To dump chemicals into tank turn pump to “pump”

To Clean Porta-Mixer-

Close drain, fill tank with water using clear Nalgene tubing connected to stainless faucet in print finishing area.

Turn mixer on and allow water and remaining chemicals to dilute and mix.

Turn pump to “pump” to empty tank.

Open drain and allow remaining water to drain in floor drain.

Repeat until water is completely clear and no chemicals remain.

Black and White Core & Close-up Photo Distribution Chart

Core Photos:

Pacific Ocean:

3 to Yeoperson (1 for staff scientist 2 for co-chiefs)

1 to Core lab notebook

2 sent back to Photography supervisor at ODP

Atlantic Ocean:

3 to Yeoperson (1 for staff scientist 2 for co-chiefs)

1 to Core lab notebook

1 sent back to photography supervisor at ODP

1 sent to Bremen core repository

Close ups:

4 to Yeoperson (1 for staff scientist, 2 for co-chiefs, 1 for publications notebook)

1 to Core lab notebook

Close-Up Photography

Introduction Talk with Scientist

Before you arrive to your first site you should have a meeting with the scientist for the leg. You will explain the ODP policy for close-up photography: Photographs taken by the photographer are for ODP publications. Photographs will not be made solely for their personal use or research.

Items to be discussed:

- Each day the photographer will photograph up to 16 close-ups.
- A request list will be available in the photo area of the core lab. (see example)
- Make sure any special request is listed on the sheet – such as photographing close-ups wet, different angles or whole rounds. Also encourage scientist to consult with you about special request to assure they will be photographed correctly.
- If whole rounds are requested make sure core lab technicians are aware so that the core does not get split before photographer photographs close-ups for the day.
- Scientist are encouraged to use the DIS images for “place holders” in their reports to avoid mix-ups later.
- Scientist are allowed to photograph their own close-ups in photo area, but are requested to talk with photographer about their camera and set up prior to using them.
- Due to strength of lights a fast film is preferred ISO 100 or less. Make sure lights are set on 200 Watt seconds before scientist use photo lights.
- Turn off photo floods before shooting. They should only be used for focusing.
- Color 4X5 originals may be view by appointment only with the photographer. This is not encouraged because of potential damage to transparencies or film if too many people are handling it.
- Prints, slides and digital files may be requested from Data Librarian at ODP after the leg is finished.

Close Up Photography

4X5 Polaroid Camera Purchased 2/15/1984

The Science Party is encouraged each leg to request photos from the photographers to be used in ODP publications.

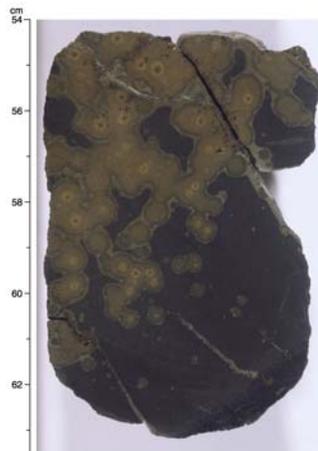
A request list should be available every day in the core lab. It is recommend that the scientist take the entire clipboard with them when requesting photos to assure all cores

will be left upstairs instead of boxed and placed in refer before being photographed. If the list is missing it is more likely to have mix-ups.

The science party may request an infinite amount of close-ups, but only 16 will be photographed per day. This amount allows the photographer plenty of shooting time, processing time, (for both close-ups and daily core photos) and printing time for daily B&W photos. This limit will also allow for any extra PR photos that may be needed.

The request list should be gathered each day at around the same time. It is then entered into a spreadsheet which will calculate size and midpoint, signify color or black and white and put the request into sequential order. The list is then made into labels using the label maker software.

This list is then taken to the close-up area along with the printed out labels to start photographing the cores. Each close-up must be photographed on a white background with a label that indicates Leg, Hole, Site, Section, increment &/or piece. A scale/ruler and a grey card should always be included.



Close-Up spread sheet sample

LEG	SITE		CORE		PIECE	B & W	COLOR	MID POINT	SIZE
	HOLE	SEC	CM 1	CM 2					
210								0	0
210								0	0
210								0	0
210								0	0
210								0	0

Close Up Request Sheet

	SITE	HOLE	CORE	SEC	INTERVAL	PURPOSE	NAME	B/W OR COLOR	PHOTO USE ONLY
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

Silk screen procedure for end-of-leg T-shirt logo

compiled by Mark Gilmore & Brad Cook - 1992

updated by Shannon Housley - 2002

The entire process includes several procedures, and although everything could be done in a single workday with a printing session in the evening, I (we) recommend breaking operations into a two-day effort. I suggest doing both operations involving Kodalith orthochromatic high-contrast film, and perhaps also stretching the screen, on the day or evening before planning to print t-shirts

Keep in mind that only so-called "line-art" is acceptable for reproduction. If the winning design has any especially small or delicate typography, I recommend suggesting to the artist that such type be "beefed up" slightly by using the next larger font and/or boldening the characters. While readability may be a concern, I recommend this more from a production standpoint, as the small characters are prone to being wiped out if there is the slightest problem with the emulsion on the photo-resist, which is especially delicate when wet during the final rinse phase. Within reason, size of the original is of little concern, as the final sizing will be done with the enlarger.

1) Check supply of Kodalith A&B chemistries. These are mixed from a powdered concentrate with 100° water, and will be too hot to use for quite some time after mixing - best to check this item even two days before planning to screen print. Left-over or freshly mixed chemistry should be placed under the port darkroom sink for 68° temping prior to use.

2) Original camera-ready art is photographed using the core lab Polaroid copy camera, on 4x5" Kodalith film. This film can be loaded and processed under red safelight conditions. Kodalith is not notched; light, creamy-looking side is the emulsion side - dark shiny side is the base.

