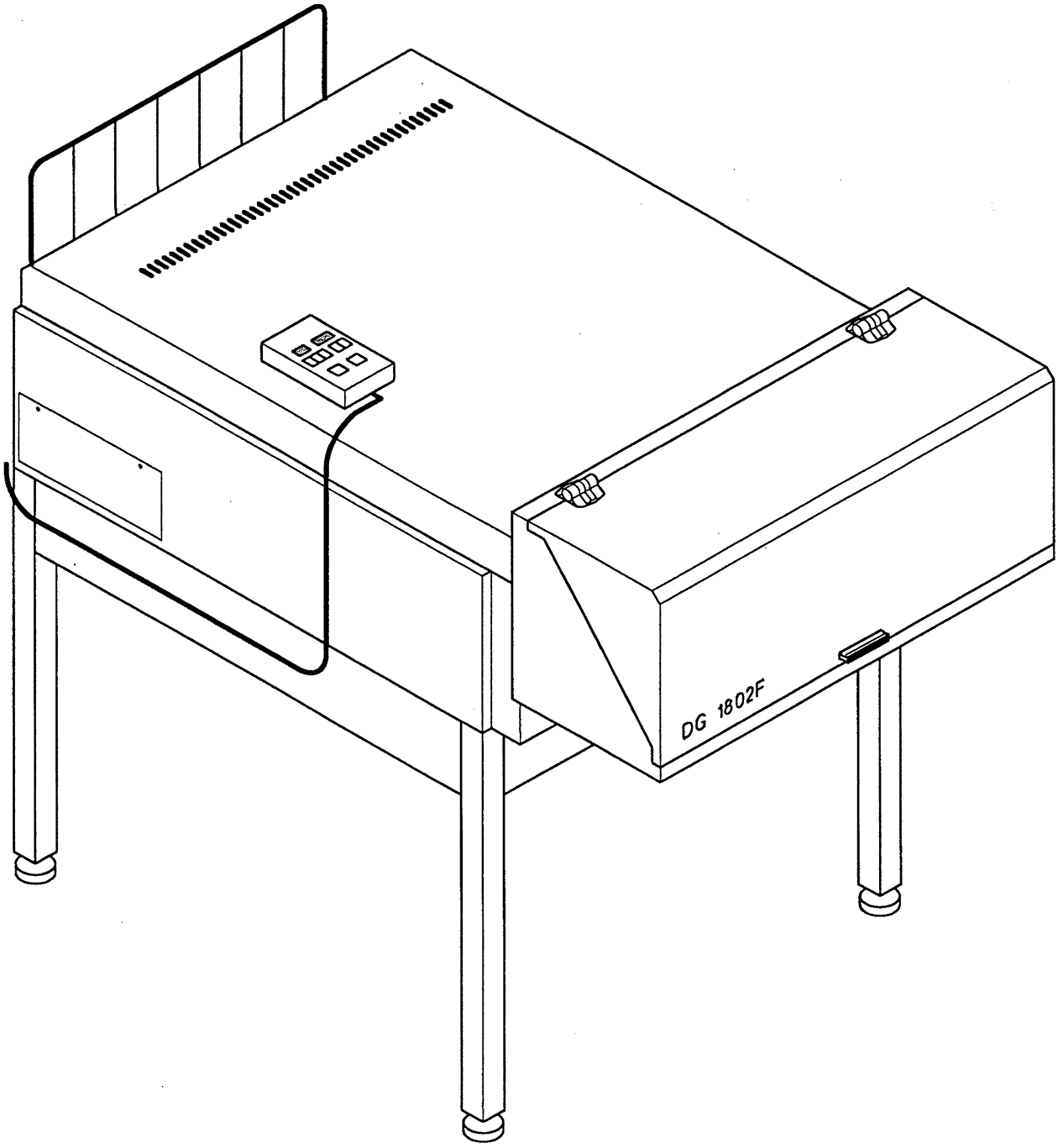
USER MANUAL



DG 1802 F

TEGN. 1:10 991028/SV 6237-OOB

NOTICE

All statements technical information and recommendations contained herein are based on tests we believe to be reliable, but accuracy of completeness thereof is not guarantied and the following is made in lieu of all warranties, expressed or implied:

Danagraf A/S shall not be liable or responsible to any purchaser or other person for injury, loss or damage neither direct, incidental or consequential, due to the use of or inability to the Danagraf equipment information in this manual.

Before using, user shall determine the suitability of the product for his intended use, and user assumes all risks and liability, whatsoever in connection therewith.
The processor is, to the best of our knowledge, suitable to work with all types of chemistries known to the graphic marked.

