PhotoTherm

Super Sidekick

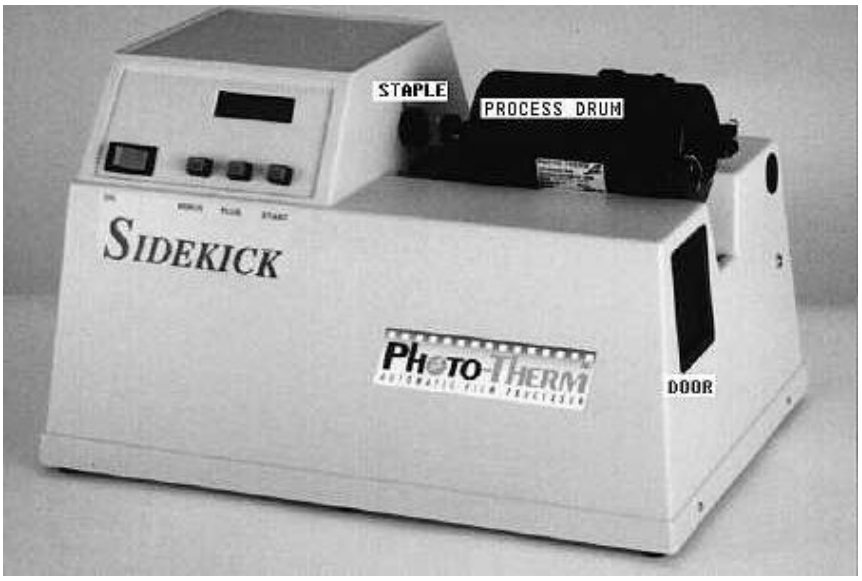
Automatic

Film Processor

Model *SSK-4*

4 Roll

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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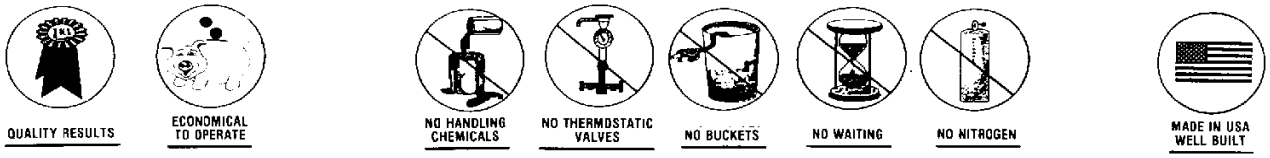
WARRANTY

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.



110 Sewell Ave. Trenton, NJ 08610 USA Tel 609 396 1456 Fax 609 396 9395
Email serve@phototherm.com

DESCRIPTION

The SSK-4 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-4 is compact (22" wide by 14" high by 16" deep). The process drum is removable for loading in a dark box or bag. The SSK-4 can process 4 rolls of 35, 2 rolls of 120/220 or 4 sheets of 4x5 at one time. One chemical can be automatically saved from each process for silver recovery, reuse or 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-4 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-4 anticipates problems and takes automatic corrective action.

The SSK-4 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

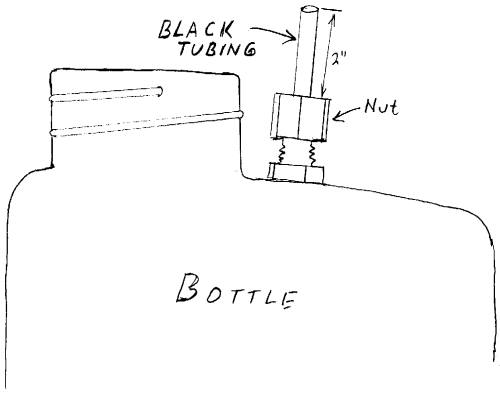
The unit comes packed in 2 boxes. Make sure you received the following:

