

# PhotoTherm

## Super Sidekick Automatic Film Processor

Model **SSK-8R**

Ver. 715 and higher

## 8 Roll Auto Replenishing Owner's Manual



US PATENTS RE 34,188 & 5,379,086

Please record the Serial No. \_\_\_\_\_ and date of Purchase \_\_\_\_\_  
Please mail in your warranty card.

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### WARRANTY

Each PhotoTherm product is produced under rigid quality control standards. This unit is fully warranted for a period of one year from date of purchase.  
PhotoTherm 110 Sewell Ave Trenton NJ 08610 USA Tel 609 396-1456 Fax 609 396-9395.



QUALITY RESULTS



ECONOMICAL  
TO OPERATE



NO HANDLING  
CHEMICALS



NO THERMOSTATIC  
VALVES



NO BUCKETS



NO WAITING



NO NITROGEN



MADE IN USA  
WELL BUILT

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## **DESCRIPTION**

The SSK-8R automatic processor accurately tempers each solution, one at a time. This design breakthrough allows B/W processing at 75 °F and then immediately afterwards slide processing 100 °F. Tempered water is not needed. Long warm-ups are not required.

All the solution bottles for processing color slides, color negatives and Black and White negatives are constantly connected. The operator just selects the process. The unit pumps the proper chemical from any of the 18 reservoir containers, quickly heats the small volume needed to the correct temperature and starts processing. As it processes one solution it prepares the next solution. At the end of the process cycle it automatically flushes itself clean, preparing itself for the next process.

The SSK-8R is compact (26" wide by 14" high by 16" deep). The film drum is removable for loading in a dark box or bag. The SSK-8R can process 8 rolls of 35, 5 rolls of 120/220 or 8 sheets of 4x5 at one time. Two chemicals can be automatically saved from each process for silver recovery, reuse or automatic replenishment. Fresh developer is used for quality. The standard processes are pre-programmed, but the developer time can be easily changed when desired.

The SSK-8R can be set up for any of 4 slide, 4 color negative and 3 B&W processes. The operator can change the time of, or eliminate any process step. The operator can select which solutions to save. The SSK-8R anticipates problems and takes automatic corrective action.

The SSK-8R protects the film from possible operator errors. It has an interactive computerized display that prompts and informs the operator what it is doing. Possible operator errors are also minimized because, chemical lines do not have to be switched nor must volumes of solutions be measured.

## **SETTING UP THE UNIT**

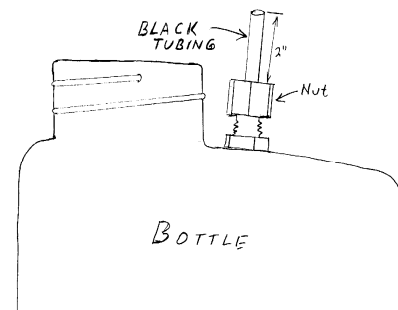
The unit comes packed in 2 boxes. Make sure you received the following:

- |                                                                      |                                                  |
|----------------------------------------------------------------------|--------------------------------------------------|
| ... 8-reel and a 4-reel black film drum with lids.                   | ... Syringe of silicone grease                   |
| ... 8-reel and a 4-reel spindles with impellers.                     | ... Allen wrench (1/16") for bushings            |
| ... 10 plastic film reels                                            | ... Magnetic stirrer. A white "pill" (3/8" x 1") |
| ... Main processor SSK-8R                                            | ... Permanent marker                             |
| ... Spacer 2-roll (white fat donut)                                  | ... Piece of Scotch Brite                        |
| ... Utility dryer tube. (White plastic 4" diameter<br>11" long)      | ... Set-up video                                 |
| ... Dryer spindle. (10" long without an<br>impeller)                 | ... This instruction book                        |
| ... Coil of 1/4" flexible tubing                                     |                                                  |
| ... Power cord                                                       |                                                  |
| ... Eight 2 liter (1/2 gal.) solution bottles with<br>fittings       |                                                  |
| ... Eight 7 liter (1.6 gal.) bottles                                 |                                                  |
| ... Two 1 gal replenishing bottles                                   |                                                  |
| ... Two 1 gal. collapsible bottles                                   |                                                  |
| ... Water bottle (5 gal) with float valve                            |                                                  |
| ... Saddle valve kit to connect water bottle to<br>water pipe        |                                                  |
| ... Brush to clean coupling (Baby bottle nipple<br>brush).           |                                                  |
| ... Dump bottle (5 gal) with level sensor and<br>cap with..          |                                                  |
| ... 3" gray plastic fitting to hold the dump and<br>flush tubing     |                                                  |
| ... 10 Film Clamps for 120/220 film.(white<br>curved plastic pieces) |                                                  |
| ... Plug to seal COUPLING when FLUSHING                              |                                                  |

## SETTING UP THE UNIT Cont.

Place the unit on a flat level surface. Lift up the side and cut away and discard the two visible nylon straps from the bottom of the unit. These straps hold the pumps secure for shipping and must be removed for the pumps to work.

Prepare the solution bottles. a) Loosen NUT. b) Push in notched end of the ¼ OD black tubing through fitting to bottom of bottle. Leave about 2 inches (5 cm) exposed. c) Hand tighten nut. d) Rinse out bottle. You can use the collapsible bottles for developers; they will extend chemical life because there is no air interface.



Use the marker pen to label each bottle and lid with the chemical it contains. Cut a piece of clear flexible tubing long enough to run from the bottle to the back of the machine. RUN THE TUBING STRAIGHT DOWN from the back of the machine. After about a foot, the tubing can run in any direction Allow about 2 feet (60 cm.) extra for slack. Label both ends of the tubing with the chemical name. Slip one end over the proper tube and the other end over the exposed black tubing of the solution bottle. Use the 7 liter Bottle Template to make volume marks on the bottle. The 5 gal. Water bottle connects to the WATER (#5) tube.

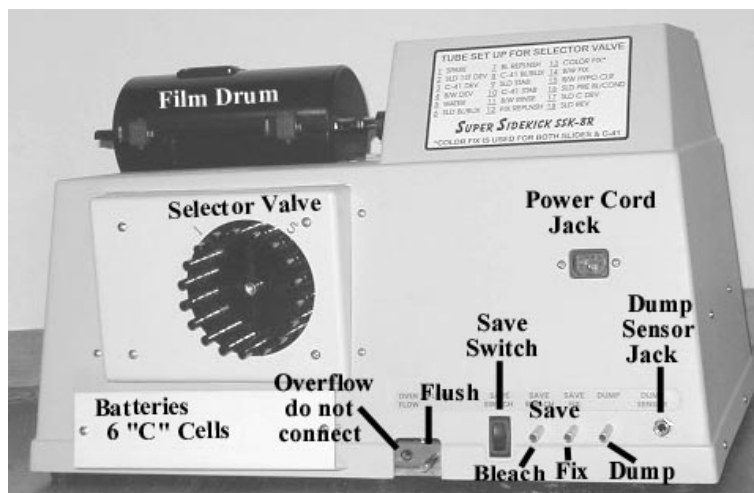
**IMPORTANT.** The solution source bottles must be located below the processor.

The 5 gal. water bottle, which has a float valve near its lid, holds the water that will be used for processing and internal cleaning (FLUSHING) of the unit. You can manually fill the bottle. Use regular tap water, not de-ionized or distilled water. You can connect the bottle to a cold water pipe for automatic filling with the "ice maker" kit. TURN OFF THE WATER AT THE SOURCE WHEN THE MACHINE IS NOT IN USE.

The DUMP bottle comes with a level sensor that should be plugged into the DUMP SENSOR jack on the back of the unit. IT WILL SENSE IF YOU HAVE ENOUGH ROOM FOR A 2 or 4 ROLL RUN ONLY. The bottle must be emptied if you are doing a 6 or 8 roll run. If a plumbed-in drain is available, use it.