No statement or recommendation not contained herein, shall have any force or effect in any agreement signed by officers of sellers and manufacturer.

Sincerely Yours,

DANAGRAF A/S

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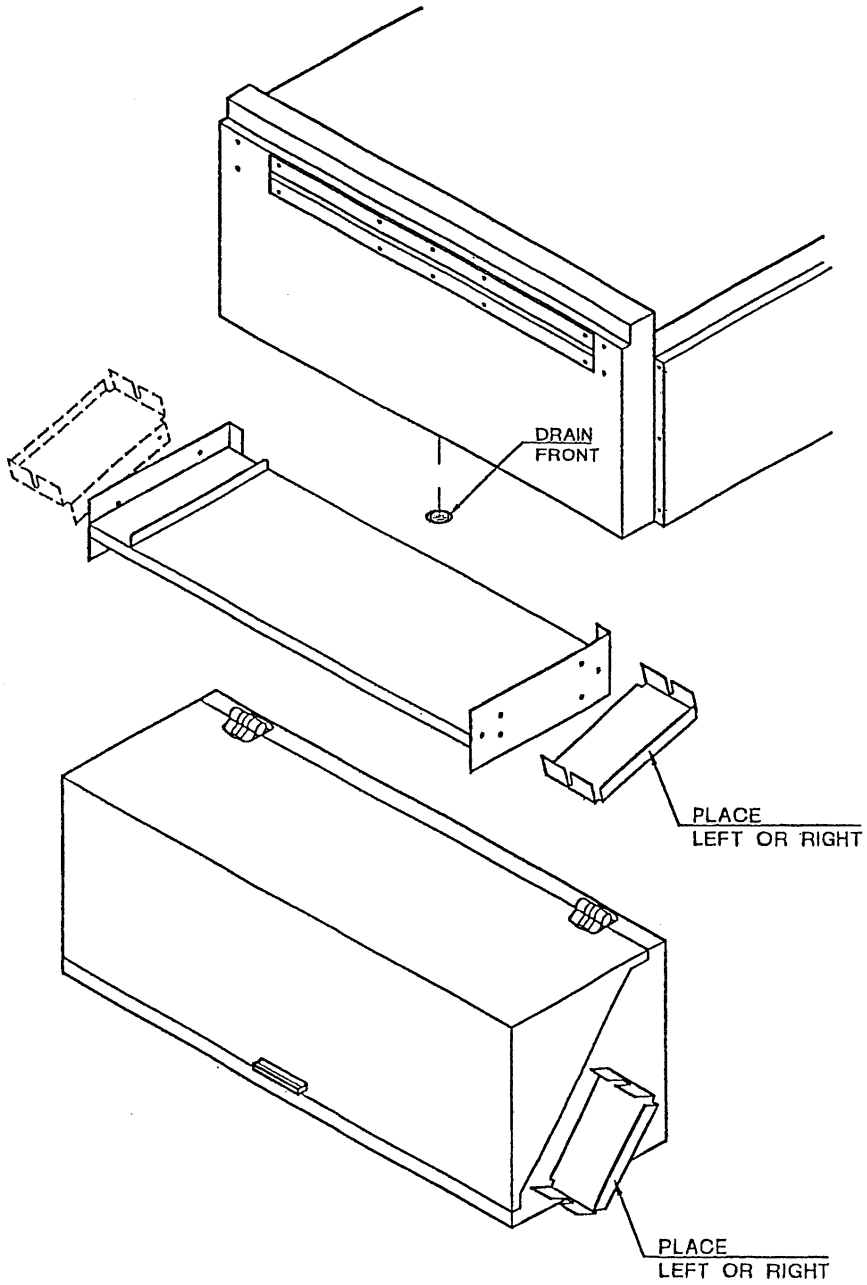
INTRODUCTION

The Danagraf DG 1802F Film Processor is conceived to accommodate the smaller user with the technology and ease of operation of automatic processing .

The high quality of Danagraf s renown processor line is also applied in this simplified, though complete production unit. All processor functions such as developer and fixer temperature and processing speed are controlled by means of a small handy operator panel. The holder for the control panel can be installed on the standard feed table or the daylight cassette left or right. If by accident the developer gets into the. wall, it can be drained below the front of the processor, see drawing below.