- **... 4-reel black processing drum with lid**
- **... 4-reel spindle with impellar.**
- **... 4 plastic film reels**
- **... Main processor SSK-4**
- **... Spacer 2-roll (white fat donut)**
- **... Utility dryer tube. (White plastic 4" diameter 11" long)**
- **… Dryer spindle. (10" long without an impellar)**
- **... Coil of ¼" flexible tubing**
- **... Power cord**
- **... Twelve ½ gal. (2 liter) solution bottles with fittings**
- **... Water bottle (5 gal) with float valve**
- **... Saddle valve kit to connect water bottle to water pipe**
- **... Dump bottle (5 gal) with level sensor and cap with**
- **…3" gray plastic fitting to hold the dump and flush tubing**
- **... 10 Film Clamps for 120/220 film.(white curved plastic pieces)**
- **... Plug to seal COUPLING when FLUSHING**
- **... Syringe of silicone grease**
- **... Allen wrench (1/16") for bushings**
- **... Magnetic stirrer. A white "pill" (3/8" x 1")**
- **... Permanent marker**
- **... Piece of Scotch Brite**
- **... Set-up video**
- **... This instruction book**

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.



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. Allow about 2 feet (60 cm.) extra for slack. RUN THE TUBING STRAIGHT DOWN from the back of the machine. After about a foot down, the tubing can run in any direction. Label both ends of the tubing with the chemical name. Slip one end over the proper tube of the selector valve and the other end over the exposed black tubing of the solution bottle. The 5 gal. Water bottle connects to the WATER (#5) tube.

IMPORTANT. The solution source bottles must be located <u>below</u> 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. 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. **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").

SETTING UP THE UNIT Cont.

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.

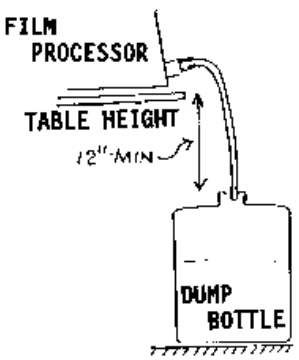


Fig. 1

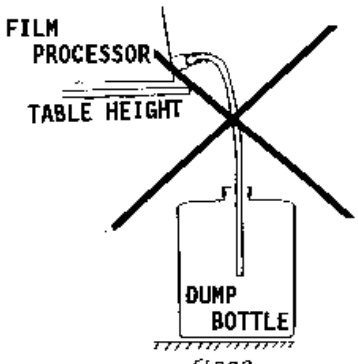


Fig. 2

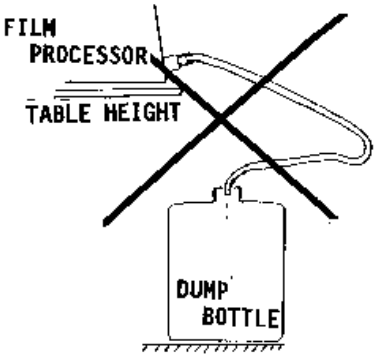


Fig. 3

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-4 from short power losses. You can also connect SSK-4 to a TRIPP Model Pro 1400. A 1400 Watt Uninteruptable 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.

See PROGRAM MODE to select the processes.

Run the DUMP TUBING TEST to verify correct tubing installation. See TEST MODE.

PRESET SELECTIONS

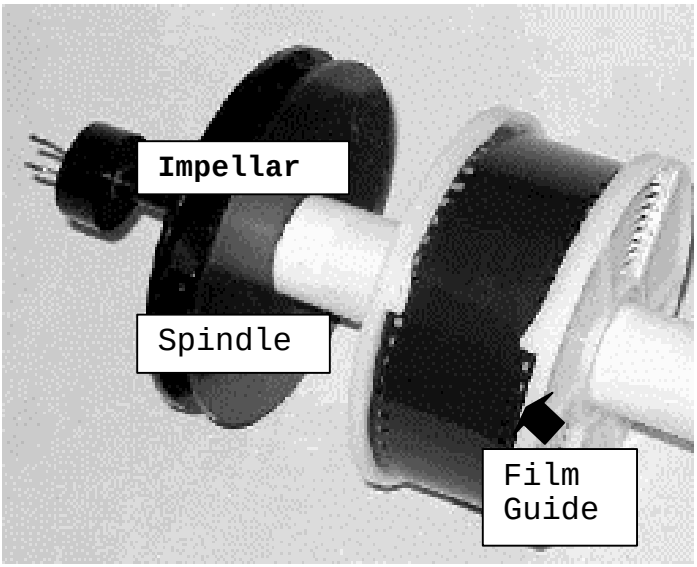
Selections as shipped from the factory. See PROGRAMMING to change selections (values).

