

Camlab Maxi

PROGRAMMING & ADVANCED SETTINGS MANUAL

Model

**GW6000
GW6000DS**

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SECTION 1

1.1 Preliminary Machine Data Settings

The machines are delivered with the following general settings:

- SR=N Washing chamber sump rinse OFF
- LN=3 Dialog menu language: ENGLISH
- HT=6 Max. heating time without temperature check: 6 minutes
- P1=50 Volume of liquid detergent to be dispensed: 200 ml Camclean
- P2=50 Volume of liquid acid to be dispensed: 200 ml Camacid
- H20=3 Types of water to be connected: Hot, Cold, Deionised

NOTE: Prior to altering any settings it is recommended that Figs. 5.1 & 5.2 are studied to become familiar with keyboard functionality. A flow chart depicting the steps to follow is shown at Fig. 5.3.

If any of these settings need to be altered, proceed as follows:

The procedure starts from the initial information, which appears on the display when the machine is turned on.

POWER-ON OK - READY Pr 1: RINSE +D
--

Press F3 for 5 seconds to enter the machine data menu:

DATA: SR LN PR HT N 3 0 6
--

Select the parameter to be changed by using the → key to position the cursor and follow the procedure detailed in paragraphs 1.2 to 1.6.

Note: After setting the correct value press ESC to return to the initial menu or use the → key to move the cursor to select the next parameter to be set.

1.2 Sump washing (SR)

The sump washing function allows the wash pump and the water circuits to be rinsed between one phase and another and allows for the complete removal of the previous washing additive and/or removal of mains water residues when rinses in deionised water begins.

The sump washing function:

- Improves washing quality
- Increases water consumption
- Lengthens the operating cycle time by several minutes.

It is therefore left to the user to decide whether or not to set the function as follows:

Enter edit mode as detailed in Section 1.1. Use the → key to move the cursor from left to right.

Position the cursor on SR. Use the **PROG+** and **PROG-** keys to set Y/N (YES / NO).

DATA:	SR	LN	PR	HT
	<u>N</u>	3	0	6

SR	Y	N
WASHING CHAMBER RINSING	yes	no

After setting the correct value press **ESC** to return to the initial menu or use the → key to move the cursor to select the next parameter to be set.

1.3 Language setting (LN)

Enter edit mode as detailed in Section 1.1. Use the → key to position the cursor on **LN**. Press the **PROG+** and **PROG-** keys to increase / reduce the numerical values, set the number corresponding to the desired language.

DATA:	SR	LN	PR	HT
	N	<u>3</u>	0	6

LN	0	1	2	3
language	Italian	French	German	English

After setting the correct value press **ESC** to return to the initial menu or use the → key to move the cursor to select the next parameter to be set.

Note: The machine needs to be turned off and then back on for the change to take effect.

1.4 Setting the drying time: Model SM/GW6000 only

Model SM/GW6000DS has forced air drying which is fully controllable as described in section 3.

Model SM/GW6000 utilises the water heaters at the end of any wash cycle to assist in drying. The heaters are not regulated and the temperature achieved will be dependant upon the length of the drying cycle and the number selected for HT.

It is possible to set a value from 1 to 18, corresponding to the time the heaters will remain 'on'.

The highest temperature will be achieved with setting 18 .

Enter edit mode as detailed in Section 1.1.

DATA:	SR	LN	PR	HT
	N	3	0	<u>6</u>

Use the → key to move the cursor from left to right. Position the cursor on HT.

Use the **PROG+** and **PROG-** keys to increase/reduce the numerical values

After setting the correct value press ESC to return to the initial menu or use the → key to move the cursor to select the next parameter to be set.

1.5 Water Selection (H2O)

The washing programs are pre-set to use cold, hot and deionised/distilled/demineralised water.

If all three types of water are not available, the operating program can be altered in order to use the most suitable alternative water supply:

Enter edit mode as detailed in Section 1.1.

DATA:	SR	LN	PR	HT
	N	3	0	6

Press enter (↵) to go to the detergent quantity program data.

P1	P2	P3	P4	H2O
50	50	0	0	<u>3</u>

Position the cursor on H2O.
Use the **PROG+** and **PROG-** keys to increase/reduce the numerical values

Value to be set	Water supply connected
H2O=0	COLD WATER ONLY
H2O=1	COLD WATER AND HOT WATER
H2O=2	COLD WATER AND DIONISED WATER
H2O=3	COLD WATER, HOT WATER AND DEIONISED WATER

After setting the correct value press ESC to return to the initial menu or use the → key to move the cursor to select the next parameter to be set.

1.6 Setting the volume of Detergent/Acid

Enter edit mode as detailed in Section 1.1.

DATA:	SR	LN	PR	HT
	N	3	0	6

Press enter (↵) to go to the detergent quantity program data screen.

P1	P2	P3	P4	H20
50	50	0	0	3

The quantity of liquid detergent/acid to be dispensed is pre-set to 200m/L. The volume required is dependant upon the detergent/acid to be used and the hardness of the local water supply.

The numerical values are expressed in approx. 4 ml. Check the recommended quantities on the detergent or additive label.

P1	P2	P3	P4	H20
<u>50</u>	50	0	0	3

To alter the volume of detergent.

Use the → key to position the cursor on P1.

To change the quantity use keys: **PROG+** and **PROG -** to increase/reduce the values.

P1	P2	P3	P4	H20
50	<u>50</u>	0	0	3

To alter the volume of acid.

Use the → key to position the cursor on P2.

To change the quantity use keys: **PROG+** and **PROG -** to increase/reduce the values.

P3=Anti-foam (when required). P4=Spare

After setting the correct value press ESC to return to the initial menu or use the → key to move the cursor to select the next parameter to be set.

SECTION 2

2.1 Designing a Program

The GW6000 and GW6000DS have a programmable control processor that is extremely flexible allowing you to program sophisticated washing cycles tailored specifically to your needs.

The machine memory contains six standard programs that represent those most commonly used in the chemical and microbiological sectors and a program for use by service engineers. A further 23 user designed programs can be stored in the microprocessor memory to be selected and used when required. The new programs can be given a name and will appear in the program list along with the existing six standard programs.

A flow chart depicting the steps to follow is shown at Figs. 5.4 & 5.5.

If you require a specialised wash program the following text details the procedure to be followed.

2.2 Washing cycle phases

A washing cycle consists of six phases, each of which can be repeated once, giving a possible total of twelve phases per cycle.

Selecting the required options from the following list programs the phases:

WATER

Warm, cold or deionised.

N.B. If no water is selected the phase will be skipped.

HEATING

Off, or on and the temperature required.