TECHNICAL DATA

DG 1802F

Height Total	1080 m.m. / 42.5"
Height Processor	360 m.m. / 14.2"
Height Stand	655 m.m. / 25,8"
Height Daylight cassette	330 m.m. / 12,9"
Width	655 m.m. / 28,8"
Length	1450 m.m. / 57,0"
Net weight	61 kg / 134 lbs.
Power supply	230V 50/6OHz
Max. power consumption	2700 W
Min. developing time	25 sec.
Factory setting developer time	35 sec.
Max. Developing time	60 sec.
Min. film length	140 m.m. / 5.5"
Min. film width	30 m.m. / 1.2"
Max. film width	430 m.m. / 17.0"
Tank capacity	8 ltr / 2.1 U.S. Gallon
Developer	8 ltr / 2.1 U.S. Gallon
Fixer	8 ltr / 2.1 U.S. Gallon
Water	

5 User Program

Adjustable temp. Developer	15 - 45^{0}C / 59 – 113^{0}F
Factory setting developer	33^{0}C
Adjustable temp. fixer	15 - 45^{0}C / 59 – 113^{0}F
Factory setting fixer	30^{0}C
Adjustable automatic dev. Replenish	0 - 999 ml / m^2
Factory setting dev. Replenish	400 ml / m^2
Adjustable automatic fix. replenish	0 - 999 ml / m^2
Factory setting fix. Replenish	300 ml / m^2
Adjustable dryer temperature	20-60^{0}C / 68-140^{0}F
Factory setting dryer temperature	45^{0}C / 113^0 F
Anti-oxidation program, fixed	60 min.
Anti-oxidation dev. Adjustable	15 - 75 ml / hrs.
Anti-oxidation fix. Adjustable	15 - 75 ml / hrs.

Room conditions: Temperature 20 - 25^{0}C / 68 - 77^{0}F, humidity 45 – 85%

INSTALLATION

Unpacking

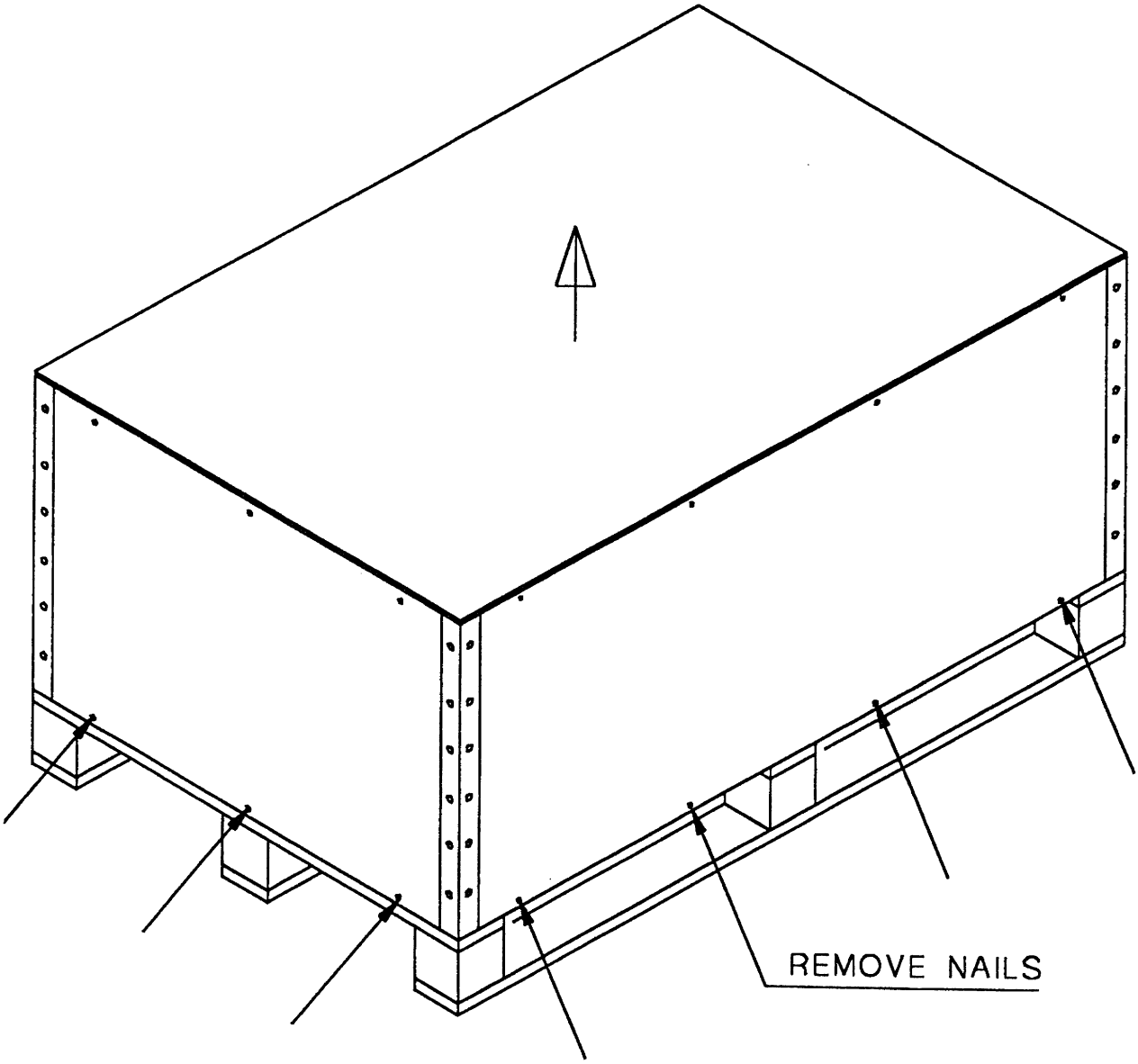
Remove the screws from the 4 sides (bottom) lift off the whole wooden part from the pallet.