Name	Preset	Choices
Unit Code	0	Must be changed to 7 to operate.
Slide Dev Time	6:30m	
Color Neg Dev Time	3:15m	
TriX/PlusX Dev Time	4:40m*	
Tmax 100/400 Dev Time	5:30m*	
Tmax 3200 Dev Time	5:45m**	
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
Set all Times	Standard	Change any time as needed
Save as Fix	All Fixes	Any solution

* 75°F (23.9°C) ** 85°F (29.3°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 PROCESS 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 PROCESS TANK 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.

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 processing 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 time slightly adjusted for a final tweak of the processing. This fine tunes the processing 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 PROCESS DRUM. Insert the PLUG in the COUPLING and wipe out the TROUGH with a paper towel.

DRYING

Up to 4 rolls of 35 mm film can be dried in the included UTILITY DRYER on reels. The film can also be dried any other way. The base of 120 film is too thin for drying on a reel, and must be dried by other means.

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 (closed end on the bottom) and put 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. Room air dry - 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 and hang up to dry. *Film with drying marks can be re-rinsed and dried again.*

An accesory 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.

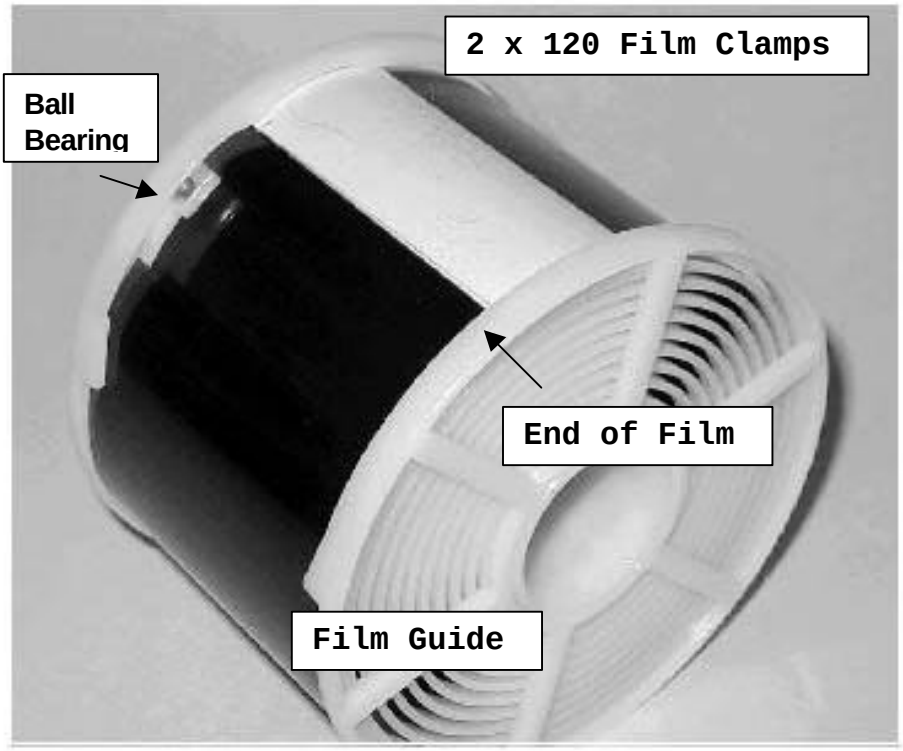
Twist the right half of the reel clockwise until you hear a click. The two halves can then be pulled apart. There are 3 "keyed" positions on the reel hub. The narrowest position is for 35mm or 126, the second for 127, and the widest for 120/220.