*There are five drain outlets in the back of the unit:*

1. DUMP - For spent chemistry. Connect to DUMP bottle or plumbed-in drain.
2. FLUSH - Disposes of spent FLUSH water. Connect to DUMP bottle or drain.
3. SAVE FIX - Recovers the solution to be saved. Active only when SAVE switch is on (red is showing). Connect to separate bottle.
4. SAVE BLEACH - Recovers solution to be saved. Active when SAVE switch is on. Connect to separate bottle.
5. OVERFLOW - DO NOT CONNECT. If solution comes out of this outlet, check your FLUSH tubing for proper installation.



Push the flexible tubing over the stainless tubes of these outlets (not more than 3/4").

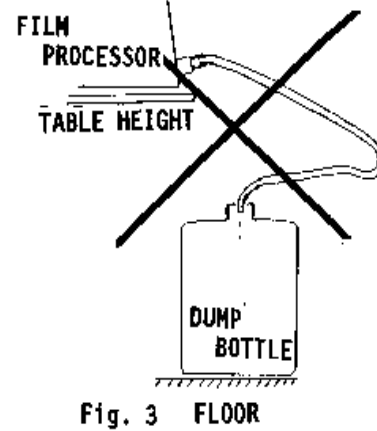
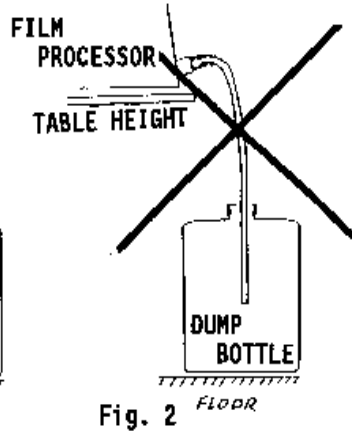
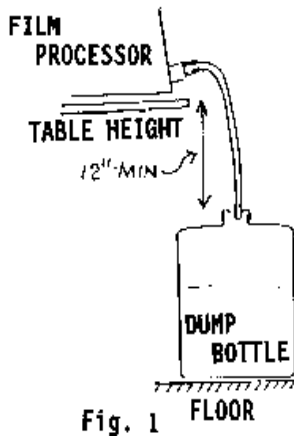
VERY,  
VERY,  
IMPORTANT!

*Position DUMP bottle close to unit. (Fig. 1)*

*Run tubing directly to DUMP bottle. (Fig. 1)*

*Cut off unneeded length of dump tubing. (Fig. 1)*

Run the DUMP and the FLUSH tubing separately into the 3" gray fitting on the DUMP bottle. Do not put a third tubing into the same fitting. Do NOT run tubing inside DUMP bottle. (Fig. 2). Allow at least 12" drop between unit and DUMP bottle.



Open the DOOR by lifting up from the bottom and pulling out. Place the magnetic stirrer (white pill) in the exposed heat tank. Carefully push the stirrer with a pencil until it is magnetically caught near the back right corner of the tank. Turn SIDEKICK on and check if the stirrer is turning.

Put in six Alkaline "C" Cells in the battery holder. This will allow the unit to continue after a power failure and protect it against power surges. Plug the power cord into a 120 Volt AC 15 Amp. (regular domestic) outlet.

The batteries will protect SSK-8R from short power losses. You can also connect SSK-8R to a TRIPP Model Pro 1400. A 1400 Watt Uninterruptible Power Supply, which would allow the unit to finish the process in case of a long power failure.

PROGRAM the USER CODE. You have to program the user CODE before you can use SUPER Sidekick (SSK). This is only done once.

Turn off SSK for at least 10 seconds. Hold down the START switch as you turn SSK on. Release the START switch. SSK will show the programming instruction. (See PROGRAM MODE for a fuller explanation). SSK will then display "USER CODE" "# (any number)". Change the number by pressing - (MINUS) telling SSK you want to make a change. Then pressing PLUS(+) to increase the number. When "7" is displayed, press START. SSK will record the information. After it is finished "RECORDING", you can use PLUS to look through all your options or just turn SSK off.

Make sure SSK is level by inserting the bottom half of the large DRUM in the SSK. Pour water into the DRUM until it is about 1/2" from the top. Measure the distance from the water to the top of the DRUM at the front and the back of the DRUM. Level the SSK with shims until the distances are equal. Run DRAIN to empty the DRUM. See SPECIAL FUNCTIONS.

See PROGRAM MODE to select the set processes. Run the DUMP TUBING TEST to verify correct tubing installation. See TEST MODE.

## **PRESET SELECTIONS**

Selections as shipped from the factory. See PROGRAMMING to change selections (values).

<b>Name</b>	<b>Preset</b>	<b>Choices</b>
Unit Code	0	Must be changed to 7 to operate.
Replenish Percent	00%	
Slide Dev Time	6:30m	
Color Neg Dev Time	3:15m	
TriX/PlusX Dev Time	4:40m*	
Tmax 100/400 Dev Time	5:30m*	
BW 20C 68F	7:00m**	
Dry After Process	No	Yes, to use built in dryer
E6 Slide Process	4 Step	7 Step, with or without prewet
Color Neg Process	C41	Bleach+Fix, with or without prewet
Prewet Black/White	No	
Set all Times	Standard	Change any time as needed
Save as Bleach	None	Any solution
Save as Fix	All Fixes	Any solution
Rotate RPM	40 RPM	10 to 50 RPM (Rotations/Minute)

\* 75°F (23.9°C)    \*\* 68°F (20.0°C)

## **PROCESSING**

In a dark box, load the film on the reel (see REEL LOADING). Slide the reel on the spindle with the film guide pointing in the direction shown. If there is room on the spindle, use the SPACER (goes on last) to conserve chemistry. Place the spindle inside the film DRUM. Cover the spindle with the lid (one side is shaped to go over the spindle). Slide the clips towards the ends of the film DRUM to close it. You are now light tight.

Push the film DRUM to the left in the TROUGH till the SNOUT seats itself inside the COUPLING. The two stainless pins of the spindle should go on opposite sides of the STAPLE on the rotate motor.

Look to make sure you have enough solution in the chemical bottles. Empty the DUMP bottle. Turn the unit ON. Use PLUS to select the type of film you are processing. Push START to begin the process.

The unit will ask you how many rolls (35 mm) are being processed. Use "PLUS" to select : "2" for 1 or 2 rolls of 35mm or 1 roll of 120/220. Use SPACER.

"4" for 3 or 4 rolls of 35mm, 2 rolls of 120/220 or a 4x5 sheet film holder.

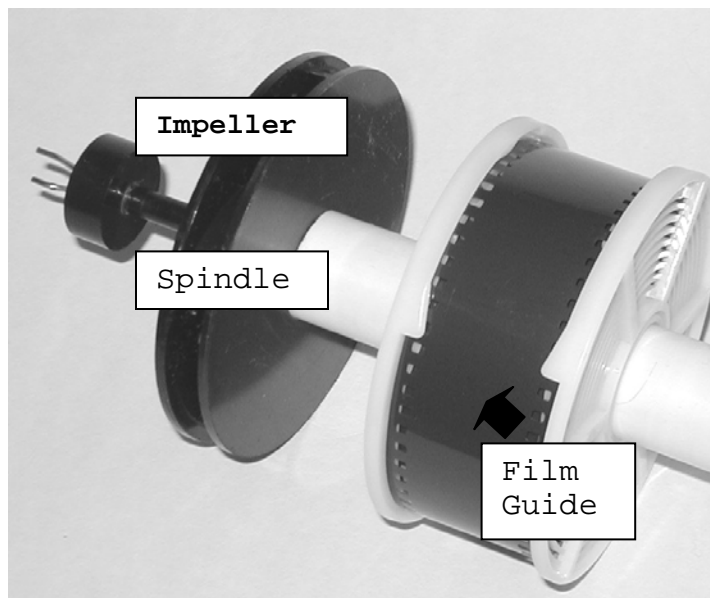
"6" for 5 or 6 rolls of 35mm, 3 rolls of 120/220 or 2 4x5 holders (8 sheets). Use SPACER

"8" for 7 or 8 rolls of 35mm, 4 or 5 rolls of 120/220.