Dismount all the parts from the pallet and check that all parts are present according to the enclosed packing list.

Note: Make sure that the hoses and the power cable goes inside the stand and be carefully not to break the drain pipes on the bottom of the Processor.

Level up the Processor in both directions, by means of the adjustable legs.

Mount the two 1" hoses to the drain pipes, red = dev. Blue = fix., according to the local regulations. In most countries, it is not permitted to lead the chemistries into the drain. Mount the 1" clear hose to a water inlet and the 1/2" clear to a suitable drain.



GENERAL DISCRIPTION

NOTE: When turning power ON the TEMP display (x x) will show the type of machine and the SPEED display (x x x) will show the E-Prom version for 5 sec.

When turning ON the main power, the rollers and pumps will run for a short while, this is for refreshment of the chemistry and to avoiding crystallization on the top rollers.

As long as the processor is turned ON, the fan on the fight hand side will be ON. This will prevent condensation and removes fumes from the processor.

The temperature for Developer, Fixer are adjustable and so is the process speed.

Whenever you enter material, and tile machine, is ready, tile processor will go to operating mode.

In case of "Low level" in any of the tanks, you will hear an acoustic ala and a red diode on the Control Panel will go ON. The processor will set the respective replenish-pump ON in order to keep the correct level. If the replenish-pump is active for more than 40 sec the pump will stop and dev/fix or water LEVEL warning will light up.

If low level occur in one of the baths, the belonging circulation pump and heater will not be able to work.

You have the possible to control the replenish pumps manually by pressing the respective buttons.

When the film affect the inlet sensor the processor starts and the Speed Display will flash with fast speed as long as the film affect the inlet sensor (" NO further INPUT ") processor busy.