Insert the leading end of the film, emulsion down, into the outer spiral groove of the reel 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-8 in DIAGNOSTIC mode.

MODE	Hold when switching ON	Description
NORMAL	Nothing	Normal Operation
PROGRAM	START	Changes processes and process 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.

DRY will turn on drier for 15 minutes.

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

CLEAN LINES is a major cleaning. It draws solution through each of the chemical tubes, one at a time, starting with tube #18and ending 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 ^{o}C (100 ^{o}F). The unit will emit a beep every time it reaches the proper temperature. Allow 15 minutes after the first beep before reading temperatures. Check the temperature with a digital thermometer (an electronic fever thermometer works great) with the probe near the stir rod but not touching the bottom of the heat tank. A glass or dial thermometer will not work.

The temperature can be adjusted with a small screwdriver through a hole on the left side of the unit. Clockwise to decrease temperature*. All units are calibrated at the factory and should not need adjustment in the field.*

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 ^{o}F, 21 ^{o}C) the Hex number should be B5,B6,B7,B8,B9 or BA. The important thing is that it should not vary by more than 2 on any successive reading. If it 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 presett 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.

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.

CHANGE ALL TIMES

You can change the time of any step in any process. You can remove any step by making the time less then 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 FIX

Select the solutions you want to save to the FIX SAVE tube. 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 No) and START records the change. Exit by turning Super Sidekick off. You can save any chemical (or chemicals) you want through the SAVE FIX tube.

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.

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 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 the display if it is ON (red showing) 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.

This mode individually checks all of the machine function, sensors and actuators. SSK may have to be opened to reach some of the sensors. See SERVICE.

LEVEL TESTER VALVE PUMP OTHER

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). The SAVE switch can also be tested as a level sensor.

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.

If none of the level sensors is made, you can push MINUS to go to the VALVE test, PLUS to go to the PUMP test and START to go to OTHER tests.

VALVE TST -+BACK DUMP FIX BLEACH

Pushing the switches will open the valves. (The valve test in TEST MODE allows you to check flow through the valve by also turning on the FILL pump). Hold MINUS and push PLUS to go back to LEVEL TESTER. Pumps are tested the same way. AUXILIARY and BLEACH are reserved for future needs.

OTHER TST -+BACK DR&ROT TEMP GAT

DR&ROT (push MINUS) will turn on the dryer and the spindle ROTATE motor. TEMP (push PLUS) will show the HEX readings of the DRUM and HEAT TANK sensors, show the voltage (120/230) and then take a few readings in HEX of the actual voltage.

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.

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 processing 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 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.

DISCARD DEV! SEE BOOK ERR# 1 means that the developer did not drain out. Work quickly, but calmly. The film is safe.

1. **Pull the film DRUM out and quickly stop up the end of the snout with your finger.**
2. **Go to a sink or bucket and let the developer drain out of the snout.**
3. **Re-insert the DRUM back into SSK.**

The process will then continue, but check to see why the developer did not drain.

CHK DRAIN TUBES SEE BOOK ERR# 2 means that some solution (not developer) did not drain. Push start to stop the buzzer. Check your drain tubing. Is the tubing crimped? Is the DUMP bottle full? When you have found the problem, correct it and push START to let the process continue.

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 with alcohol to remove grease and fingerprints. Buff with Scoth-Brite. Push in the contactor springs.

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.**

REPL FILL PUMP **SSK has determined that your FILL pump needs replacing.**

WAIT FOR AC **If message flashes on and then goes away do not worry. If the message stays on it means that developer has not touched the film yet and that you are connected to a Uniterruptable Power Supply (UPS). 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.**

HINTS

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

PROCESSING PARAMETERS

SOLUTION	Time	Temp	Tube	COMMENTS

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 (3x)	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	3:00	37.8	16	pre-bleach
SLD BLEACH	8:00	37.8	6	
COLOR FIX	4:00	37.8	12	SAVED FIX if switch ON
WATER wash (3x)	2:00	37.8	5	
SLD STABilizer	2:00	23.9	9	

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

4 Step E6 Slide with water preheat. ⇦ 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	
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 prehwet	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.