ADDITIVE

Detergent, acid, or none.

EXTENSION

Duration of the period between filling (or heating if selected) and emptying.

REPEAT

Repeat the phase once.

NAME

It is possible to select a name for the phase, which will be displayed while the phase is in operation, so that the operator can see the cycle progressing.

In general a washing program consists of the following phases:

- PREWASH with mains water, (with anti-foam solution if found to be required)

- WASH with warm mains water and alkaline detergent heated to between 60° - 95° C.
A hot alkaline wash which removes contaminants from the glassware.

- ACID RINSE
Elimination of alkaline residues and any remains of alkaline detergent.
Also removes calcium carbonate precipitates from the glassware.

- RINSE (with mains water)
Dilutes previously used chemical additives.
Each rinse dilutes initial concentration of contaminant by about 99%

- RINSE (with deionised water)
Dilutes inorganic salts and organic fractions (if any) in the mains water.

- HOT RINSE (with deionised water)
Dilutes inorganic salts and organic fractions (if any) in the mains water;
Heats the chamber and wash load it contains and promotes rapid evaporation
of water as an aid to drying.

Each washing program consists of a maximum of 6 different phases.

For each of the 6 phases that make up a program you can define the following:

1. The type of water to be used in the phase (cold, hot or deminealised) .
2. The type of additive to be added to the washing water by activating one of the dispensing pumps
3. Whether or not to heat the washing water, and if so to what temperature
4. The length of time you wish to wash at the set temperature
5. A label (phase name) to be displayed while the program is running
6. Whether or not a phase is to be repeated once it has finished.

These parameters must be defined for each of the 6 phases.

2.3 Entering Edit Mode

At initial switch-on the following screen will be displayed:

POWER-ON OK - READY

Press the **F1** key for at least 5 seconds to enter the edit mode. The following screen will be displayed:

**PROGR. 1 -Dry
N 100°C**

Now select the program that you wish to design (between 7-29) using the **PROG+** and **PROG-** keys. e.g. Program 7.

The following screen will be displayed:

**PROGR. 7 -Dry
N 100°C**

To load the program into the operating memory Press **F4**.

The following screen will be displayed:

**LOAD PROGRAM 7
CONFIRM? (YES/NO)**

Press **YES** to confirm.

The following screen will be displayed:

**PROGR. 7 -DRY
LOADED N 100°C**

Drying time

Drying temperature

2.4 Program Name

Press the **→** key to enter the program name editor menu.

The following screen will be displayed.

Name : NO PROG

Enter a name for the program up to 14 characters long. Press the **→** key to position the cursor.

Name : INTENSE WASH

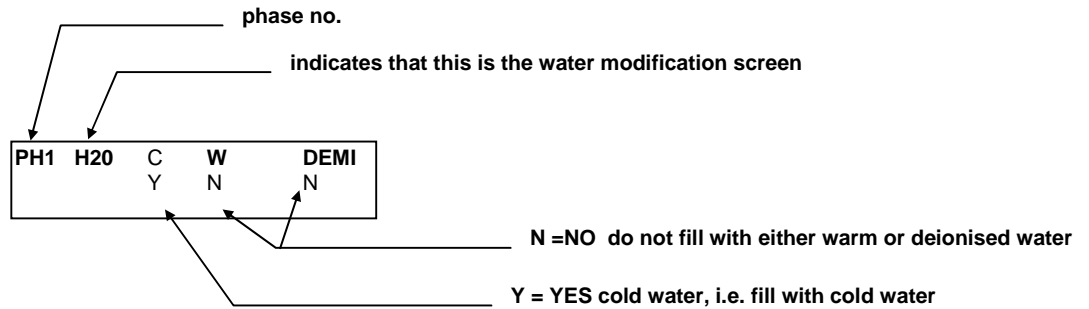
Use the **PROG+** & **PROG-** keys to change the letter or character (characters in alphabetical order). e.g. INTENSE WASH

Once the program name has been entered press **ESC** to return to the initial screen.

2.5 Phase 1 Water Selection

PROGR. 7 -DRY N 100°C
--

Press **↵** to enter the phase programming menu.
The following display appears.



This is the first of the 30 data pages that make up a program. To move between the pages the following keys should be used:

PH1	H2O	C	W	DEMI
		Y	N	N

To select the type of water to be used Y for Yes needs to be Selected, e.g. to select cold water only:

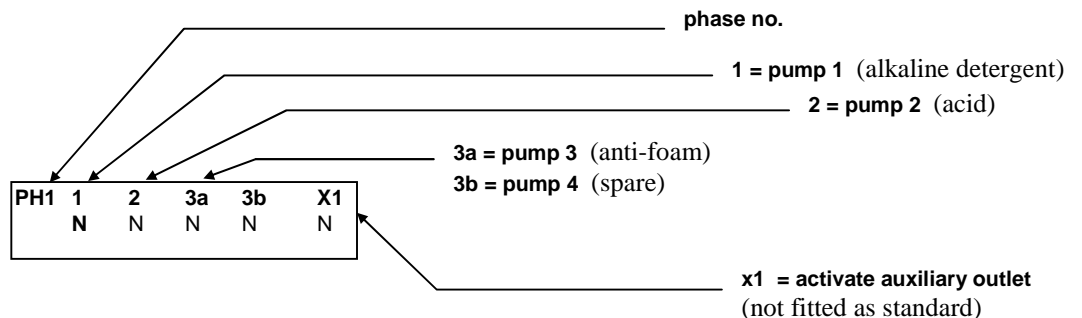
Position cursor under W using the **→** key & press NO.

Position cursor under C using the **→** key & press YES.

NOTE: If no water is selected the phase will be skipped.

2.6 Phase 1 Additive Selection

Press **↵** to enter the additive phase menu. The following screen is displayed.



PH1	1	2	3a	3b	X1
	Y	N	N	N	N

Position the cursor under 1 to add detergent or 2 to add acid.
Press **YES** or **NO** key as appropriate.

NOTE: The volume of each additive to be dispensed has been determined in section 1.6.

2.7 Phase 1 Washing Temperature & Time Selection

Press \leftarrow to enter the Wash Temperature phase menu. The following screen is displayed.

PH1	HEAT	TEMPER
	N	--

Press Yes to select heating.
Use **PROG+** & **PROG-** keys to select desired temperature, e.g. 95C.

PH1	HEAT	TEMPER
	Y	95

Press \leftarrow to enter the Wash Time phase menu.
The following screen is displayed.

PH1	EXTENSION	P4
	0	N

Use **PROG+** & **PROG-** keys to select time required.
e.g. 5 minutes (to a maximum of 10 mins).

PH1	EXTENSION	P4
	5	N

NOTE: P4 is not used.

2.8 Phase Name & Phase Repetition Selection

Once a phase has been programmed, you can allocate one of the available names to identify the function performed. This phase name will be displayed during the program while the phase is running. This allows you to monitor what the machine is doing during a cycle. It is advisable to use a name that reflects as closely as possible what is actually being performed during the phase.

Press \leftarrow to enter the Phase Name Selection Menu. The following screen will be displayed.

PH1 TYPE	REPEAT
	N

Press \rightarrow to scroll through the list of names.
Use the **NO** and **YES** keys to select repeat.

PH1 TYPE	REPEAT
PREWASH	Y

NOTE: Repeating the phase increases the program time.

2.9 Phases 2-6

Press the \downarrow key for phases 2 to 6. If phases are not required enter N for all water selections to skip phases. When all phases have been programmed press **ESC**.

NOTE: \downarrow to advance to next phase, \leftarrow to select a parameter within a phase, \rightarrow to move cursor & select item within a menu.

2.10 Selecting Drying Time

The following screen is now displayed.

PROGR. 7 -DRY
N 100°C

Use the **YES** and **NO** key to select drying time. Press either **F1** or **F2** to increase/decrease the drying temperature.

2.11 Saving Changes

When you have finished making changes, press **ESC**, then **F5** to save your programme. The following screen appears.

SAVE PROGRAM.	7
CONFIRM? (YES/NO)	

Press **YES** to confirm.
The following screen is displayed.

PROGR . 7 -DRY.
SAVED 10' 100°C

Press **F4** (READ) to check the changes you have made
or press **ESC** to quit the programming mode.

This procedure can be repeated for the remaining vacant 22 programs.

SECTION 3

3.1 Editing a Program

At any time the 7 pre-set programs and the 23 user defined programs can be edited. To alter any parameter at any time the edit mode needs to be selected by pressing F1 for 5 seconds, select program number by using PROG+ or PROG-, press F4 and YES. An example of how program 6 can be modified is shown below, the parameters to be altered are as follows:

1. Increase the drying time from 30 to 40 minutes & decrease the drying temperature from 100C to 90C.
2. Eliminate detergent from the wash
3. Use mains water for final rinses
4. Modify the washing temperature

The initial settings for program 6 are as follows:

Prog 6 Intense Demin	COLD RINSE 3 Mins	WASH AT 90C 10 Mins +Detergent	ACID RINSE 2 Mins +Acid	COLD RINSE 2 Mins	DEMINS RINSE 2 Mins	DEMINS RINSE 90C 10 Mins.	DRYING 30 Mins at 100C
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3.2 Modifying Drying Time & Temperature

At initial switch-on the following screen will be displayed:

POWER-ON OK - READY Pr 1:Rinse +D

Press the **F1** key for at least 5 seconds to enter the edit mode. The following screen will be displayed:

PROGR. 1 -Dry N 100°C
--

Now select program 6 by using the **PROG+** key. The following screen will be displayed:

PROGR. 6 -Dry 30' 100°C
--

To load the program into the operating memory, press **F4**. The following screen will be displayed:

LOAD PROGRAM 6 CONFIRM? (YES/NO)

Press **YES** to confirm. The following screen will be displayed:

PROGR. 6 -DRY LOADED 30' 100°C

NOTE: Every press of the YES key increases the drying time by 10 minutes.
Pressing the **NO** key decreases drying time until drying is eliminated.

Press the **YES** key to increase drying time by 10 minutes.
The following screen is displayed.

PROGR. 6	-DRY	
	40'	100°C

NOTE: Every press of F2 decreases the temperature by 5°C. Every press of F1 increases the temperature by 5°C. Press F2 twice to decrease the temperature to 90°C.
The following screen will be displayed.

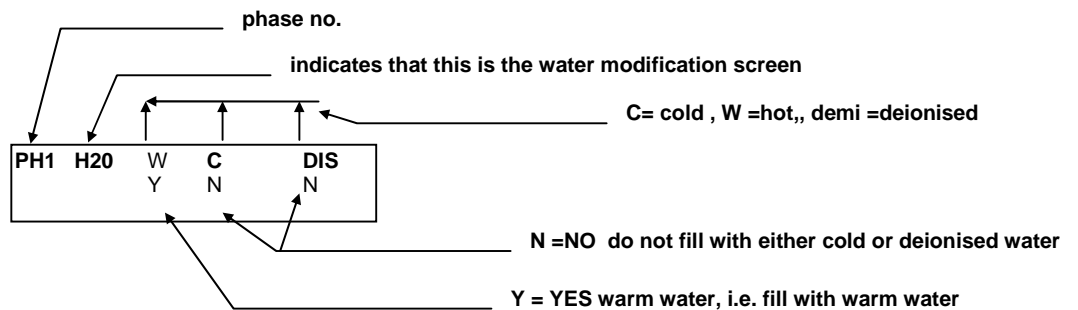
PROGR. 6	-DRY	
	40'	90°C

NOTE: To change the next parameter, proceed to 3.3.
OR: To accept changes and return to normal operation press F5, YES & ESC in sequence.

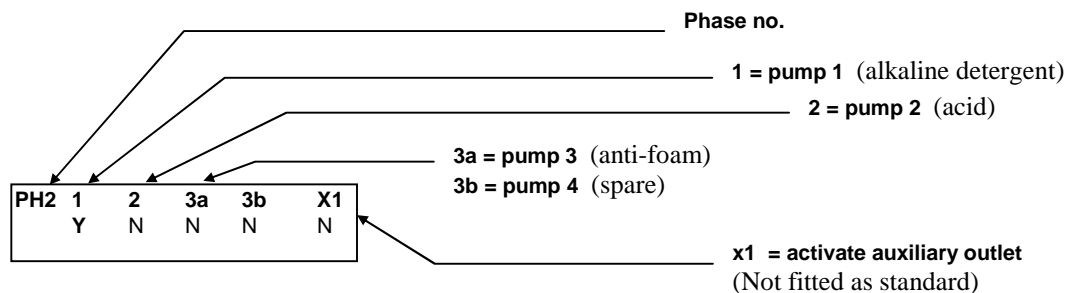
3.3 Modifying Additives

Press the ENTER key (↵).

The phase 1 water supply modification will appear:



Press the ↓ arrow key to advance to phase 2. Press the ENTER key ↵. The additives screen will appear be displayed.



Now use the arrow key → to move the cursor from left to right and stop at Y under pump 1. Press **NO** to stop pump 1 dispensing in phase 1 (program 6 wash).

PH2	1	2	3a	3b	X1
	N	N	N	N	N

NOTE: To change the next parameter, proceed to 3.4.

OR: To accept changes and return to normal operation press ESC, F5, YES & ESC in sequence.

3.4 Modifying Final Rinse Water

From the previous menu press the ↓ arrow key 3 times to advance to phase 5 and Press the ↵ key 4 times. The following screen will be displayed.

PH5	H20	C	W	DEMI
		N	N	Y

Press **YES** to set cold water in phase 5. Position the cursor under DEMI and press **NO** to disable deionised water.

The following screen is displayed.

PH5	H20	C	W	DEMI
		Y	N	N

Repeat this operation for phase 6 to replace deionised water with mains water.

NOTE: To change the next parameter, proceed to 3.5.

OR: To accept changes and return to normal operation press ESC, F5, YES & ESC in sequence.

3.5 Modifying Wash Temperature and Time

From the previous screen, press ↓ 3 times to advance to phase 2. The following screen will be displayed.

PH2	H20	C	W	DEMI
		N	Y	N

Press ENTER (↵) twice.
The following screen will be displayed.

PH2	HEAT	TEMP
	Y	90

Press PROG + to change the temperature to 95C.
Press ENTER. The following screen will be displayed.

PH2	EXTENSION	P4
	10	N

Press PROG - to change the wash time from 10 mins to 5 mins. The following screen will be displayed.

PH2	EXTENSION	P4
	5	N

When you have finally finished making changes, press **ESC**. The following screen will be displayed.

PROGR. 6	-DRY	
	40'	90°C

Press **F5** to accept the changes made.
The following screen will be displayed.

SAVE PROGRAM	6
CONFIRM? (YES/NO)	

Press YES to confirm.
The following screen is displayed.

PROGR. 6	- DRY	
SAVED	40	90°C

Press **F4** & **YES** to check the changes you have made or press **ESC** to quit the programming mode.

SECTION 4

4.1 Program Default Settings

PROGRAM 1			PROGRAM DESCRIPTION: RINSE WITH TAP WATER													
PROGRAM NAME (11 CHARACTERS)			R	I	N	S	E									
DRYING PARAMETERS GW6000DS ONLY			TIME: 0 Minutes						TEMPERATURE: 0°C							
PHASE		H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP		
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP		
PH1	Y	N	N	N	N	N	N	N	N	--	3	N	Tap rinse	N		
PH2	N	N	N	N	N	N	N	N	N	--	N	N	--	N		
PH3	N	N	N	N	N	N	N	N	N	--	N	N		N		
PH4	N	N	N	N	N	N	N	N	N	--	N	N	--	N		
PH5	N	N	N	N	N	N	N	N	N	--	N	N	--	N		
PH6	N	N	N	N	N	N	N	N	N	--	N	N	--	N		

PROGRAM 2			PROGRAM DESCRIPTION: LIGHT WASH WITH TAP WATER												
PROGRAM NAME (11 CHARACTERS)			L	I	G	H	T			W	A	S	H		
DRYING PARAMETERS GW6000DS ONLY			TIME: 30 Minutes						TEMPERATURE: 80°C						
PHASE		H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP	
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP	
PH1	Y	N	N	N	N	N	N	N	N	--	3	N	Tap rinse	N	
PH2	N	Y	N	Y	N	N	N	N	Y	60	5	N	Wash	N	
PH3	Y	N	N	N	Y	N	N	N	N	--	2	N	Acid rinse	N	
PH4	Y	N	N	N	N	N	N	N	N	--	2	N	Tap rinse	N	
PH5	N	Y	N	N	N	N	N	N	N	75	3	N	Hot tap rinse	N	
PH6	N	N	N	N	N	N	N	N	N	--	N	N	--	N	

PROGRAM 3			PROGRAM DESCRIPTION: STANDARD WASH WITH TAP WATER												
PROGRAM NAME (11 CHARACTERS)			S	T	N	D	D			W	A	S	H		
DRYING PARAMETERS GW6000DS ONLY			TIME: 30 Minutes						TEMPERATURE: 100°C						
PHASE	H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP		
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP	
PH1	Y	N	N	N	N	N	N	N	N	--	3	N	Tap rinse	N	
PH2	N	Y	N	Y	N	N	N	N	Y	75	5	N	Wash	N	
PH3	Y	N	N	N	Y	N	N	N	N	--	2	N	Acid rinse	N	
PH4	Y	N	N	N	N	N	N	N	N	--	2	N	Tap rinse	N	
PH5	Y	N	N	N	N	N	N	N	N	--	2	N	Tap rinse	N	
PH6	N	Y	N	N	N	N	N	N	N	90	3	N	Hot tap rinse	N	

PROGRAM 4			PROGRAM DESCRIPTION: LIGHT DEIONISED WASH												
PROGRAM NAME (11 CHARACTERS)			L	I	G	H	T			D	E	M	I	N	
DRYING PARAMETERS GW6000DS ONLY			TIME: 30 Minutes						TEMPERATURE: 100°C						
PHASE	H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP		
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP	
PH1	Y	N	N	N	N	N	N	N	N	--	3	N	Tap rinse	N	
PH2	N	Y	N	Y	N	N	N	N	Y	60	5	N	Wash	N	
PH3	Y	N	N	N	Y	N	N	N	N	--	2	N	Acid rinse	N	
PH4	Y	N	N	N	N	N	N	N	N	--	2	N	Tap rinse	N	
PH5	N	N	Y	N	N	N	N	N	Y	75	3	N	Hot demin	N	
PH6	N	N	N	N	N	N	N	N	N	--	0	N	--	N	

PROGRAM 5			PROGRAM DESCRIPTION: STANDARD DEIONISED WASH												
PROGRAM NAME (11 CHARACTERS)			S	T	N	D	D			D	E	M	I	N	
DRYING PARAMETERS GW6000DS ONLY			TIME: 30 Minutes						TEMPERATURE: 100°C						
PHASE	H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP		
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP	
PH1	Y	N	N	N	N	N	N	N	N	--	3	N	Tap rinse	N	
PH2	N	Y	N	Y	N	N	N	N	Y	75	5	N	Wash	N	
PH3	Y	N	N	N	Y	N	N	N	N	--	2	N	Acid rinse	N	
PH4	Y	N	N	N	N	N	N	N	N	--	2	N	Tap rinse	N	
PH5	N	N	Y	N	N	N	N	N	N	--	2	N	Demi rinse	N	
PH6	N	N	Y	N	N	N	N	N	Y	90	3	N	Hot demin	N	

PROGRAM 6			PROGRAM DESCRIPTION: INTENSE DEIONISED WASH												
PROGRAM NAME (11 CHARACTERS)			I	N	T	E	N	S		D	E	M	I	N	
DRYING PARAMETERS GW6000DS ONLY			TIME: 30 Minutes						TEMPERATURE: 100°C						
PHASE	H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP		
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP	
PH1	Y	N	N	N	N	N	N	N	N	--	3	N	Tap rinse	N	
PH2	N	Y	N	Y	N	N	N	N	Y	90	10	N	Wash	N	
PH3	Y	N	N	N	Y	N	N	N	N	--	2	N	Acid rinse	N	
PH4	Y	N	N	N	N	N	N	N	N	--	2	N	Tap rinse	N	
PH5	N	N	Y	N	N	N	N	N	N	--	2	N	Demi rinse	N	
PH6	N	N	Y	N	N	N	N	N	Y	90	3	N	Hot demin	N	

PROGRAM 30			PROGRAM DESCRIPTION: TEST PROGRAM												
PROGRAM NAME (11 CHARACTERS)			T	E	S	T		P	R	O	G				
DRYING PARAMETERS GW6000DS ONLY			TIME: 10 Minutes						TEMPERATURE: 60°C						
PHASE	H2O			DOSING PUMPS					HEATING		EXT+P4		TYPE REP		
DATA	C	W	D	P1	P2	P3	P4	X1	HEAT.	T°C	EXT	P4	TYPE	REP	
PH1	Y	N	N	Y	N	N	N	N	Y	60	1	N	Wash	N	
PH2	N	Y	N	N	Y	N	N	N	N	--	1	N	Acid rinse	N	
PH3	N	N	Y	N	N	N	N	N	N	--	1	N	Demi rinse	N	
PH4	N	N	N	N	N	N	N	N	N	--	N	N	--	N	
PH5	N	N	N	N	N	N	N	N	N	--	N	N	--	N	
PH6	N	N	N	N	N	N	N	N	N	--	N	N	--	N	

SECTION 5

FIG5.1 KEYPAD

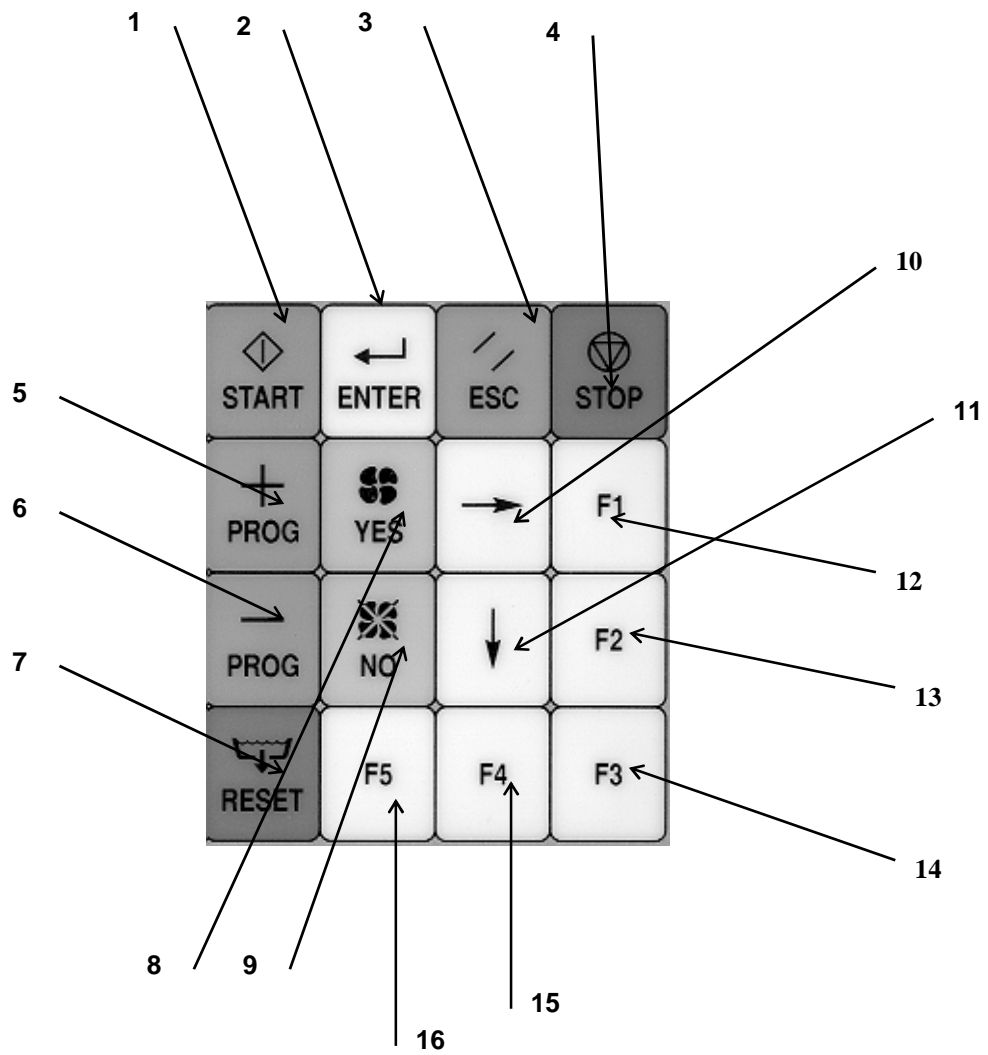


Figure 5.2 Keypad Functions

No.	KEY	OPERATING MODE FUNCTION	PROGRAMMING MODE FUNCTION
1	START	START	START
2	↵ ENTER	TEMP/TIME CHECK	STEP THROUGH MENU
3	ESC	CANCEL DATA	RETURN TO PREVIOUS SCREEN
4	STOP	STOP	STEP THROUGH DIAGNOSTICS
5	PROG +	SELECT NEXT PROGRAM	INCREASE PROGRAM VALUES
6	PROG -	SELECT PREVIOUS PROGRAM	DECREASE PROGRAM VALUES
7	RESET	RESET	N/A
8	☒ YES	☒ SELECT DRIER ON	CONFIRM DATA
9	☒ NO	☒ SELECT DRIER OFF	CANCEL DATA
10	→	N/A	STEP RIGHT
11	↓	N/A	PAGE ADVANCE
12	F1	ACCESS PROGRAMMING	INCREASE DRYING TEMP
13	F2	N/A	DECREASE DRYING TEMP
14	F3	MACHINE SETTINGS	RESTORE DEFAULT PROGRAMMES (WITH PROG+)
15	F4	N/A	LOAD PROGRAM
16	F5	N/A	STORE PROGRAM
13 & 16	RESET + F2*	RESET MEMORY	

NOTE: In the event of a program failure or keypad lockup; turn power off for 20secs. Turn power back on whilst pressing and holding F2 & Reset for 5 Seconds until a “beep” is sounded.

FIG. 5.3 Flow Chart for Altering Preliminary Settings

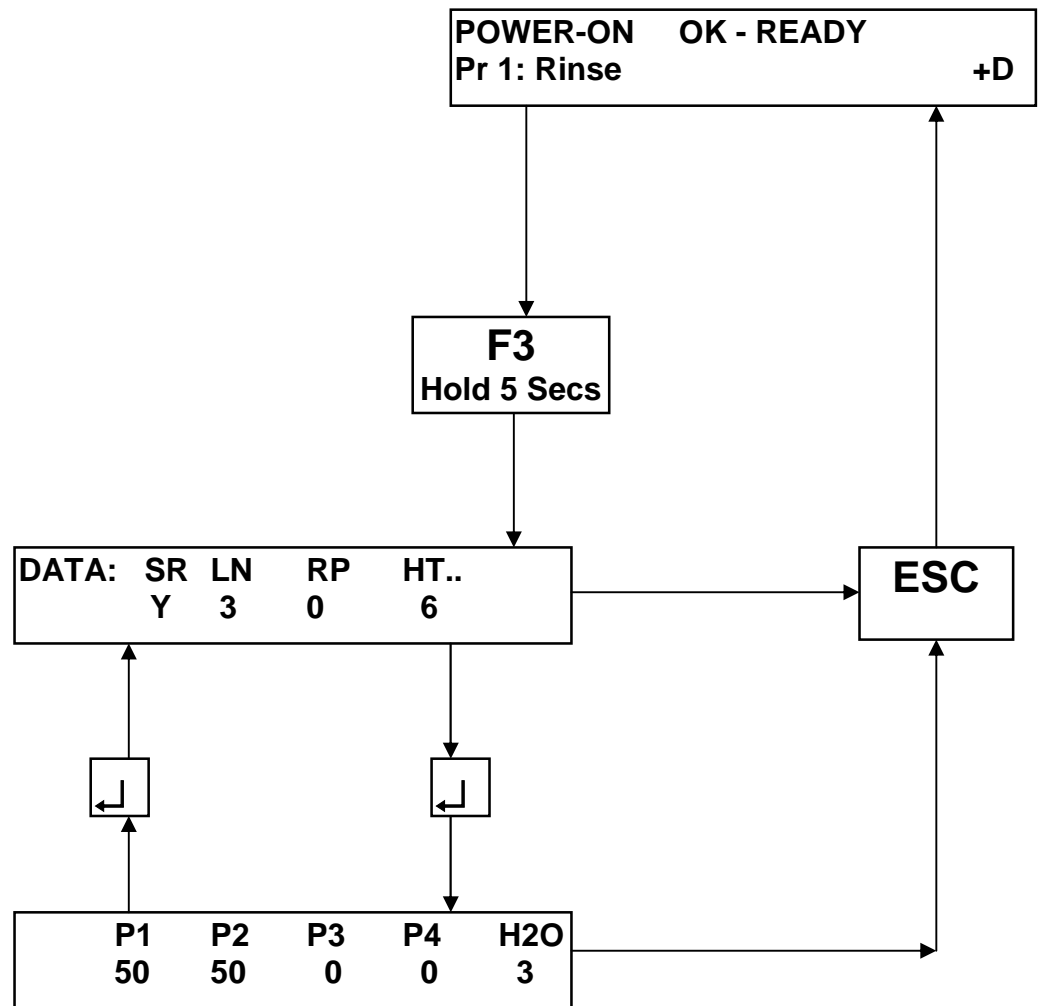


FIG. 5.5 Flow Chart for Designing a Program (Part 2)

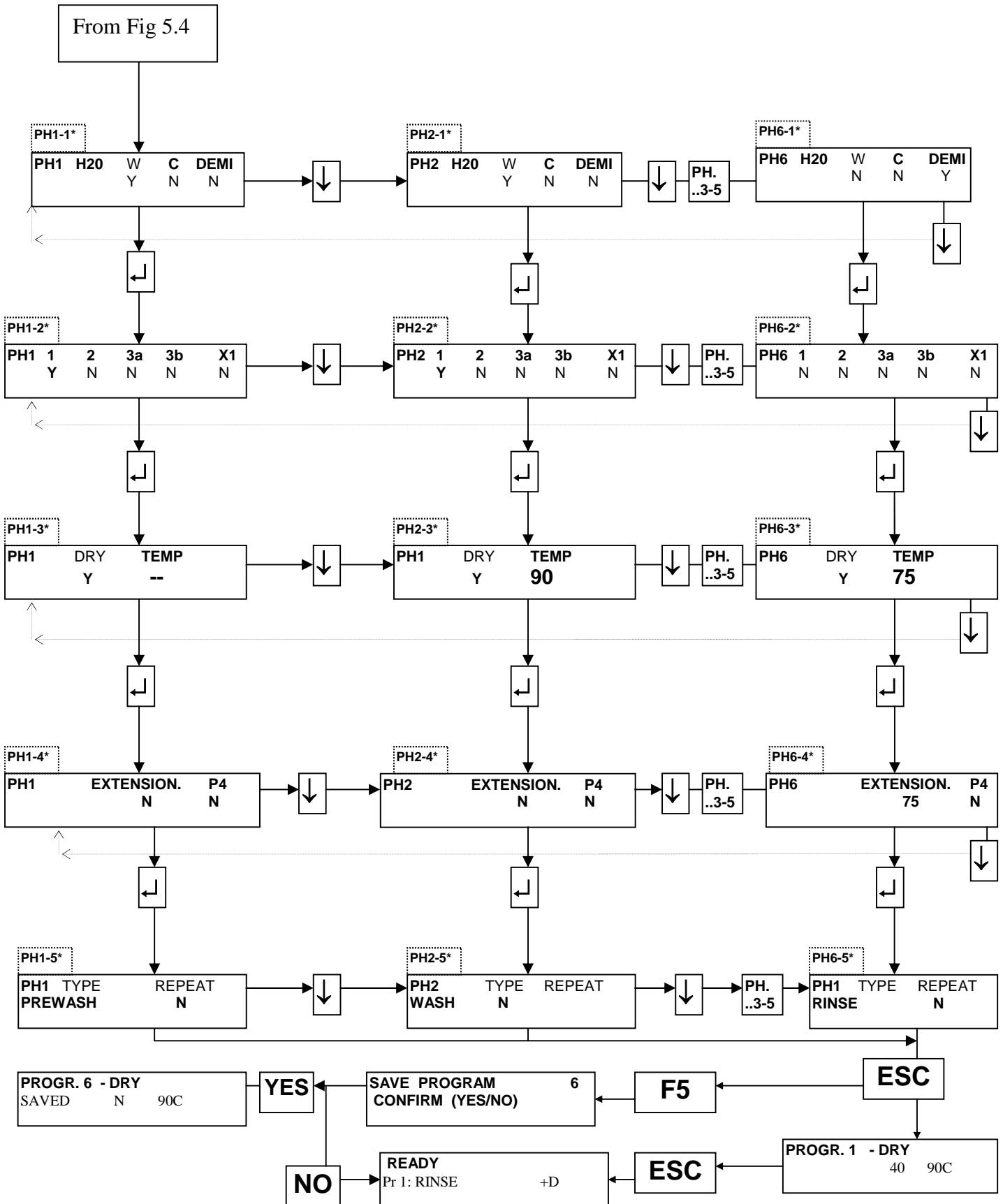


FIG 5.6 Flow Chart to Enter Diagnostic Mode(use with 6.2)

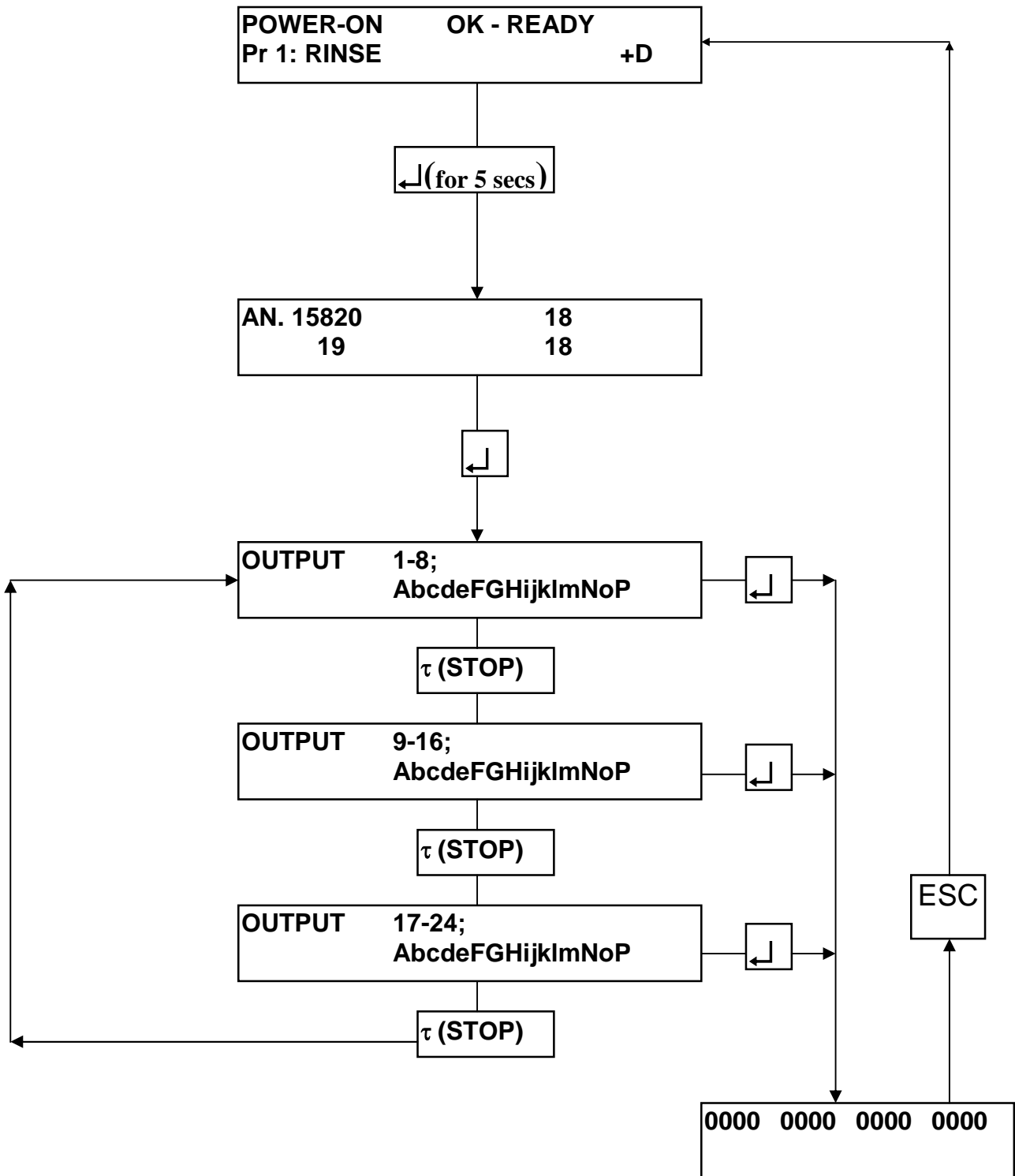
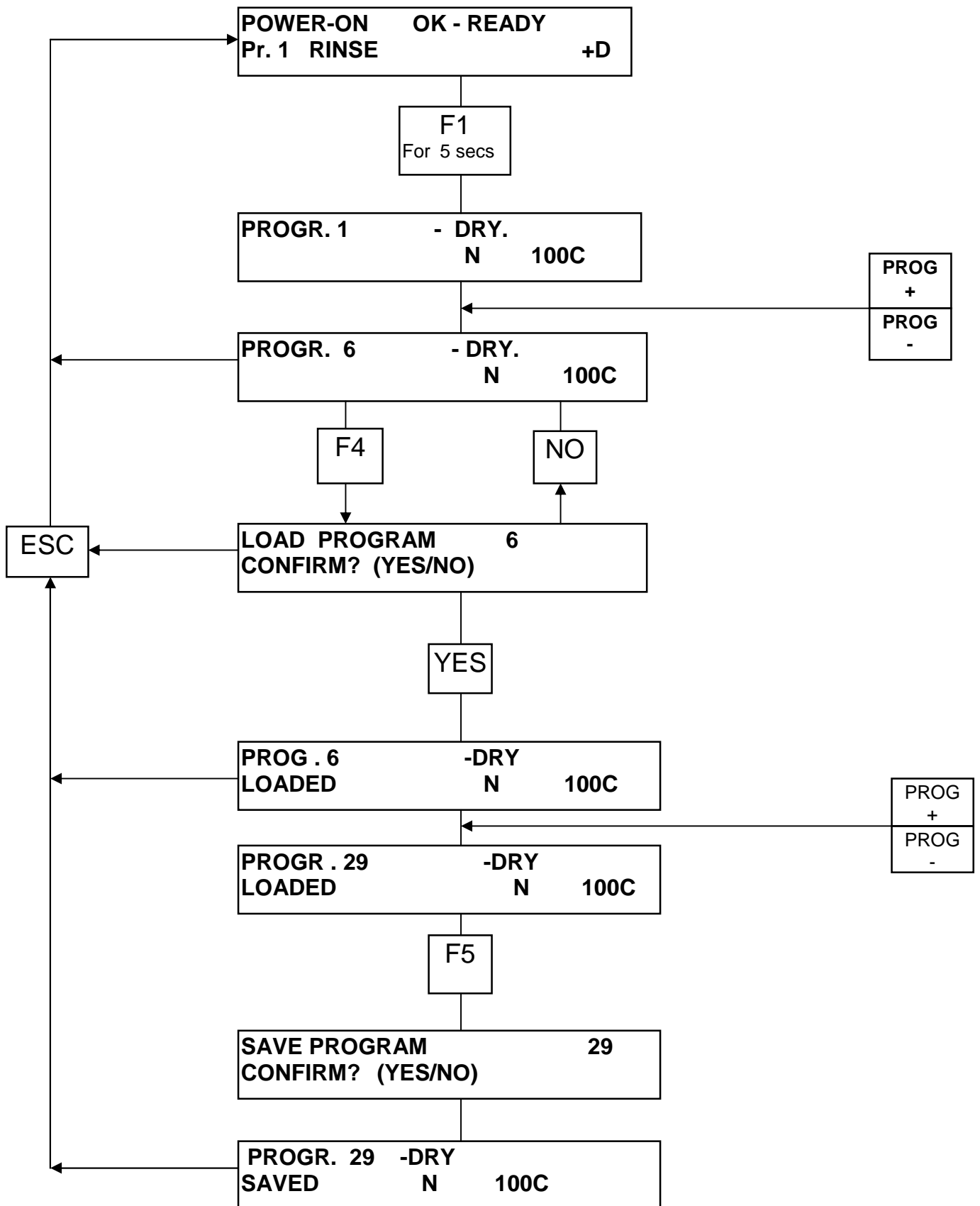


FIG. 5.7nb Flow Chart to Copy a Program (e.g. Program 6 to 29)



SECTION 6

6.1 Diagnostic Mode

The procedures detailed in this section are for use by suitably qualified engineers only. The diagnostic mode enables the engineer to test active components (motors, valves etc) and check the state of sensor devices (level switch, door switch etc) via the keypad, without having to dismantle the machine. A flow chart depicting the steps to follow is depicted at Fig. 5.7.

Great care must be taken with these procedures as in this mode it is possible to overfill the machine, or force on the heaters without any water in the wash chamber, causing extensive damage.

6.2 Entering the Diagnostic Mode

At initial switch-on the following screen will be displayed.

POWER-ON OK - READY Pr1:Rinse +D
--

Press the ↵ key for 5 seconds.
The following screen appears.

AN. 15820 18
19 18

Press the ↵ key again.
The following screen appears.

OUTPUT 1-8; AbcdeFGHijklmNoP

Using certain keys as shown at 6.3 can test outputs 1-8. The status of various sensors can be checked as shown in 6.4. Press the STOP key.
The following screen appears.

OUTPUT 9-16; AbcdeFGHijklmNoP
--

Using certain keys as shown at 6.3 can test outputs 9-16. The status of sensors can be checked as shown in 6.4. Press the STOP key.
The following screen appears.

OUTPUT 17-24; AbcdeFGHijklmNoP

Using certain keys as shown at 6.3 can test Outputs 17-24. The status of sensors can be checked as shown in 6.4. Press the ↵ key.
The following screen is displayed.

0000 0000 0000 0000

Press each key in turn and a 1 will be displayed proving the functionality of each key. NOTE: Press ESC last as this key will exit from the diagnostic menu.

POWER -ON OK - READY Pr1:Rinse +D

Normal operation may now be resumed.

6.3 Devices Checked in Diagnostic Mode

OUTPUT	KEY	RELAY ACTIVATED	DEVICE ACTIVATED
<u>1 - 8</u>			
1	PROG -	K1	P1 DETERGENT PUMP
2	NO ✕	K2	P2 ACID PUMP
3	↓	K3	P3 ANTI-FOAM PUMP
4	F2	K4	P4
5	RESET	K5	NOT USED
6	F5	K6	DRIER FAN MOTORS (After 1 minute)
7	F4	K7	RH DRIER HEATER
8	F3	K8	NOT USED
<u>9 - 16</u>			
9	PROG -	K9	NOT USED
10	NO ✕	K10	EMPTY PUMP
11	↓	K11	COLD WATER VALVE
12	F2	K12	WARM WATER VALVE
13	RESET	K13	DEIONISED WATER VALVE
14	F5	K14	NOT USED
15	F4	K15	CHAMBER WATER HEATERS
16	F3	K16	LH DRIER HEATER
<u>17 - 24</u>			
17	PROG -	K17	DEIONISED TANK HEATERS
18	NO ✕	K18	WASH PUMP
19	↓	K19	DOOR LOCK SOLENOID
20	F2	K20	NOT USED
21	RESET	K21	NOT USED
22	F5	K22	NOT USED
23	F4	K23	NOT USED
24	F3	K24	"BEEP"

6.4 Input Device Status

ACTIVE	INPUT DEVICE	INACTIVE
A	AUX PCB DIP S/W	a
B	AUX PCB DIP S/W	b
C	AUX PCB DIP S/W	c
D		d
E	CONDENSATE LEVEL S/W MIN (N/A)	e
F	CONDENSATE LEVEL S/W MAX (N/A)	f
G	DOOR MICROSWITCH MECHANICALLY CLOSED	g
H	DOOR MICROSWITCH MECHANICALLY LOCKED	h
I		i
J	LEVEL S/W FOR P4 (N/A)	j
K	LEVEL S/W FOR P3 (N/A)	k
L	LEVEL S/W FOR P2 (N/A)	l
M	LEVEL S/W FOR P1 (N/A)	m
N	UPPER LEVEL SWITCH (OVERFILLED)	n
O	WASH PUMP PRESSURE S/W (SMALL)	o
P	WATER LEVEL SWITCH (NORMAL)	p