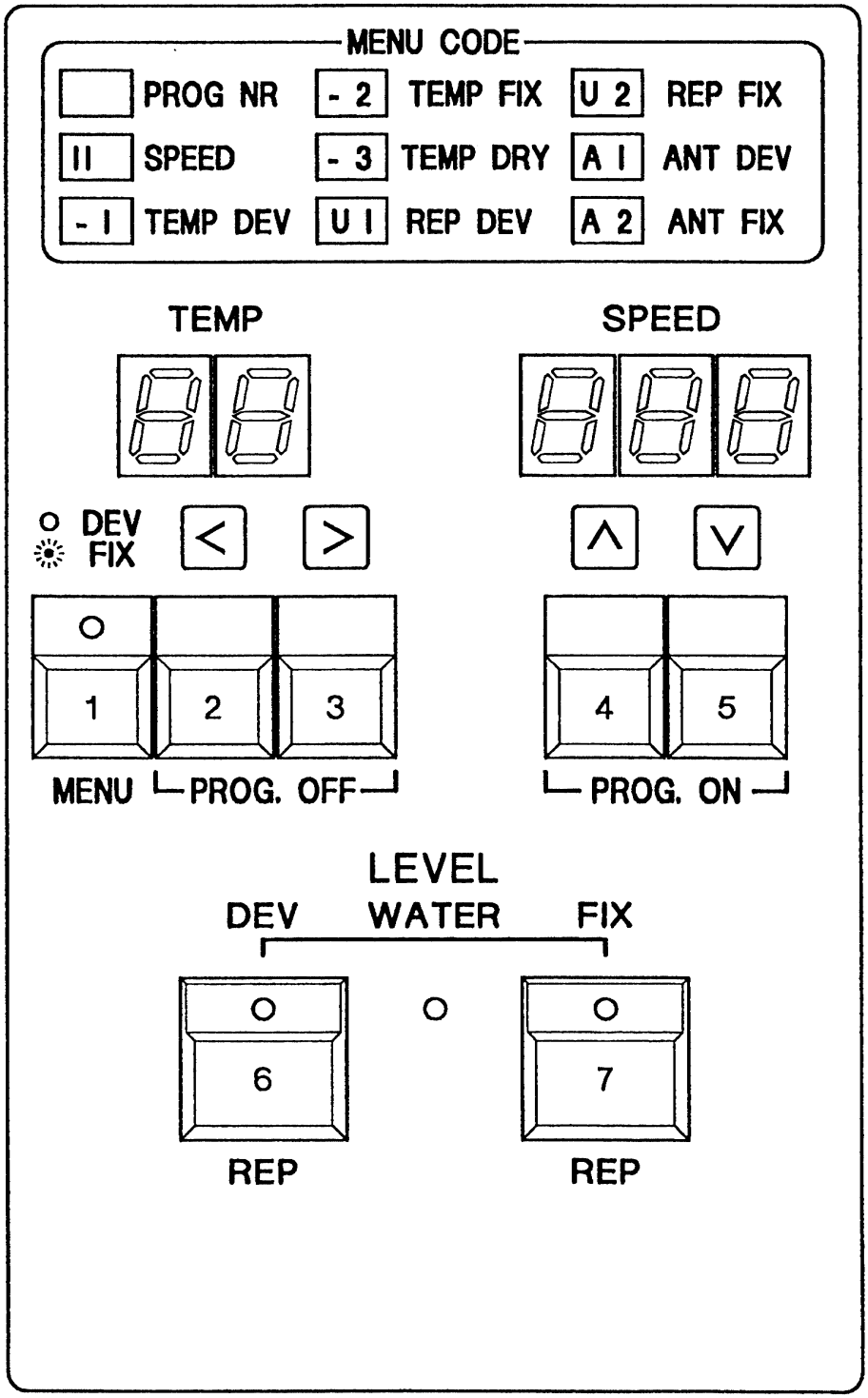
When the trailing edge of the film pass the inlet sensor the Speed Display will return to steady display, and the next film can be introduced.

After the film leaves the dryer, the processor will go to a " stand by " mode.

If the processor has not been used for one hour, the " ANTI-OXIDATION " program will go active, which will cause the roller to turn for 14 sec. to avoid crystallization. Replenish pump will give amount of replenish. See page 11 chapter for control Panel.

CONTROL PANEL

DISPLAY MODULE
30100110



CONTROL PANEL

The DG 1802 X-RAY have 5 User Programs.

The TEMP. display will show the actual temperature of the developer. to check the temp. for fixer, just press [1] key to change between DEV and FIX temperature.

How to create a program / change a program.

Press key [4]+[5] PROG. ON for 1 sec.
The display for TEMP. will go OFF and the Program 01 - 05 (1-5) will be shown in the display and the program 01 - 05 can be selected with the key [4] or [5].

Press key [1] SPEED display will indicate Process speed (20-90 sec.)
Temp. Display (II) The SPEED can be changed with [^] and [v] key.

Press key [1] SPEED display will indicate the set temperature in Developer.
Temp. Display (-1) The temperature can be changed with [^] or [v] key.

Press key [1] SPEED display will indicate the set temperature in Fixer.
Temp. Display (-2) The temperature can be changed with the [^] or [v] key.

Press key [1] SPEED display will indicate the set dryer temperature, 20-60^{0}C.
Temp. Display (-3) The dryer temperature can be changed with [^] or [v] key.

Press key [1] SPEED display will indicate set replenish for developer (05-99).
Temp. Display (U1) (05-99) is 50 - 999 ml/m^2, can be changed with the [^] or [v] key.

Press key [1] SPEED display will indicate set replenish for stabilizer (05-99).
Temp. Display (U2) (05-99) is 50 - 999 ml/m^2, can be changed with the [^] or [v] key.

Press key [1] SPEED display will indicate set Anti-oxidation program for dev.
Temp. Display (A1) Developer, 15 - 75ml pr. hour, can be changed with [^] or [v] key.

Press key [1] SPEED display will indicate set Anti-oxidation program for fix.
Temp. Display (A2) Fixer, 15 - 75ml pr. hour, can be changed with [^] or [v] key.

All new value will be saved in the E-Prom, to go out of the program, press key [2] + [3] (Program OFF) together 1 sec. and all the new value will be saved.