TRI X / PLUS X

B&W DEV eloper	4:40	23.9	4	end of BW process is same

TMAX 100 / 400

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

TMAX 3200 This is a warmer process 85°F (29.3°C) vs 75°F (23.9°C)

B&W DEV eloper	5:45	29.3	4	end of BW process is same
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^{im} developer (B/W DEV) 2. Rapid B/W FIX 3. Hypo clearing agent (B/W P WASH) such as Heico Perma-Wash^{tm} 4. B/W RINSE Photo-Flo (Kodak) or Rexton's Hyperwet^{tm}. 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 ^{o}F (29 ^{o}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.

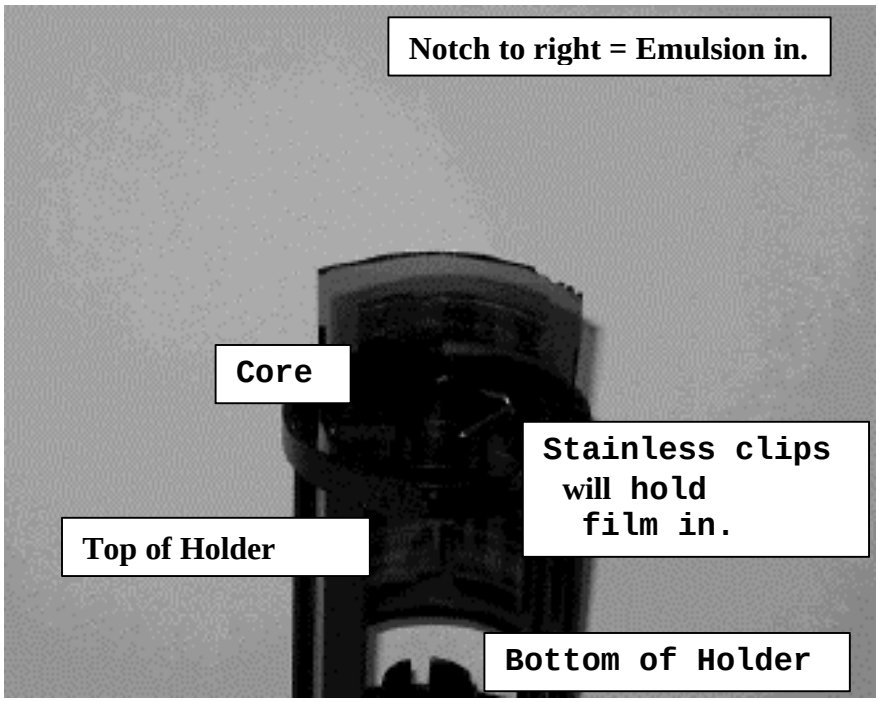
B/W PROCESSING TIMES with TMAX Developer at 75°F (23.9°C). Select "Tri X / Plus X" and PUSH.

FILM	Time	Push 1 Stop
Agfa 201 440-2500		
APX 25	4:15	5:15
APX 100	4:15	5:15
AP 400	4:50	5:45
Fuji 800 788-3854		
Neopan SS	4:15	5:30
Neopan 400	4:40	5:50
Neopan 1600	3:30	4:40
Ilford 201 265-6000		
HP5 PLUS	4:30	5:30
100 DELTA	4:30	5:30
400 DELTA	5:00	6:00
Delta 3200	7:30	9:00
FP4 PLUS	3:30	4:10
PANF	Not recommended	
Kodak 800 242-2424		
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
Select TMAX	3200	@85°F
TMAX 3200 @85°F	5:45	6:55

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 Processing DRUM and process normally. Select DRUM SIZE = 4 for 1 HOLDER in the 4-roll DRUM.