The SSK uses 2 oz. (60ml) of solution per run, plus 3 ½ oz. (105 ml) per roll.

If you want to change the developing times see PUSH PROCESSING.

The unit will load the first solution into the internal heating tank, heat it to the proper temperature, warm the film DRUM with warm air and then start the process automatically. As the unit is processing one solution it prepares the next solution. The film DRUM has an independent secondary temperature controller that controls the warm air blowing on the DRUM to maintain accurate temperature. The temperature in the DRUM is continuously measured and the processing time slightly adjusted for a final tweak of the processing. This fine tunes the solution to an accurate temperature for very consistent results. When one solution is finished it is drained out and the prepared solution in the heating tank is pumped into the DRUM. The same procedure is repeated for all the necessary solutions. The unit will signal at the end of the wet processing. Remove the film DRUM. Insert the PLUG in the COUPLING and wipe out the TROUGH with a paper towel.



## **DRYING**

Use your own dryer if you have one. If not use the included UTILITY DRYER. The film is dried on the reels. Up to 4 roll of 35mm film ONLY can be dried at one time, the base of 120 film is too thin for drying on a reel, and must be dried by other means. In Programming mode you will have to program the unit to DRY AFTER PROCESSING

Place the UTILITY DRYER vertically in the TROUGH so that the cut away portion of the DRYER covers the air vent in the side of the TROUGH. Shake out each reel 4 times over a sink with a vigorous snap of the wrist to remove excess solution. Put the reels on the dryer spindle. The spindle should not stick out past the reels. Place the spindle in the UTILITY DRYER.

Push START to begin drying. SSK will FLUSH itself as it is drying the film. The unit MUST BE ALLOWED TO FLUSH itself after every processing run. The required drying time will vary with the amount of film and the relative humidity of the room. If the film is not fully dry when the dryer stops (15 min.), dry again. Rinse all reels, spindle and drum with COLD water. Dry the parts at room temperature, hot air may distort the parts. RINSE, DO NOT IMMERSE THE DRUM.

If you get drying marks, try the following: a) use distilled water for the last step. b) dilute the wetting agent or stabilizer. c) use softened water. d) rinse externally in distilled water. e) squeegee the film and hang it up to dry. *Film with drying marks can be re-rinsed and dried again.*

An accessory hang-up dryer is available from PhotoTherm (Part# AF-DR8).

## **REEL LOADING**

The plastic ratcheting reels can be adjusted to hold different sizes of film. Simply hold the reel in both hands, making sure that the outer spiral groove (near the ball bearings) is on top and facing you.

Twist the right half of the reel clockwise until you hear a click. The two halves can then be pulled apart. There are 3 “keyed” positions on the reel hub. The narrowest position is for 35mm or 126, the second for 127, and the widest for 120/220.

Insert the leading end of the film, emulsion down, into the outer spiral groove of the reel and an inch past the ball bearings. With both hands on the reel twist the right half and the left half in opposite directions. You may have to assist the film feeding by placing the thumb, of your forward moving hand, on the outside of the film.

*Keep feeding the film until the end clears the ball bearings.*

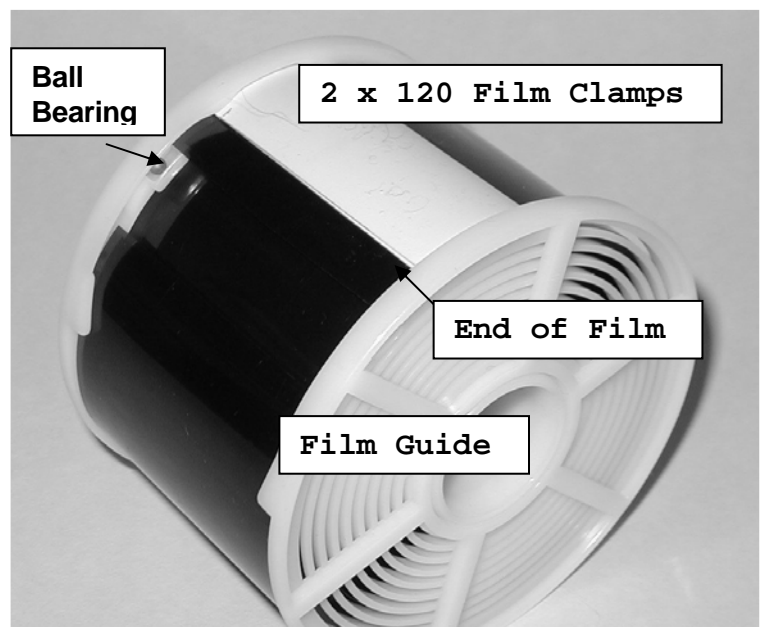
Any Paterson™ reels will work. They are available at most photo stores. Contact Photo-Therm if you prefer to use different style reels.

**35 MM FILM** Cut off the film leader. Clip the corners of the leading end to make feeding easier. 35 mm film can be started past the ball bearing in the light, but must be fed into the reel in the dark. Twist one side of the reel back and forth to feed the film into the reel. When you reach the end of the film use scissors to cut it away from the film cassette. Do not tear the film. An uneven tear may cause the film to come off the reel.

**120/220 FILM.** Separate the tape from the backing paper and fold it back over the film. This will stiffen the end of the film. Load the taped end into the reel. Feed until the back end passes the ball bearings.

Bend a 120 Film Clamp and place it over the end of the film into the grooves of the reel, close to the ball bearings, as shown above. Add a second film clamp on top of the first one. For extra assurance use a 1 in. piece of leader tape to bond the end of the film to the film clamp.

*Mount the 120 reels in the center of the spindle.*





## **SPECIAL FUNCTIONS**

Just turn the power switch ON for normal operation. Hold down the START switch as you turn the power switch ON to be able to PROGRAM process values. Hold the PLUS switch when turning on to see the roll count and run DUMP tubing test and valve test.

Hold MINUS when turning the unit on to put SSK-8R in DIAGNOSTIC mode.

MODE	Hold when switching ON	Description
NORMAL	Nothing	Normal Operation
PROGRAM	START	Changes processes and set values.
TEST	PLUS +	Tests Valves and DUMP lines. Displays Roll count.
DIAGNOSTICS	MINUS -	Technical diagnostics.

### **NORMAL MODE** Special Functions

Selected with PLUS when machine is turned ON without holding any other switch.

DRY will turn on drier for 15 minutes.

DRAIN will empty the internal HEAT TANK and the film DRUM.

FLUSH will automatically clean the unit internally. Done after every process. It rinses the HEAT TANK, selector valve and pumps and expels any floating residue out the FLUSH tube on the back of the unit

CLEAN LINES is a major cleaning. It draws solution through each of the chemical tubes, one at a time, starting with tube #18 and ends with #1 and then does a FLUSH using #5 as a water source.

All solution tubing should be removed and the water tubing moved manually from position to position, as the unit draws water through each tube to clean itself.

CALIBRATE will load water into the heat tank, heat it and hold the temperature at 37.8 °C (100 °F). The unit will emit a beep every time it reaches the proper temperature. When the temperature is stabilized, the unit will double beep. Check the temperature with a digital thermometer (an electronic fever thermometer works great) with the probe near the magnetic stirring rod but not touching the bottom of the heat tank. A glass or dial thermometer will not work. . Use PLUS and MINUS to change the unit's displayed temperature to match the temperature of your thermometer. Push START to record the calibration. Turn the unit off and run DRAIN to empty the heat tank. ....If you have a Celsius thermometer, determine the error from 37.8 °C. Use PLUS and MINUS to have the unit display 100.0 plus 2 times your error. As an example, if you read 38.1oC, the error is .3. X 2 = .6. Set the units display temperature to 100.6.