(THIS PAGE IS NOT IN USE)

PREPARATIONS

After the processor has been installed by a qualified technician, you can prepare to fill up the tanks with chemistry.
NOTE: Always follow the instructions given by the film and chemistry manufacturer.

Fixer:
It is strongly recommended first to fill-up the fixer tank in order to prevent splashing into the developer section. This will cause contamination of the developer and result in a poor developing process. The fixer tank is marked with blue.

Developer:
Before filling the developer into the Dev. tank, check and make sure that no splashing has occurred, when filling the fixer tank. If so clean thoroughly. The developer tank is marked with red.

Replenishment:
Mix some additional Developer and Fixer in separate containers. Place these under the processor and insert the 1/2" red hose into the Developer and the 1/2 it blue hose into the Fixer container.

Turn the processor "ON" and set up the programs, according to your needs.

Press the "MAN. REP. DEV." and "MAN. REP. FIX." buttons for a few seconds to make sure chemistry is pumped up through the system in order to remove air pockets.

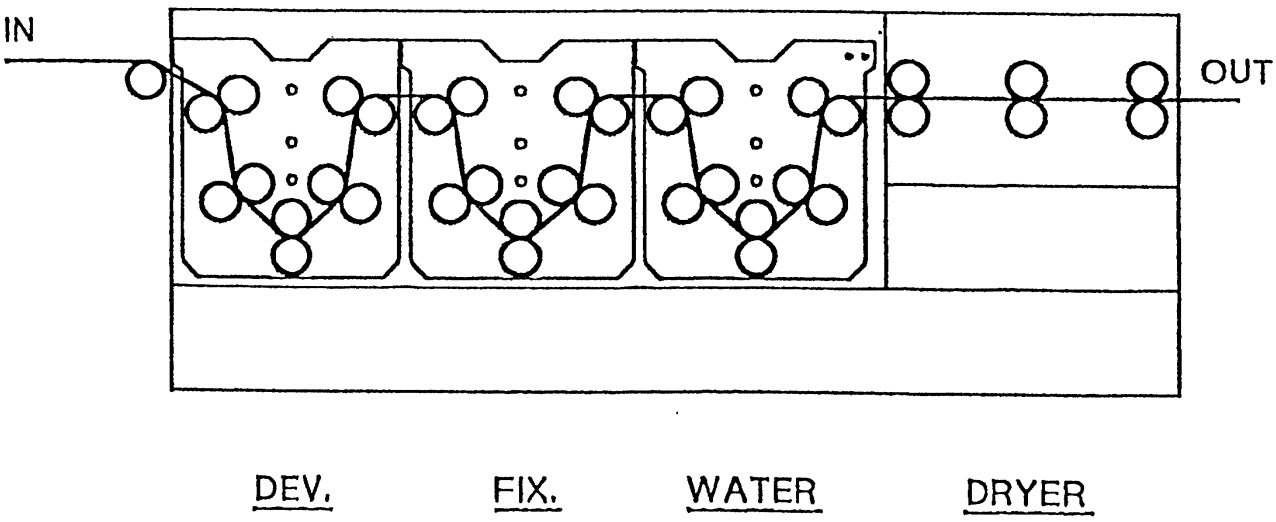
(THIS PAGE IS NOT IN USE)

DEVELOPING

When you insert film through the entrance slot a switch will be activated. The processor will start up in process mode. After the trailing edge has left the infeed sensor the processor will still run in process mode until material has completely left the dryer section.

When the processor is in the "STAND BY" mode the Anti-oxidation program will be active. This means the rollers will turn for 14 sec. every 60 min. to avoid crystallisation on the rollers. At the same time the Anti-oxidation program will maintain the balance of the chemistry according to the settings.

Note: It is not possible to change the developing time (SPEED) during process mode.



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RECOMMENDED MAINTENANCE

Routine cleaning:
The most effective way to avoid operating difficulties is to regularly clean the processor, its hoses and the replenishment pumps.
Chemistry is subject to oxidisation and even though the machine has its own program to eliminate this problem, the operator should pay special attention to preserve the chemistry and remove crystallised deposits from the equipment.
The use of floating lid in the developer replenish container will keep out the air to preserve the chemistry. This will give better results and create fewer problems.

The following suggestions are simple but extremely necessary. They will help enormously to avoid spoiled work, wasted time, lost tempers and unnecessary expense.
NOTE: Be careful, always to mount the parts in the correct position after cleaning.

Every day:
Clean the to cover, the film entry and the light room cassette (optional).
Use separate damp cloths to clean guides and each set of upper rollers.
Feed one or two film before commencing the days work.