After processing:

1. **Remove the HOLDER 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, spindle and DRUM. AIR DRY. DO NOT USE HOT AIR.**

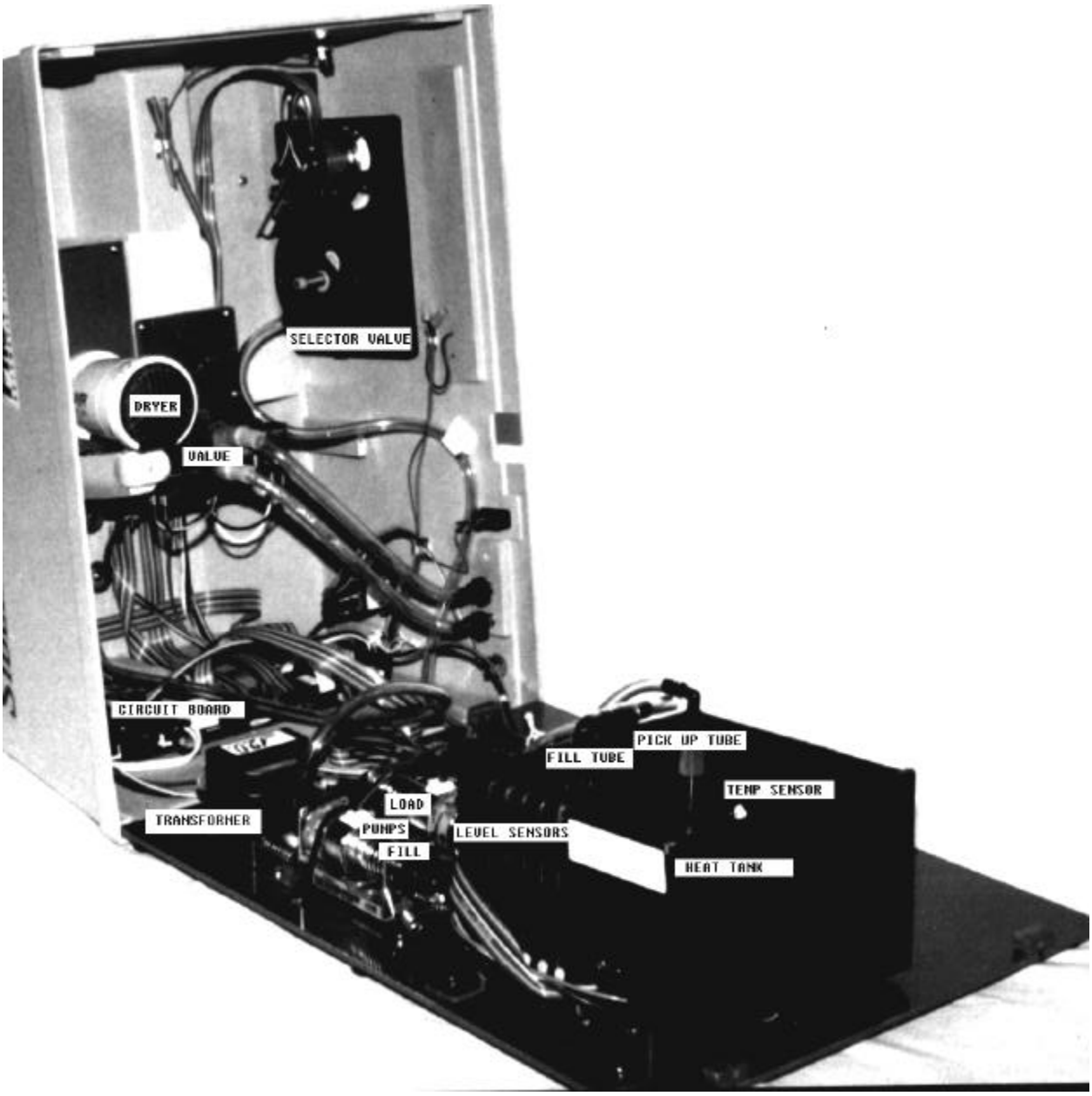
Very thin base 4x5 film like Kodalith will not mount in the holder.

SERVICE

CORRECTING PROBLEMS

Will not start up or gets stuck in process step. Alarm does not sound	**Selector Valve jammed. 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.Improper draining. Reread how to run DUMP lines. Run DUMP LINE TEST in TEST MODE.** **2.The STAPLE is touching the spindle bushing while the spindle is being pulled in. Adjust by mounting the STAPLE closer to the motor.**
"Machine failure" message	**Temperature sensor problem. 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.Temperature off. Run CALIBRATE. See Special functions.** **2.Chemical quality, mixing or age.**
Film color off	**Chemical quality, mixing or age.**
DRUM not recognized	**Clean contact plates on PROCESS DRUM. Run sensor test.**
Dev time counting down when STARTed	**DRUM sensor shorted. Replace DRUM.**
Leak from snout.	**Grease "O" ring on DRUM snout.**

Use a telephone near Sidekick when calling in for service.


SELECTOR VALVE
DRYER
VALVE
CIRCUIT BOARD
TRANSFORMER
LOAD
PUMPS
FILL
LEVEL SENSORS
FILL TUBE
PICK UP TUBE
TEMP SENSOR
HEAT TANK

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 (p.16) 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 (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: 9 oz and 15 oz. Pour the proper amount of water (start with 4 oz then add 5 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 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.

PARTS LIST SSK-4 Always specify model and serial number.

AF-SVG	Selector Valve	450.-	AF-SPL	Spindle 4-roll	60.-
SS4-HT	Heat tank	350.-	SK8-D4	Process drum 4-roll	140.-
AF-TS	Temperature sensor	50.-	AF-BOT2L	Bottle 2 liter	5.-
SS4-PC	Printed circuit brd	250.-	AF-BOT1G	Bottle 1 gal (4 l)	7.-
AD-DISP	Display	90.-	AF-BOT5	Bottle 5 Gal	20.-
AF-TR	Transformer	75.-	ADC-LEV	Sensor for dump btl	50.-
AD-P	Pump	140.-	AF-FV	Float valve	20.-
AF-DRT	Dryer internal	50.-	AF-ICE	Water connect kit	15.-
AF-DR8	Wall dryer 8 roll	280.-	AF-C120	120 film clamps (3)	2.-
AF-V2	Valve Double	120.-	AF-OR	”O” ring (3)	2.-
AF-VCL	Valve coil 120V	25.-	AF-REEL	Film reels Paterson	10.-
AF-VST	Valve seat	5.-	AF-LNCRD	Power cord	10.-
AF-ROT	Rotate motor	75.-	DP-SW	Switch power. 2 pole	7.-
AF-STAP	Staple bushing	10.-	DP-PSW	Push switch	5.-
AF-STSL	Staple sleeve (2)	1.-	AF-SW	Switch save	3.-
AF-4X5	4x5 holder	90.-			

blank sheet for page count. insert wiring diagram

SUPPLIER PHONES

609 396-1456	**Our help line. First check CORRECTING PROBLEMS**
800 221 1555	**Russell. 7-step Slide Chemistry. Very helpful**
800 243-2776	**Agfa**
800 788-3854	**Fuji**
201 265-6000	**Ilford**
800 242-2424	**Kodak**
800 999-4042	**PSI. Makes Unicolor 4-step slide chemistry**
800 525-2821	**Jobo. Imports Tetanol (Germany) 4-step slide chemistry**
800 621-5488	**Brandess Kalt. Sell Heico Perma Wash 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 silicone grease #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**
202 223-6906	**Interclone. Profit-making slide copier**
800 255-1522	**Pic-Mount. Slide Mounters, mounts and boxes**
612 936-9500	**Pakon. Slide mounters and mounts.**
716 377-6375	**Gepe. Snappy slide mounter. Slide mounts for Snappy mounter**
800 309-4239	**CDW. Tripp Lite BC PRO 1400 Uninterruptable Power Supply**

SERVICE LOG

Date	Action
	ATTACH MORE SHEETS AS NEEDED for LOG