CALIBRATE also measures the number of pump pulses needed to cover the level sensors. This information is necessary for replenishment with the SSK-8R. If you run out of water during calibration, rerun the calibration.

The DRUM Temperature sensor can be tested by holding MINUS when "CALIBRATE" is displayed and then pushing START. The bottom display line shows 2 Hex numbers. The first Hex number refers to the DRUM temperature sensor. At room temperature (70 °F, 21 °C) the Hex number should be B9,BA,BB,BC,BD or BE. The important thing is that it should not vary by more than 2 on any successive reading. If the readings are erratic, clean the Stainless Steel contact plates with alcohol and Scotch Brite, and squeeze in the contactors on the body.

**PROGRAM MODE** will allow you to change the set processing values. Select by holding START as you turn SSK on.

SSK will first show you programming instructions.

INSTRUCTIONS  
- = CHANGE

Use MINUS when you want to change settings. Minus will also lower the time when changing times.

INSTRUCTIONS  
+ = ADVANCE

Use PLUS to advance the selections and increase the settings.

INSTRUCTIONS  
START = RECORD

START records the changes.

INSTRUCTIONS  
PWR OFF TO EXIT

Turn the power switch off to exit programming.

UNIT CODE  
#

Change # to 7 for the unit to operate. Push MINUS to make a change. Push PLUS until 7 is displayed and then push START to record the change. This is only done once when you first get

Super Sidekick. After recording either turn off the unit for at least 10 seconds to exit or push PLUS to look at the next parameter.

REPLENISH %  
##=BLEACH ##=FIX

Changes the percent of replenishment. Push MINUS to change. One number at a time will start blinking. Use PLUS to increase the number. Push MINUS to move to the next number. When all the numbers are correct, push START to record.

PROCESS NAME  
#:## DEV TIME

The next few screens let you change the set developer times. (Changing the developer time for one processing run only (Pushing), is done during normal processing as the process is selected.)... push MINUS to make a change, use PLUS and MINUS to select the time and then push START to record.

DRY AFTER PROCES  
NO

If you want to use the included utility dryer right after processing, set to "YES". If you will dry the films externally (recommended), set to "NO".

E6 SLIDE PROCESS  
4 STEP

Select the slide process you want to use: whether 4 or 7 step, with or without prewet. You can also choose not to show slides as a selection to the operator.

C NEG PROCESS  
C-41

Select the color negative process you want to use: C-41 or bleach & fix combined, with or without prewet. You can also choose not to show color negatives as a selection.

PREWET BW  
NO  
CHANGE ALL TIMES

Set to yes if you want the BW film to be prewet before developer. You can change the time of any step in any process. You can remove any step by making the time less than 2 minutes. In Black & White any changes after developer affect all the Black & White processes. Push MINUS to make changes, push PLUS to select

the process, then push MINUS to change the times in that process. PLUS selects the solution, MINUS will let you make changes and then PLUS and MINUS change the time. START records the selection. Exit by turning Super Sidekick off.

SAVE CHEM BLEACH

Select the solutions you want to save to the BLEACH SAVE and FIX SAVE tubes. Push MINUS to make a change, push PLUS to select the process, then push MINUS to change the solutions you want to save in that process. PLUS changes the choice (Yes or

SAVE CHEM FIX

No) and START records the change. Exit by turning Super Sidekick off.

ROTATE SPEED  
40 RPM

You can change the rotational speed of the spindle. Push MINUS to make a change. PLUS will advance the selections and then START will record the changes.

RESET ALL VALUES

Will change all parameters to their original settings when Super Sidekick was shipped from the factory. Just press START.

**TEST MODE** Select by holding PLUS as you turn SSK ON. It will first display roll and run counts and then show the number of pump pulses used to cover each of the level sensors.

DUMP TUBING installation is tested by pumping up water into the large film drum and letting it drain out. The cycle is repeated 3 times. Connect the DUMP and FLUSH tubing to your drain or bottle. Fill the water bottle with water and connect it to tube #5. Insert the large DRUM into SSK, keep the top off so you can observe the action. The DRUM should fully empty every time it drains. If it does not, turn the unit off and recheck your DUMP tubing. You can empty the HEAT TANK and DRUM by running DRAIN in NORMAL MODE.

The VALVE TEST is selected by pushing PLUS. Insert the PLUG into the coupling. When you push any switch, a valve will open and the FILL pump will turn on as long as you hold the switch. It will pump any solution in the HEAT TANK out of the DUMP/SAVE tubes. You can use the CALIBRATE function in NORMAL mode to pump some water into the HEAT TANK.

The SAVE switch will indicate ON (red showing) on the display if it is on during the VALVE TEST.

**DIAGNOSTIC MODE** Select by holding MINUS as you turn SSK ON. This is a technician level area. Acknowledge you are technically qualified by pressing PLUS.

PLUS OR START  
NO DRUM SENSOR!

Pushing Start will ignore the temperature sensor on the film DRUM. Processing is accomplished using the single temperature controller in the HEAT TANK. This setting is used in the unlikely event that there is a problem with the DRUM. It will allow you to get good processing until you receive a good film drum. This setting must be set for every run.

Pushing PLUS lets you select outputs or sensors. Push START to test outputs.

PLUS OR START  
OUTPUTS

When choices appear on the bottom line, they are selected by the MINUS, PLUS or START Switches.

OUTPUTS  
VALVE PUMP OTHER

The valve and pump tests are obvious, OTHER contains tests for the dryer and rotator (DR&ROT). TEMP contains a sequence of data:

1. Temperatures of the film drum and the heat tank.
2. Show the unit voltage 120 or 240.
3. The AC voltage used to determine when to switch to UPS operation.
4. Digital potentiometer setting.
4. Line frequency.

The readings are in relative numbers in Hex. Hold MINUS and push PLUS to return to the previous menu.

GAT (push START) will exercise the ROTARY SELECTOR valve to both ends of travel, then stop at tube #9. This is the middle of travel and is the position the valve must be in when its internal tubing is mounted

PLUS OR START INPUTS
-------------------------

Will display any level sensor that senses solution. SSK has the following Level sensors: Low, 2-roll, 4-roll and drain level (located inside the coupling), dump bottle sensor, The Flush sensor inside the overflow of the HEAT TANK and the SAVE switch.

You can test the sensors by connecting a clip lead between the solder lug on the side of the HEAT TANK (central grounding [earth]) and the sensor.

## MAINTENANCE

### ***Wipe off all spills when they occur.***

Keep the stainless contact plates on the DRUM clean. Never touch with fingers. Clean daily with alcohol and buff with Scotch Brite. Bend in the contactor springs on the body periodically. Use silicone grease to lubricate the "O" ring on the SNOUT of the film DRUM as needed.

*Inspect the plastic sleeve on the STAPLE that turns the spindle - replace if worn.*

Clean the reels as needed by soaking in a 50% solution of household bleach for 5 minutes. Rinse well with hot water.

ONCE A WEEK, clean the inside of the coupling with ammonia (available at drug stores and supermarkets) using the brush provided. The coupling is the gray fitting into which the film DRUM is inserted. Run FLUSH (see NORMAL MODE) after cleaning.

*ONCE A YEAR, open the unit (see SERVICE), unplug it first, and:*

1. Protect the PC board from getting wet. Cover it with paper towels and a plastic sheet.
2. Examine for any signs of wetness.
3. Clean the heat tank and the area above the heat tank with a cloth dampened with a toilet bowl cleaner.
4. Replace the air filter on the dryer with a 3" square of air conditioner filter.
5. Remove the protection for the PC board and push down on all the connectors.
6. Close up the unit.

## **ALARMS & MESSAGES**

DO NOT TURN UNIT OFF until you check why.

A continuous series of short buzzes signals that the unit requires attention. Read the message in the display to find out what needs to be done.

**(SOLUTION) NOT DRAINED** means that the a processing solution did not drain out. Work quickly, but calmly. The film is safe. The display will tell you what to do.

**PUSH START** to let the unit know that you are there.

**REMV DRUM & DUMP.** Remove film DRUM, quickly put your finger over the end of the snout so that the solution does not spill out. Take the film DRUM to the sink and discard the solution through the snout. Do not open the film DRUM. **PUSH START** to let the unit know.

**INSERT FILM DRUM.** **PUSH START** to let the unit know.

**CHECK DUMP LINES.** If it is developer this step is skipped. **PUSH START** to let the unit know. The process then continues. At the end of the run the unit will ask you to check the dump (and save) lines and to clean the coupling.

\*\*\*\*\*

**CHECK "SOLUTION NAME"** means that there is not enough solution for the processing to continue. Push START to turn off the alarm. Fill the solution bottle and then push START. The process will continue.

**FLUSH** means that the unit was not flushed after the last processing run. Push START to allow unit to flush itself.

**NO AC** means the unit is not plugged in. Plug the unit into a live wall outlet.

**DUMP TANK FULL** Empty the DUMP bottle.

**PLEASE TURN OFF** Turn unit off when not in use. There is nothing that needs warming up.

**MACHINE FAILURE** Problem with HEAT TANK temperature sensor. See **CORRECTING PROBLEMS**.

**SET CODE** SSK code must be set before it can operate. See **PROGRAM MODE**.

**CLEAN DRUM SENS!** SSK has tested the DRUM temperature sensor and determined that it needs cleaning. Wipe the stainless steel plates with alcohol to remove grease and fingerprints. Buff with Scotch-Brite. Push in the contactor springs.

**DO CLEAN COUPLING.** Use ammonia to Clean the sensor in the COUPLING where the DRUM is pushed inserted. See **MAINTENANCE**.

**DO CLEAN LINES.** See **SPECIAL FUNCTIONS**

**CLEAN LEVEL SENSRS** SSK has determined that one of your level sensors in the heat tank may have some slime or a hair hanging from it. Open the unit (see **CORRECTING PROBLEMS / OPENING the UNIT**) and clean off the sensors. Check for any moisture inside the unit.

**CLN GAT GEAR.** The computer detected that there is dirt on the outside edge of the large gear of the SELECTOR VALVE. See **SERVICE**. Be very careful to protect the circuit board when cleaning the gear.

**REPLC FILL PUMP.** Replace the FILL PUMP that pumps solution from the HEAT TANK to the film DRUM. The computer tested the pump and it is pumping slower. See **SERVICE / OPENING THE UNIT**.

**CALL FACTORY & CALL FACTORY COD(E).** Call factory at 609 396-1456 between 0830 and 1600 EST.

**LOW LEV OPEN.** Low level sensor in HEAT TANK is open. Very unlikely. Computer checks before any solution touches the film. The film is safe. Call the factory at 609 396-1456 between 0830 and 1600 EST.

**CALENDAR ERROR. ).** Call factory at 609 396-1456 between 0830 and 1600 EST.

**WAIT FOR AC** electrical power. If message flashes on and then goes away do not worry. If the message stays on, it means that you are on Uninterruptible Power Supply (UPS) and developer has not yet touched the film. SSK will wait for AC electrical power to be restored before continuing the process. If the film was already in developer when the power outage occurred, SSK will continue the process on UPS power.

**CHECK FLUSH LINE.** Flush tubing not draining correctly. Check the way the tubing runs from the FLUSH fitting on the back of the unit to your drain.

## HINTS

Test a new batch of chemistry on your own film or run a test strip.

# PROCESSING PARAMETERS

S O L U T I O N   T i m e   T e m p   T u b e   C O M M E N T S

=====

## E6 Slide Processes.

### 7 Step E6 slides without prewet.

Air Preheat               Varies   to 37.8                   Go to SLD DEV below

### 7 Step E6 slides with water prewet.

WATER prewet	Varies	Varies	5	Checks drum temp
SLD DEV eloper	6:30	37.8	2	Very precise
WATER wash	2:00	37.8	5	
SLD REV ersal	3:00	37.8	18	
SLD C olor DEV	4:00	37.8	17	Very precise
SLD COND itioner	4:00	37.8	16	pre-bleach
SLD BLEACH	8:00	37.8	6	
COLOR FIX	4:00	37.8	13	SAVED FIX if switch ON
WATER wash (3x)	2:00	37.8	5	also used by C41 FIX
SLD STAB ilizer	2:00	23.9	9	

### 4 Step E6 Slides without water prewet.   Go to SLD DEV below

### 4 Step E6 Slide with water prewet.    PRESET

WATER prewet	Varies	Varies	5	Checks room temp
SLD DEV eloper	6:30	37.8	2	Very precise
WATER wash (2X)	2:00	23.9	5	Acts as cool stop
WATER wash	2:00	37.8	5	
SLD C olor DEV	4:00	37.8	17	Very precise
WATER wash (2X)	2:00	23.9	5	
WATER wash	2:00	37.8	5	
SLD BLIX	10:00	37.8	6	SAVED FIX when switch is ON
WATER wash (3x)	2:00	37.8	5	
SLD STAB ilizer	2:00	23.9	9	

## Color Negative Processes.

### Color Negative C41 without prewet.   Go to C41 Dev below

### Color Negative C41 with prewet    PRESET

WATER preheat	Varies	Varies	5	Checks drum temp
C41 DEV eloper	3:15	37.8	3	Very precise
C41 BLEACH	6:00	35.5	8	
WATER wash	2:00	35.5	5	
COLOR FIX	6:00	35.5	13	SAVED FIX if switch ON
WATER wash (2X)	2:00	35.5	5	also used by E6 FIX
C41 STABilizer	2:00	23.9	10	

Color Neg. Bleach+Fix combined no prewet. GO to C41 DEV

Color Negative Bleach+Fix combined with prewet.

WATER prewet	Varies	Varies	5	Checks room temp
C41 DEV eloper	3:15	37.8	3	Very precise
C41 BLIX	3:00	35.5	8	SAVED FIX when switch is ON
WATER wash	2:00	35.5	5	
C41 STAB ilizer	2:00	23.9	10	

Black & White Processes. All are available in NORMAL MODE. If PREWET BW is programmed YES then there will be a prewet step before developer.

TRI X / PLUS X

B&W DEV eloper	4:40	23.9	4	end of BW process is same
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TMAX 100 / 400

B&W DEV eloper	5:30	23.9	4	end of BW process is same
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BW 20C 68F

B&W DEV eloper	7:00	20.0	4	end of BW process is same
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END OF BLACK & WHITE Common to all BW processes.

WATER wash	2:00	23.9	5	also acts as stop
B&W FIX	7:00	23.9	14	SAVED FIX is switch ON
WATER wash	2:00	23.9	5	
B&W P erma WASH	2:00	23.9	15	hypo clear or water
WATER wash	2:00	23.9	5	
BW RINSE	2:00	23.9	11	



# CHEMICALS

## BLACK AND WHITE

Use: 1. Kodak T-Max™ developer (B/W DEV) 2. Rapid B/W FIX 3. Hypo clearing agent (B/W P WASH) such as Heico Perma-Wash™ 4. B/W RINSE Photo-Flo (Kodak) or Rexton's Hyperwet™. Mix T-Max developer 1 part concentrate to 5 parts water. It works better in a Sidekick than Kodak's recommendation of 1:4.

## COLOR NEGATIVES C-41

Use working strength solutions of any C-41 chemistry. Overflow solutions work well. If you use replenishers remember to add starter to the developer to get a working strength solution.

RA C-41 chemistry works well with the standard bleach and fix times. If you would like to shorten the bleach and fix times see PROGRAM MODE.

## SLIDES 7 STEP E-6

Blue shift can be corrected by adding sodium hydroxide (see chem. manufacturers instructions) to the color developer or by diluting the reversal step. When reversal is too dilute, the slides will have a green cast.

Bleach should be aerated (have air pumped through it). Use a fish tank type air pump and run the tubing to the bottom of the bleach bottle. Do not use an airstone. Run for at least 2 hours a day. Check reversal for scum growth - discard, clean bottle, re-mix. Check color developer for separation - re-stir with mixing rod.

## SLIDES 4 STEP E-6

Unicolor, Photo-Technology, Tetanol or Beseler chemistry will work. (Some manufacturers call their chemistry 3 step - they don't include a wetting/stabilizing step. Use C-41 stabilizer or a wetting agent (Hyper-wet or Photo-Flo) for this step.

## PROCESSES OTHER

MOTION PICTURE FILM (black layer on base). Process ECN-2. Process like normal C-41 film. Since SIDEKICK can use fresh solutions for each step, the black residue does not gum up the unit. Turn SAVE switch OFF. After the last step, rinse under warm water and gently rub the remaining residue from the film base. Do not touch the emulsion. Hang film to dry. Wash reels with a soft brush in dish detergent.

Mix color chemistries in water that is at least 85 °F (29 °C). Stir well. Wait one hour before using.

## **PUSH PROCESSING.**

If you want to change the developer time for one run, hold MINUS as you push START. The display will show the developer time. Change to desired time using the PLUS and MINUS. When the proper time is displayed push START to begin. The next time you process the unit will return to the normal time.

*As a rough guide, 1 stop is about:*

- a) + 2 min. for Slides E-6.
- b) + 30 sec for color negs C-41.
- c) + 20% of normal dev time for B/W

*Call film manufacturer for more complete information.*

**B/W PROCESSING TIMES with  
TMAX Developer at 75°F (23.9°C).  
Select "Tri X / Plus X" and PUSH.**

FILM	Time	Push 1 Stop
<b><u>Agfa 201 440-2500</u></b>		
APX 25	4:15	5:15
APX 100	4:15	5:15
AP 400	4:50	5:45
<b><u>Fuji 800 788-3854</u></b>		
Neopan SS	4:15	5:30
Neopan 400	4:40	5:50
Neopan 1600	3:30	4:40
<b><u>Ilford 201 265-6000</u></b>		
HP5 PLUS	4:30	5:30
100 DELTA	4:30	5:30
400 DELTA	5:00	6:00
Delta 3200	7:30	9:00
SFX	6:00	7:10
Univ 400	5:00	6:00
FP4 PLUS	3:30	4:10
PanF	3:30	4:10
Ilford Pan 400	5:30	6:35
<b><u>Kodak 800 242-2424</u></b>		
PAN-X	4:40	5:40
PLUS-X	4:40	5:40
TRI-X	4:40	5:40
TMAX 100	5:30	6:35
TMAX 400	5:30	6:35
Tech Pan	5:00	6:00
TMAX 3200	7:10	8:15
Cosmos	5:00	6:00
125PX	4:40	5:40
Acros 100	3:45	4:30
Infrared	5:00	6:00
With D76	6:00	7:15
<b><u>Miscellaneous</u></b>		
Academy	3:30	4:15
Forte Pan	5:30	6:35
Arista 125	4:40	5:40
Arista 400	7:30	8:30
Forte Pan	5:30	6:35
Pan 100	4:00	4:50
Tech Pan	5:00	6:00
Verachrome 120	4:40	5:40

## **4 X 5 INSTRUCTIONS** (optional)

Practice loading the 4x5 HOLDER with the lights on. The HOLDER will process 4 sheets at a time.

The 2 stainless clips are on the TOP of HOLDER. Rotate both clips toward the center core.

Insert the sheets with the emulsion towards the center. 4x5 sheet film has notches in one corner. Hold the sheet facing you with the longer side vertical. When the notches are at the top right corner, the emulsion is facing you.

Load the 2 inside sheets first. Load from the TOP of the HOLDER. Squeeze the film so that it can fit inside the ring of the HOLDER. Push the sheet into the groove. Use your other hand to help guide the sheets.

After all the sheets have been loaded, rotate the stainless clips toward the outside ring to hold in the sheets.

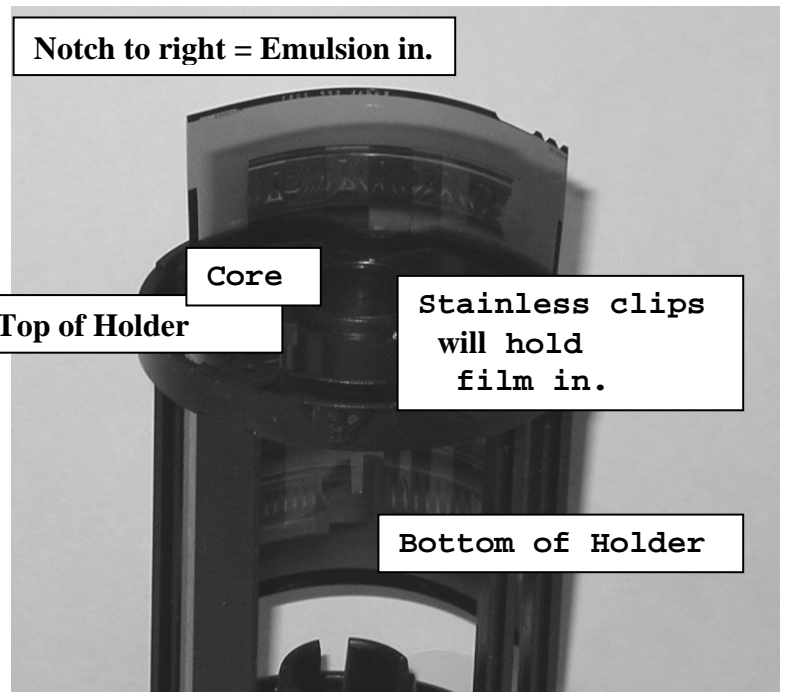
The spindle should then be inserted from the bottom of the HOLDER. Place the spindle with the HOLDER(S) in the film DRUM and process normally.

Select DRUM SIZE = 4 for 1 HOLDER in the 4-roll DRUM and DRUM SIZE = 6 for 2 HOLDERS in the 8-roll DRUM.

After processing:

1. Remove the HOLDER(S) from the spindle.
2. Rotate the stainless clips toward the center core of the HOLDER
3. Push the sheet up slightly from the bottom.
4. Pull the sheet from the TOP. Use your other hand to help guide the sheet.
5. Use your own method to dry the sheets.
6. Rinse the HOLDER(S), spindle and DRUM. AIR DRY. DO NOT USE HOT AIR.

***Very thin base 4x5 film like Kodalith will not mount in the holder.***



# **AUTOMATIC REPLENISHING**

Initially set up your unit to run without automatic replenishment. When you are familiar with the operation and satisfied with the results, start using the replenishment option.

Super Sidekick model SSK-8R can replenish any 2 chemicals, usually bleach and fix for a great reduction in chemical costs. You get the highest quality results, because the developers are fresh.

Replenishment is turned on when 3 conditions are met:

1. The solution is saved as either bleach or fix. Save only one of each when you are replenishing.
2. The SAVE switch on the back of the SSK is turned on (red showing).
3. The percentage of replenishment as set in PROGRAM MODE is not zero. See PROGRAM MODE. Start with 9% bleach and 30% fix replenishment.

Replenishers are connected like any other solution: bleach to tube #7 and fix to tube #12.

The SAVED solution drains to a REPLENISHING bottle, next time SSK uses that solution it will pump up the set percent of replenisher and then pump up the used solution. When the used solution, it drains back to the REPLENISHING bottle.

Because of the added replenisher, the volume in the REPLENISHING bottle increases. You have to arrange the bottle so that the overflow flows away or is emptied manually.

The RETURN tubes are connected to the SAVE FIX and SAVE BLEACH tubes on the back of Super SIDEKICK.



Connect the REPLENISHING bottle as per drawing:

1. The RETURN tubing must follow all the rules of a DUMP line.
  - a. Keep it short and going down as quickly as possible.
  - b. Minimum of a 12" drop.
  - c. End of tubing must never be in solution.
2. Allow 2 feet of slack on USED tubing.
3. Aerate the bleach with a fish tank air pump (2 hours/day or more) through the air fitting. Do not use an airstone.
4. The OVERFLOW should be directed to your container.
5. Use black ¼" tubing to reach the bottom of the REPLENISHING bottle for USED and Air.

Monitor your process results. If the film does not clear (milky) increase the fix replenishment rate. You can usually re-fix the film manually to correct the problem.

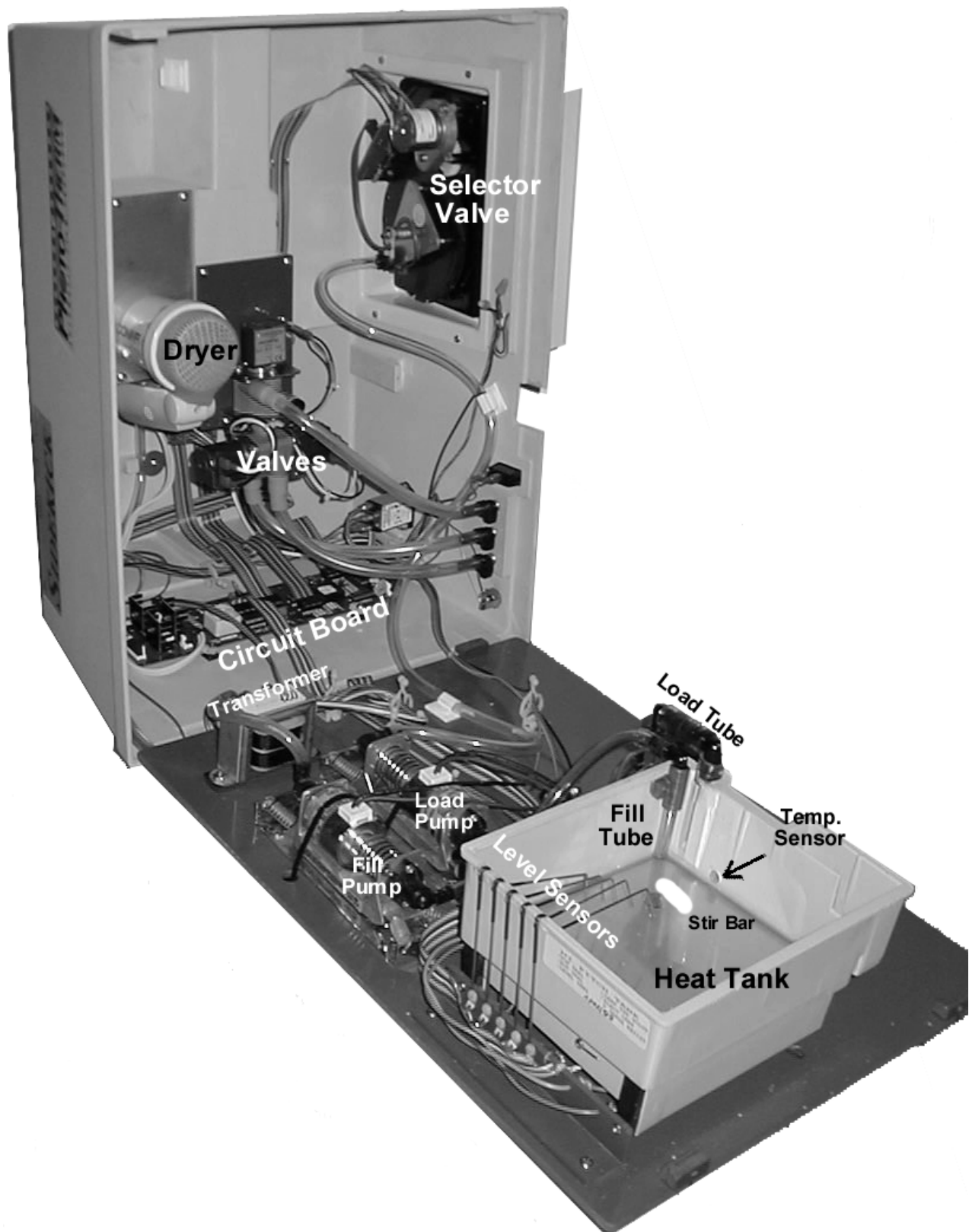
If the film looks flat, muddy or the black areas have a red tinge, increase the bleach replenishment rate and/or make sure the bleach is aerated. You can usually re-bleach the film to correct the problem.

# **SERVICE**

## **CORRECTING PROBLEMS**

Will not start up or gets stuck in process step. Alarm does not sound	<u>Selector Valve jammed</u> . Record display messages. Remove DRUM, drain solution and put DRUM in bucket of water to protect the film. Unplug & open unit and check ribbon connector and tubing to Selector (Rotary) Valve.
Excessive leakage from front of DRUM, where spindle passes through	1. <u>Improper draining</u> . Reread how to run DUMP lines. Run DUMP LINE TEST in TEST MODE. 2.The <u>STAPLE is touching the spindle bushing</u> while the spindle is being pulled in. Adjust by mounting the STAPLE closer to the motor.
"Machine failure" message	<u>Temperature sensor problem</u> . Check ribbon connector from heat tank. Make sure it is pushed down, properly aligned and pins are straight. Handle carefully. Lift up squarely. Do not just pull ribbon.  If program module was just replaced check it for bent pins.
Film too dark or light	1. <u>Temperature</u> off. Run CALIBRATE. See Special functions. 2. <u>Chemical</u> quality, mixing or age.
Film color off	<u>Chemical</u> quality, mixing or age.
DRUM not recognized	Clean <u>contact plates on film DRUM</u> . Run sensor test.
Dev time counting down when STARTed	<u>DRUM sensor</u> shorted. Replace film DRUM.
Leak from snout.	Grease "O" ring on DRUM snout.

Use a telephone near Sidekick when calling in for service.



## **OPENING the UNIT.** *Qualified Personnel only*

*The unit must be opened in order to reach the internal components.*

- 1) Remove the power cord from the unit and pull at least one battery from the battery holder. Remove all the solution tubing from the tubes on the back of the unit.
- 2) Unscrew the 4 screws holding the BODY to the base (2 on the right side and 2 on the left side). Lift up on the right side of the BODY so that it hinges on the left side. Rest the BODY on its left side.

### SELECTOR VALVE REPLACEMENT

Open the unit (see OPENING). Cover the PC Board with paper towels and a plastic sheet to protect it from getting wet. The SELECTOR VALVE (SV) is now exposed. The tubing from the SV is held against the side of the case by a clamp. Open the clamp. With a paper towel in hand; remove the SV tubing from the pump fitting.

Remove the ribbon connector of the SV from the PC board. Carefully lift the connector straight up. Do not bend the pins. The SV is held with 4 screws. Unscrew and remove SV.

Carefully turn the SV so that it lines up on tube #9. Install the new SV. Fasten with the 4 screws. Clamp the tubing to the case. The black mark on the tubing should line up with the bottom of the clamp block. Push the end of the tubing onto the pump.

Remove the protective socket from the connector of the new SV and place it on the old SV connector. Replace the electrical connector in the socket marked SELECTOR VALVE on the PC board. The mark on the connector should be on the lower left corner.

*Close up the unit. Do a test processing run.*

### PRINTED CIRCUIT (PC) BOARD REPLACEMENT

Open the unit (see OPENING). Locate the circuit board. Carefully note how each connector is mounted before you pull it from the board. Pull away squarely from the board, be careful not to bend the pins. Do not just yank the ribbon cables. Rotate the 2 clamps holding the PC board and remove it.

Push the new PC against the stop on the right side of the track and then twist the clamps. Carefully replace all the connectors. Use the wiring diagram as a guide for positioning. Close the unit and run CALIBRATE (see SPECIAL FUNCTIONS).

### TEMPERATURE SENSOR REPLACEMENT

Open the unit (see OPENING). Locate the heating tank. The temperature sensor screws into the side of the heating tank. There are 2 wires connecting the sensor. One goes to a solder lug, and the other is soldered to a black wire. Cut away both wires (the wires are interchangeable).

Wrap the new sensor with 4 wraps of Teflon tape and screw into the heat tank. Solder the 2 wires where you cut the old wires. Close the unit and run CALIBRATE TEMPERATURE (see SPECIAL FUNCTIONS) to match the sensor to the PC board.

### SOLUTION LEVEL SETTING

Open the unit (see OPENING). Locate the 5 level sensors on the heat tank. The sensor closest to the left corner is low level (4 oz. -120 ml) followed by: 11 oz, 15 oz, 22 oz and 29 oz. Pour the proper amount of water (start with 4 oz. then add 7 oz. = 11 oz. then add 4 oz. = 15 oz. etc.) into the heat tank. Hold the sensor where it passes over the tank wall with one hand and bend the end of the sensor with the other hand so that the sensor just touches the water. Empty the heat tank by closing the unit and running DRAIN (see SPECIAL FUNCTIONS).

### SHIPPING the UNIT

Prepare the unit by running CLEAN LINES (see SPECIAL FUNCTIONS). Open the unit (see OPENING) and wipe up any loose solutions. Tie down the 2 pumps (through the holes in the base) with strong twine. Remove the magnetic stirrer (white pill) from inside the heat chamber. Close the unit. Remove and keep stir bar, plug, door and power cord.

Place the unit in a plastic bag. Use as much packing (balled newspapers, bubble wrap etc. <please do not use small Styrofoam chunks>) as possible to cushion the unit from the walls of the box.

INCLUDE a sheet with your name address and telephone and a description of the problem.

### PARTS LIST SSK-8R Always specify model and serial number.

SSK-SVR	Selector Valve	550.-	AF-SPL	Spindle 4-roll	60.-
SK8-HTL	Heat tank	350.-	SK8-SPL	Spindle 8-roll	90.-
AF-TSL	Temperature sensor	50.-	SK8-D4	Film drum 4-roll	140.-
SSK-PCB	Printed circuit brd	300.-	SK8-D8	Film drum 8-roll	160.-
AD-DISP	Display	90.-	SSK-BOTH	Holding bottle, replenish.	25.-
AF-TR	Transformer	75.-	AF-BOT5	Bottle 5 Gal	20.-
AD-P	Pump	160.-	ADC-LEV	Sensor for dump btl	70.-
AF-DRT	Dryer internal	50.-	AF-FV	Float valve	20.-
AF-DR8	Wall dryer 8 roll	450.-	AF-ICE	Water connect kit	25.-
AF-V3	Valve triple	180.-	AF-BOT2L	Bottle 2 liter	5.-
AF-VCL	Valve coil 120V	25.-	AF-REEL	Film reels Paterson	15.-
AF-VST	Valve seat	5.-	AF-LNCRD	Power cord	10.-
SSK-ROT	Rotate motor	125.-	DP-SW	Switch power. 2 pole	10.-
AF-STAP	Staple bushing	15.-	DP-PSW	Push switch	5.-
AF-STSL	Staple sleeve (2)	1.-	AF-SW	Switch save	5.-
AF-4X5	4x5 holder	90.-	AF-BOT1G	Bottle 1 gal (4 l)	7.-
AF-C120	120 film clamps (3)	2.-	AF-OR	"O" ring (3)	2.-
			AF-BOT7L	Bottle 7 liter	10.-





## SUPPLIER PHONES

609 396-1456	Our help line. First check CORRECTING PROBLEMS
800 243-2776	Agfa
800 788-3854	Fuji
201 265-6000	Ilford
800 242-2424	Kodak
310 538-9530	Clayton. BW Chemistry. Customer recommended. claytonchem@earthlink.net
800 621-5488	Brandess Kalt. Sell Heico <u>Perma Wash</u> fix (hypo) remover
800 553-2001	Porters. Get catalog. Has Rexton Hyperwet #35-0597, a B/W rinse
708 833-0300	McMasters. Ask for catalog. Has <u>silicone grease</u> #1418K4
800 537-9724	United Plastics. Ask for catalog. Good source for bottles, tubing etc.
800 537-9724	Good stand for unit. Rubbermaid 4505. United Plastics # 06998
800 255-1522	Pic-Mount. Slide Mounters, mounts and boxes
612 936-9500	Pakon. Slide mounters and mounts.
973 808-9010	Gepe. Snappy slide mounter. Slide mounts for Snappy mounter
800 309-4239	CDW. Tritt Lite. BC PRO 1400 Uninterruptible Power Supply

## SERVICE LOG

Date	Action
ATTACH MORE SHEETS AS NEEDED for LOG	

# PhotoTherm LP

110 Sewell Ave.

Trenton NJ 08610 USA

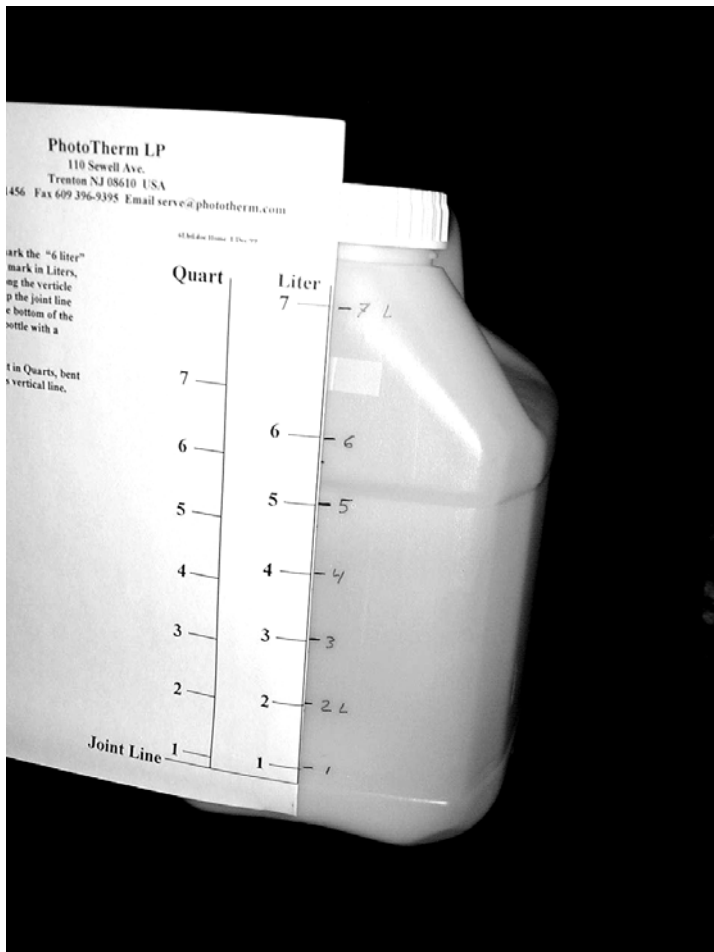
Tel 609 396-1456 Fax 609 396-9395 Email [serve@phototherm.com](mailto:serve@phototherm.com)

## 7 Liter Bottle Template

7Lbtl.doc Home 1/Dec/99

Use the template to mark the "7 liter" bottle. If you wish to mark in Liters, bend the template along the vertical line for liters. Line up the joint line with the joint near the bottom of the bottle and mark the bottle with a permanent marker.

If you wish to mark it in Quarts, bend the template along its vertical line.



Quart

Liter  
7

7

6

6

5

5

4

4

3

3

2

2

1

1

Joint Line