Every week:
(in addition to above)
Turn OFF the processor and remove all 3 racks. Clean them carefully with lukewarm water, using separate cloths for each rack.

NOTE: Racks can be removed and refitted without draining out the chemicals, but once again, it is essential to make sure that not one drop of fixer goes into the developer bath. If this happens, the developer must be drained and the bath must then be thoroughly cleaned and refilled.

Every month or when needed:
(in addition to above)
Drain both baths and empty the replenishment containers.
Fill the baths and replenishment containers with water and ensure that the racks baths, hoses and containers are thoroughly washed by flushing and pumping water through each bath / system.

After refilling the bath, repeatedly press the manual replenishment buttons for the developer and fixer, to eliminate any air pockets in the system.

GENERAL QUALITY CONTROL STATEMENT

If there is a reduction in the quality of the processed materials, it can probably be solved by checking the control settings, the operational procedures, or by giving a little extra attention to the routine cleaning. A small amount of time invested in "SELF HELP" will usually avoid a lot of wasted time and possible expense which will result from calling in a service technician.

If, however, the problem seems to be electrical or mechanical do not attem t suc complex trouble shooting unless you are well qualified to do so.

Great care has been taken in the development specification, and manufacture of this equipment to ensure that it will give many years of reliable performance and quality. It should therefore be expected that "REAL" technical problems will be rare and, if encountered, will involve the chemistry and materials, or the routine cleaning.

The following pages will provide answers to the most common problems that can be encountered when processing work.

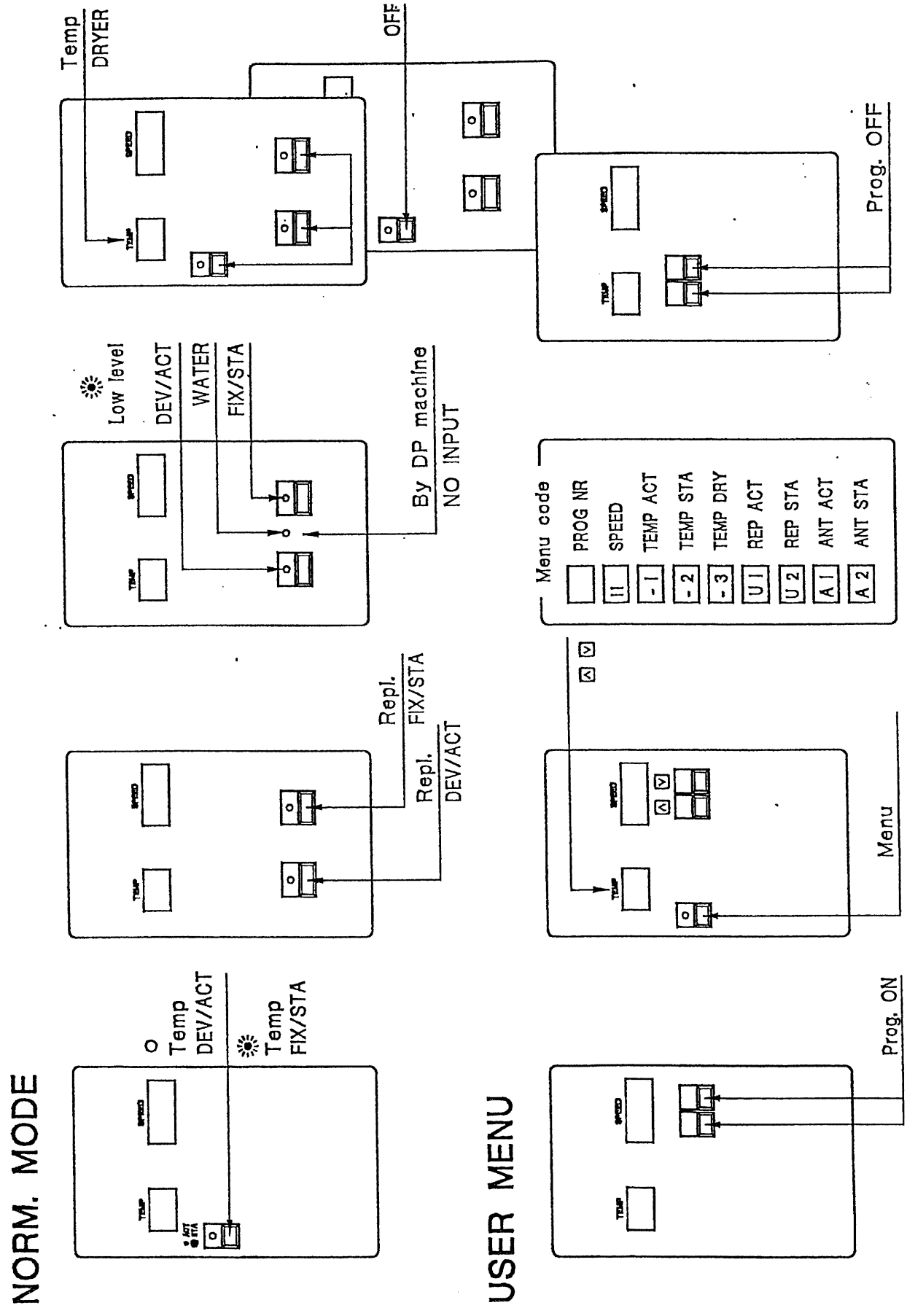
TROUBLESHOOTING GUIDE

PROBLEM	SOLUTION
The processor is not working	Make sure that the machine is plugged in
	Check wether the fuse is working
The processor shows only vertical lines in display and does not work	Check that the toppled is correctly on the Processor, switch off the Processor wait 5-10 sec. And switch on again.
The material jammed at the entry	Check that the material is not to curled
	Check that the entry guide is in correct Position
	Make sure that the rollers in the developer input rack is running smoothly.
	Check daylight feed slot.
The material jammed in developer, fixer or water rack.	Make sure that all rollers in the developer-fixer-water rack is running smoothly.
	Check that the developer rack is in the correct position.
	Remove the roller rack and clean it thoroughly. Ensure that the rack and its rollers are in their correct locations and the rollers are turning evenly and freely.
The material jammed at crossover between developer and fixer or between fixer and water rack.	Insure that the developer, fixer and water rack are perfectly levelled.
	Check that the crossover guide is in correct position.
	Ensure that the roller rack are at their correct location and that the crossover guides are correctly fitted.

The material jammed at crossover between fixer and water or water and dryer.	Insure that the fixer, water and dryer rack are perfectly levelled. Check that the crossover guide is in correct position. Ensure that the roller rack are at their correct location and the crossover guides are correctly fitted.
The material jammed in Dryer rack.	Make sure that the Dryer temperature is approx. 45^0C and that excessive heat is not causing the material to curl. Check that Dryer-rack is in correct position. Make sure that the rollers in the Dryer-rack is running smoothly.
No manual replenish	Check level in replenish tank. Qualified investigation necessary.
No heating in baths.	Check pre-set temperatures. Check level in baths.
No circulation in baths.	Check level in baths.
Beeper is sounded twice	Film has been developed
Speed display is flashing	There is film in the entrance.
Temperature display is flashing	Low temp in Dev
Temperature display is flashing and LED is lit.	Low temp in Fix.
Beeper is sounded, Dev. LED is On and Speed display is flashing	The level is low in the DEV. bath.
Beeper is sounded, Fix LED is On and Speed display is flashing	The level is low in the FIX. bath.

FILM QUALITY HINTS AND TROUBLE SHOOTING

PROBLEM	SOLUTION
Lengthways stripes on the material	Remove and clean the crossover guides.
The material is scratched	Check that the crossover guides are fitted correctly, and clean all top rollers and crossover guide
	Inspect the dryer section and make sure that the assembly is correctly
	Drain the fixer bath and refill with a new chemistry solution.
The material is coming out wet	Make sure that the Dryer temperature sensor bar is in correct position
	Check that the Dryer rack is in correct position
	Check whether there is sufficient dryer air flow.
	Check the developing time is set correctly.
The Processor stops before the material come out	Insure that the input sensor has been activated during the entire length of the material.
	Check that the rack are in correct position and the rollers are running smoothly.
Material is sticky or milky when coming out (for optimum drying use hardener)	Drain the fixer bath and refill with a new chemistry solution
	Clean rollers in dryer section
Material is jamming in one of the baths	Remove the roller rack and clean it thoroughly. Ensure that the rack and its rollers are in their correct locations and the rollers are turning evenly and freely.
Material is jamming at the crossover	Ensure that the roller rack are their correct location and that the cross over -,guides are correctly fitted.


NORM. MODE
Temp
DEV/ACT
Temp
FIX/STA
Repl.
FIX/STA
Repl.
DEV/ACT
Low level
DEV/ACT
WATER
FIX/STA
By DP machine
NO INPUT
Temp
DRYER
OFF
Prog. OFF
USER MENU
Prog. ON
Menu
Menu code
PROG NR
SPEED
TEMP ACT
TEMP STA
TEMP DRY
REP ACT
REP STA
ANT ACT
ANT STA