3)

Exposures are bracketed. Formula that worked for me: power pack on 400 watt-seconds; lens set @ f11; four exposures at 3,4,5, and 6 "pops" of the flash lighting per sheet of film. Good exposure will most likely be either 5, or 6 pops. The multiple exposures needed are achieved by simply tripping the shutter with the cable release the required number of times. The "bulb" ("B") shutter speed setting will not work for this purpose as is sometimes done with other cameras; therefore, separate exposures are made at the regular shutter speed setting of 1/125. Light sources near the copy stand such as florescent overhead, modeling lights, should not affect the process.

3) Kodalith is processed in trays using equal parts of "A" and "B" chemistry at 68°, mixed with stirring just prior to use. The 4x5" film can be processed in the small 6x8" trays, although you'll need the larger 13x16" trays for processing the larger 11x14" Kodalith during the next step. I recommend that you plan to do both sizes of Kodalith during one work-session, so as to maximize efficiency of your chemistry usage - besides, you should be on a roll. Process by rocking in trays for 2 3/4 min each. Stop, Fix, rinse, perma wash and photo flow just like normal film. Dry in film dryer by hanging between

two racks.

4) The dried 4x5 is first opaqued for stray pinholes, then placed in the enlarger, and projected at the final sizing onto 11x14" Kodalith. The 11 X 14 will be exposed at about 15 inches f-16 #3 filter at 7 seconds. Using the 135 mm lens. Keep in mind that the final sizing is limited not only by the dimensions of the film, but also by the size of the screen, which is approximately 21 x 16.5" - a generous border area at the top and bottom of the screen will be required when inking and printing the finished product.

5) The next steps involve preparation of the screen. A section of the screen material is cut from the roll with a several inch border. The adjustable allen screws on the aluminum frame are backed all the way out so as to allow for maximum travel of the stretcher bars when tightening the screen material. Screen material is locked into the stretcher bars with the locking insert bars. Note that these bars are asymmetrical, and are intended to be used with the flat flange pointing outward to achieve maximum grip on the screen material. Use some system of tightening sequence as you gradually tighten all 12 allen screws. How tight? Damn tight. Tighten until the whole frame sings like a tuning fork, or until it explodes, then back all screws off 1/4 turn.

6) Abrading/Degreasing, and applying the photo resist: Although this procedure is also performed on polliwogs at equator crossing ceremonies, the screen needs treated as well. The bare screen is prepared to accept the photo-resist by being wetted, then thoroughly scrubbed with generous quantities of the Ulano "23" Fabric Abrader and Degreaser with a stiff bristle-brush, such as the one you'll find in the box marked "silkscreen stuff". Ulano's directions advise to "let stand for 5 minutes" after scrubbing, then rinsing "thoroughly".

While the screen is still wet, a section of photo-resist, a material containing a light-sensitive emulsion, is adhered to bottom, or flat-surfaced side of the screen. Bring the film to room temperature and handle this material ONLY under safelight conditions. Cut a section slightly smaller than the working area of the screen there should be a template in the "silk screen box". Lay the film face-up (tacky side up) on flat counter area by front sink for positioning, then simply press the screen/frame assembly in place on top of the photo-resist. Slide gently off of the counter and place in film dryer bottom to dry. Set film dryer on NO HEAT and dry over night. DO NOT TURN ON LIGHTS IN DARKROOM. I suggest you leave this for your last task of the day. When you have it safely placed in the dryer lock up the darkroom and do not let anyone in until you get on shift the next day. Still ONLY HAVE THE SAFELIGHTS ON UNTIL YOU ARE COMPLETELY FINISHED WITH THIS PROCESS. If you are certain the film is completely dry peel off the film backing. You will see a phosphorescent glow - pretty cool huh? Unwrap the "special" piece of glass and place it on top of the light table beside the enlarger.

Place your artwork on top of the glass right side up. Lay the screen on top of the artwork. Place 11X14 piece of black photo paper on top of the artwork area of the screen. Place books and paper boxes on top of that. Make sure it is well weighted down. Set your timer for 12 min and turn on the light table light ONLY. After 12 min rinse well. You

may want to check occasionally to see if the artwork area is coming off. Keep rinsing until no more film will come off the screen. Check it well then turn on the room lights. Let it dry.

Apply Purple goop where emulsion does not cover.

Let dry.

Trim excess screen salvage and tape up ends of screen so that it is flat with silver holder. Roy liked to use a pencil taped to the top edge of the screen side to give the screen a little "POP" when you squeegee the ink. This helps it pull away from the shirt faster and you may have less bleeding with his method.

You should get volunteers to help out with screening process. String up tons of line to dry the shirts on. Usually best to have a strong person actually doing the screening, then have someone pulling the shirts out of the holder and someone to feed the shirts into the holder. Have several people hanging the shirts around the core lab to dry and several putting the shirts on cardboard. I recommend about 2 - 3 oz. Of the drying catalyst to about 2 cups of ink. I do not recommend using yellow ink on dark shirts. I usually stick with black and white. Cut Several dozen sheets of butcher paper for blotters. Run about 10 or so before you screen your first shirt to make sure the screen is doing well. If the screen starts to get blotchy because of excess ink, run several sheets of paper through to clear it. Be quick as possible to avoid having the screen block up on you. The ink dries quickly and can clog smaller areas of the screen.

Don't forget to clear off an area of the stairwell and stick one up there.

Have fun printing.

And when you are done.....sleep for about 2 days. You will need it
GOOD LUCK.

Author: Shannon Houseley

Version: post 210 (Dec. 2003)

Sign Off (department Supervisor):_____

Review by:

Review On: