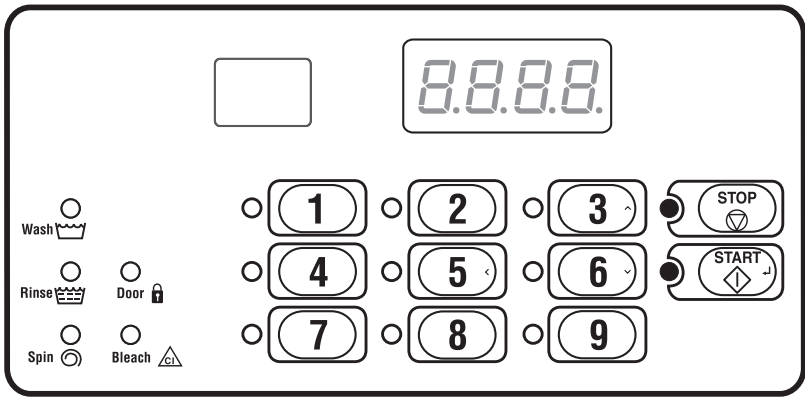
Washer-Extractor

Refer to Page 4 for Model Numbers

Programming



CHM1311R

Keep These Instructions for Future Reference.
(If this machine changes ownership, this manual must accompany machine.)

Alliance Laundry Systems

www.alliancelaundry.com

Part No. F8237801R7
October 2012

WARNING

Failure to install, maintain, and/or operate this machine according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

W030

NOTE: The WARNING and IMPORTANT instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution, and carefulness are factors which cannot be built into these machines. These factors MUST BE supplied by the person(s) installing, maintaining, or operating the machine.

Always contact the distributor, service agent, or the manufacturer about any problems or conditions you do not understand.

Table of Contents

Model Identification

Information in this manual is applicable to these machine models:

HCL020HN2	HCU060HN2	SCU020HN2	UCN040HNF
HCL030HN2	HCU060HNF	SCU020HNF	UCN040HNV
HCL030HNF	HCZ020HN2	SCU030HN2	UCN060HN2
HCL040HN2	SLC020HN2	SCU030HNF	UCN060HNF
HCL060HN2	SCL020HNF	SCU040HN2	UCN060HNV
HCL080HNF	SCL030HN2	SCU040HNF	UCN080HNF
HCN020HN2	SCL020HNF	SCU060HN2	UCN080HNV
HCN020HNF	SCL030HNF	SCU060HNF	UCU020HN2
HCN030HN2	SCL040HN2	SCU080HNF	UCU020HNF
HCN030HNF	SCL040HNF	UCL020HN2	UCU030HN2
HCN040HN2	SCL060HN2	UCL030HN2	UCU030HNF
HCN040HNF	SCL060HNF	UCL030HNF	UCU040HN2
HCN060HN2	SCL080HNF	UCL040HN2	UCU040HNF
HCN060HNF	SCN020HN2	UCL040HNF	UCU060HN2
HCN080HNF	SCN020HNF	UCL060HN2	UCU060HNF
HCU020HN2	SCN030HN2	UCL080HNF	UCU080HNF
HCU020HNF	SCN030HNF	UCN020HNV	
HCU030HN2	SCN040HN2	UCN030HN2	
HCU030HNF	SCN040HNF	UCN030HNF	
HCU040HN2	SCN060HNF	UCN030HNV	
HCU040HNF	SCN080HNF	UCN040HN2	

Preliminary Information

About the Control

This control is an advanced, programmable computer that lets the owner control most machine features by pressing a sequence of keypads. Refer to *Figure 1*.

The control allows the owner to program custom cycles, retrieve audit information, and other programmable features. Refer to ***Programming Control*** for a list of features. Machines shipped from the factory have a default cycle of Cycle #5 built in. However, the owner can change the default cycle, or any cycle, as needs permit.

IMPORTANT: In the event of a power failure, the control will not have to be reprogrammed. It is designed with a memory system that will remember how it was programmed until the electrical power is restored.

IMPORTANT: It is extremely important that the machine has a good ground connection and that all mechanical and electrical connections to the control are made before applying power to or operating the machine.

Glossary of Terms

The following are a few terms and abbreviations to learn. These are referred to throughout the instructions.

Display – This term refers to the window area of the control that displays words and values.

LED (Light Emitting Diode) – This term refers to the lights next to the keypads and status words of the control.

Power Failure Recovery

If a cycle is in progress and the power fails for less than five seconds, the cycle status is saved in memory. When the power recovers, the machine will resume into the previously active cycle.

If the length of the power failure is greater than five seconds, the control will end the cycle and the display will revert back to Start Mode.

Communications

The control may be programmed manually or by infra-red communication with an external device.

Infra-red Communications

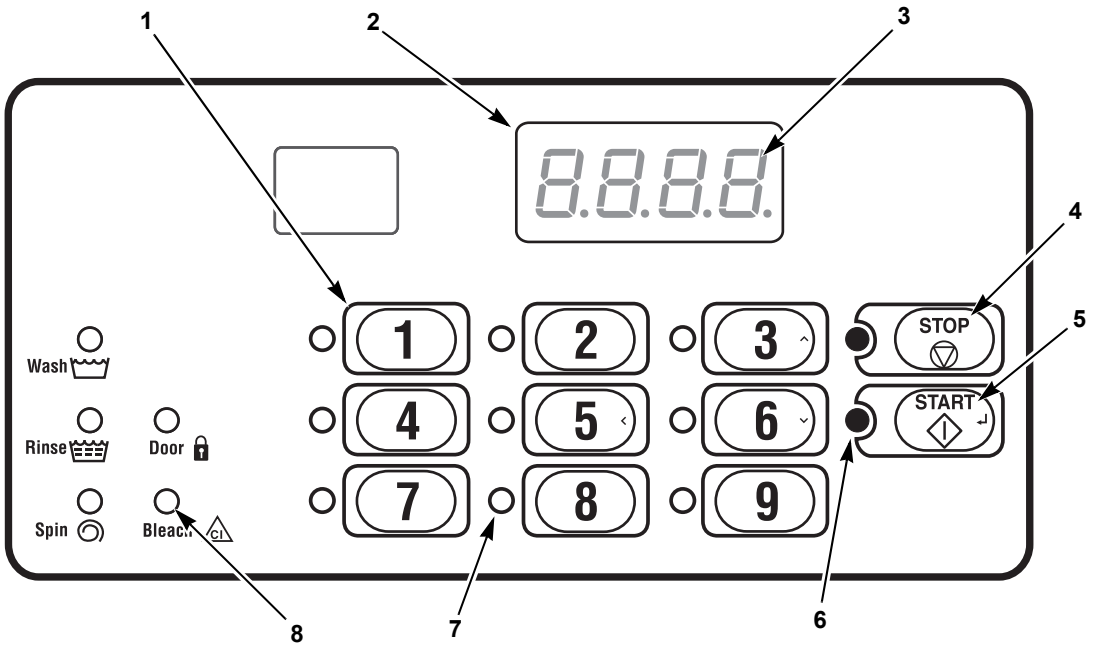
An external device, such as a PDA, allows the owner to program and retrieve information from the control without touching the keypad. An external device greatly expands the programming options available to the owner. However, it is not required to program and operate the machine. The operation of an external device and the advanced features available are covered separately in the instructions included with the external device software. Contact Alliance Laundry Systems for a list of approved PDAs and other external devices.

Control Identification

Select Cycle Pads (Refer to *Figure 1*)

SELECT CYCLE pads are used to select the specific washer cycle. These pads are numbered 1-9 and allow the user to select a cycle other than the default cycle (#5). Refer to *Table 1* for keypad definitions. The SELECT CYCLE keypads are not active after the first Fill step of the cycle. Pressing the flashing START pad will confirm the selection and the cycle will begin.

The SELECT CYCLE pads are used in various combinations for programming cycles, retrieving audit information, running diagnostic tests, and other operations. These instructions cover the manual programming and data retrieval options.



1	SELECT CYCLE pads
2	Display
3	Four 7-Segment Digits
4	STOP pad
5	START (enter) pad
6	LED Light
7	Cycle Indicator Lights
8	LED Status Lights

Figure 1

Keypad	Definition
1	90C
2	60C
3	40C
4	90C PERM PRESS
5	60C PERM PRESS
6	40C PERM PRESS
7	70C PERM PRESS
8	50C Gentle
9	30C Gentle

Table 1

Display Identification

Light Emitting Diodes (LEDs) (Refer to *Figure 1*)

LIGHT EMITTING DIODES (LEDs) are used to indicate the chosen cycle, cycle status, when the bleach compartment is dispensing, and door lock information. See below for information on each LED.

Wash LED

Wash LED is lit at the beginning of a wash portion of the cycle and will remain lit until the wash is complete.

Rinse LED

Rinse LED is lit at the beginning of a rinse portion of the cycle and will remain lit until the rinse is complete.

Spin LED

Spin LED is lit during the Final Spin portion of the cycle.

Door LED

Door LED is lit whenever the door is locked. The door can't be opened when this LED is lit.

Bleach LED

Bleach LED is lit when bleach compartment is dispensing for the first time in the cycle.

Four 7-Segment Digits

The 7-Segment Digits are used to display the time remaining in a cycle, error messages and descriptive codes. During diagnostic testing or manual programming of the control, these digits will display descriptive codes and values (as described in ***Entering the Manual Mode***).

Machine Operation

Start Up

When power is applied to the machine, the control will display its software version as "S xx" ("xx" is the version number) for one (1) second. If the control was not powered down during a running cycle, it will enter Start Mode.

Door Locking Mode

The control enters this mode after the START (enter) keypad is pressed in Start Mode. The control stays in Door Locking Mode until it confirms the door is closed and locked.

Stop Mode

The control enters this mode if the user stops the cycle by pressing the STOP keypad.

Start Mode

The control enters this mode when machine is ready for operation. The display will show the cycle time for the selected cycle.

After pressing the START keypad, the door will lock and the cycle will begin.

End of Cycle Mode

When a cycle is complete, the control will display "00" until the washer door is opened. When this event occurs, the display will revert back to Start Mode.

Cycle Sequence

Upon the start of a cycle, the control will display the total cycle time. The appropriate LEDs will light while the machine passes through different cycle steps. The user will not be able to change cycles after first Fill is complete.

Run Mode

The control enters this mode when a cycle is running. The time remaining appears in the display, the status LED's are lit and the loading door is locked.

Signals

There are two options when a signal can be used during the washer operation. These two options are listed below:

1. **End of Cycle Signal**
   By default, this signal is turned off. If turned on, the signal sounds for three (3) seconds at the end of a cycle.
2. **Signal On Keypad Depression**
   By default, this signal is turned on and sounds for a quarter of a second each time a keypad is pressed.

NOTE: Refer to *Programming Control* to program signal options.

Changing Cycles

Cycles can be changed anytime during the first Fill step. After the first Fill step, all key presses are ignored.

Door Unlocking Mode

The control enters this mode after a cycle has ended.

The control waits for confirmation that door is unlocked. Once confirmation is received that door is unlocked, control will enter End of Cycle Mode.

Special Features

Programming Control

The control allows the machine owner to program the control with the use of the keypad. Cycle options may be programmed, audit information may be viewed and diagnostic tests may be run by pressing combinations of the SELECT CYCLE keypads.

For details on programming select cycle options, refer to ***Programming Control***.

Collecting Audit Information

The control will store audit information in its memory that can be retrieved by pressing various combinations of SELECT CYCLE keypads. The control will record total machine cycles and total rapid advance cycles.

For more information on the audit features, refer to ***Collecting Audit Information***.

NOTE: Additional audit information is retrievable with an external device, using infra-red communications. Refer to the appropriate instruction manual.

Testing Machine and Control Functions

Special diagnostic features built into the control allow the owner to run specific diagnostic tests. By opening and closing the top cover and then pressing various sequences of SELECT CYCLE keypads, the owner may retrieve or perform the following tests:

- VFD Balance Weight Test (Design 1 models only)
- Drive DC Bus Display Test (Design 2 models only)
- Water Purge Test
- Water Leak Detection Test
- Drive Software Version Number (Design 2 models only)
- Drive Parameter Table Version Number (Design 2 models only)
- Drive Type (Design 2 models only)

For detailed information on running diagnostic tests, refer to ***Testing Machine and Control Functions***.

Rapid Advance Feature

This feature allows the user to quickly advance through active cycles. This feature is useful when tests must be performed immediately on a machine currently in an active cycle. In this case, the user can quickly advance through the cycles to shakeout. At this point, the user can perform the required tests and then return the machine to the point it was interrupted or press the STOP keypad to end the cycle.

For detailed information on using the Rapid Advance feature, refer to ***Rapid Advance Feature***.

Communications Mode

This feature allows the control to communicate with an external device using infra-red communications. This allows the control to be programmed without using the keypad.

For more detailed information on using the Communications Mode feature, refer to ***Communications Mode***.

Power Save Mode

This feature powers down the display after machine is idle for 4 minutes and 15 seconds. To “wake up” the machine display, press any Cycle pad.

The Power Save Mode is a feature of the control and cannot be disabled in programming.

Temperature Display Mode

This feature allows machines equipped with a temperature sensor to display the current water temperature after the first fill during a cycle.

Press the active cycle keypad to display temperature and press again to return to remaining cycle time.

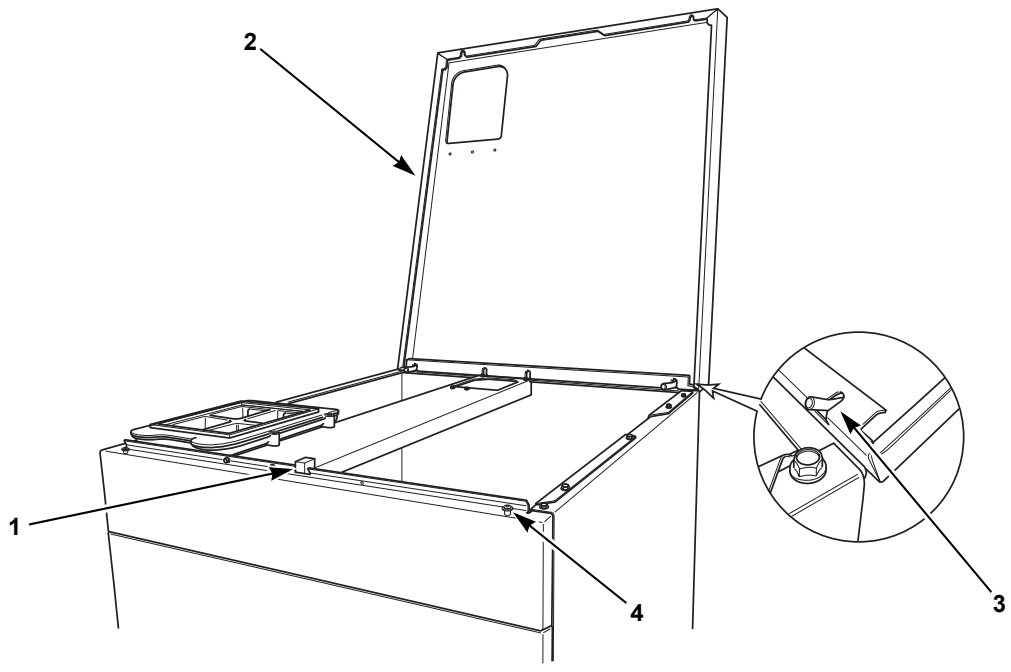
Opening the Top Cover

To manually program the control, the top cover must be opened. Opening and closing the top cover trips a switch which allows access to various programming options. Once opened, the top cover may either be left open, and then closed after programming, or it may be closed immediately.

The top cover is located on the top of the machine.

1. Unlock top cover.
2. Slide top cover forward slightly to move notches away from the pegs on the front of the cabinet.
3. Lift the top cover up. To completely remove, lift top cover away from both top cover hinges. Refer to *Figure 2*.

After removing or opening and closing the top cover, the operator has 4 minutes and 15 seconds to begin programming. If the appropriate SELECT CYCLE keypads have not been pressed in that time, the control will not accept operator programming. Should this happen, opening and closing the top cover will once again trip the switch which allows access to the programming options.



1 Top Cover Lock
2 Top Cover
3 Top Cover Hinge
4 Peg

Figure 2

Entering the Manual Mode

For programming, testing, and retrieving information from the control, it is often necessary to enter the Manual Mode by following the six simple steps below.

For an overview of Entering the Manual Mode, refer to the flowchart on the following page.

How to Enter the Manual Mode

1. If the washer is in an active cycle, rapid advance through the cycle. Refer to the ***Rapid Advance Feature***.
2. Open the top cover. Refer to ***Opening the Top Cover***.
3. While pressing and holding the #4 keypad with one hand, press the #1 keypad with the other hand.
4. The display will show "rAPd".
5. Press the #3 (∧) keypad or the #6 (∨) keypad to scroll through the options until the desired option appears in the display.
6. Press the START (enter) keypad.

Manual Mode is broken into three groups: Manual Programming, Manual Rapid Advance and Manual Diagnostics. Manual Programming can only be turned on or off with an external device. Refer to the appropriate instruction manual. Manual Rapid Advance can be turned on and off using an external device or by manual programming (refer to *option 14* of ***Programming Control***).

By default, all groups are turned "on".

The manual features available in each group are as follows (the menu displayed on the display in this mode is in parentheses).

Manual Programming

Manual Programming (Prog)

Manual Read Audit (AUdt)

Manual Reset (rSEt)

Manual Rapid Advance

Rapid Advance (rAPd)

Manual Diagnostics

Manual Diagnostic Tests (diAg)

If a group is turned off, the display will change from the selected feature to "oFF" when the START (enter) pad is pressed and an audio signal will sound for one (1) second. The display will then return to the selected feature. The features in the group cannot be entered.

Entering the Manual Mode

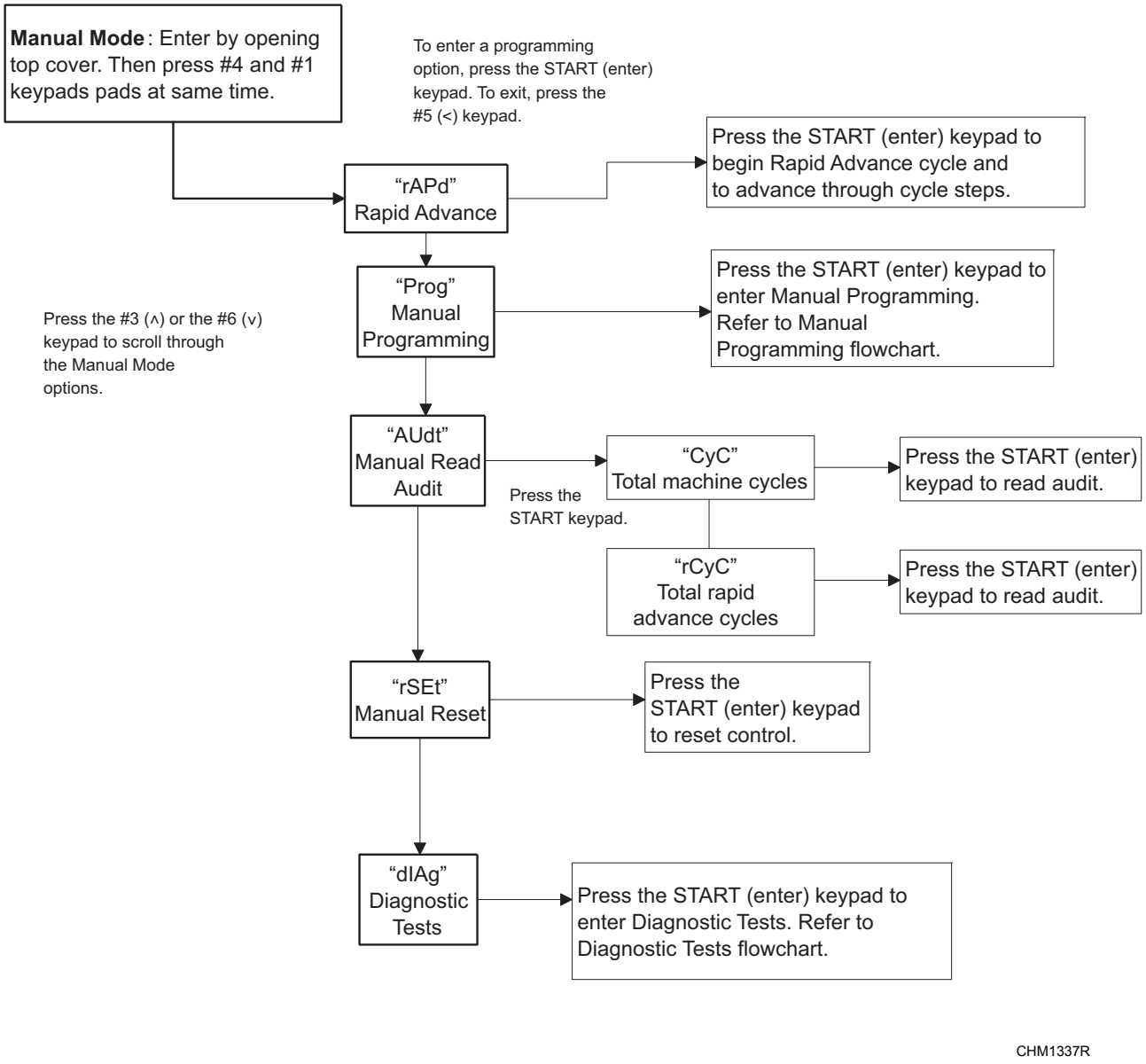


Figure 3

Programming Control

What Can Be Programmed?

This feature allows the owner to program cycle information and other features by using the keypads. The control must have the Manual Programming Mode enabled, which is the factory default. This mode can only be turned "oFF" and "on" by using an external device. Refer to this section when programming the control.

This section offers a detailed description of all available programmable options.

Each description includes instructions on when and why the option might be used and, more importantly, how to program the option.

For more advanced users, a quick reference list (refer to *Table 2*) and programming flowcharts (refer to *Figure 4* through *Figure 7*) of the options available through the programming mode are located on the following pages.

NOTE: The letters and numbers in the Option Display column of the Programmable Options List are what will be shown in the display when that option is selected.

Programmable Options Available

Option Number	Option Display	Description	Default Value	Value Range
1	**"dCYC"**	**Default Cycle**	5	1 - 9
2	**"AUd"**	**Audio Signal**	29*	0 - 31
3	**"Err-"**	**Errors**	–	–
a.	"E FL"	Fill Errors	on	on/oFF
b.	"E dr"	Drain Error	on	on/oFF
c.	"E Ub"	Unbalance Error Display	on	on/oFF
d.	"E oP"	Open Thermister Error Display	on	on/oFF
e.	"E SH"	Shorted Thermistor Error Display	on	on/oFF
f.	"E Ht"	Heat Error Display (Heater only)	on	on/oFF
g.	"LEr-"	Water Leak Detection Error	–	–
1.	*"LEr1"*	*Water Leak Detection During a Machine Cycle (On/Off)*	oFF	on/oFF
3.	*"LEr3"*	*Number of cycles between Leak Detection Test*	0*	0 - 127
h.	"E Sd"	Slow Drain Detection	oFF	on/oFF
4	**"CyC-"**	**Cycle Programming**	**	–
a.	**"Aglt"**	**Cycle Agitate**	–	–
1.	**"tyPE"**	**Agitate Type**	**	1 - 2
2.	**"ASPd"**	**Agitate Speed (VFD only)**	**	Lo/rEg
b.	**"Seg-"**	**Cycle Segment Programming**	–	1 - 8*
1.	*"SgEn"*	*Segment Enable/Disable*	**	on/oFF

* Refer to programming section for value definition.

** Refer to the *Cycle Chart* for default cycle setting informaton.

Table 2 (continued)

Table 2 (continued)

Option Number	Option Display	Description	Default Value	Value Range
2.	*"FILL"*	*Fill Step*	–	–
a.	"FLEn"	Fill Step Enable/Disable	**	on/oFF
b.	"FLEU"	Fill Level	**	HI/nEd/Lo
c.	"tEnP"	Fill Temperature	**	CoLd/Uarn/Hot
3.	*"SUPL"*	*Supply Step*	–	–
a.	"SUEn"	Supply Step Enable/Disable	**	on/oFF
b.	"dISP"	Dispenser Options	**	For Design 1 models, display will show *"*Cx*"* (compartment-oriented) or *"*Sx*"* (supply-oriented), depending on how option 5 (Supply/Compartment Dispenser Programming) is programmed. For Design 2 models, Compartment and Supply dispensing is programmed separately. **Press START keypad to access options.**
(1)	"C2" or "S1"	Compartment #2/Supply #1 (Design 1 models)	**	on/oFF
(2)	"C3" or "S2"	Compartment #3/Supply #2 (Design 1 models)	**	on/oFF
(3)	"C4" or "S3"	Compartment #4/Supply #3 (Design 1 models)	**	on/oFF
(4)	"S4"	Supply #4 (Design 1 models)	**	on/oFF
(1)	"C2"	Compartment #2 (Design 2 models)	**	on/oFF
(2)	"C3"	Compartment #3 (Design 2 models)	**	on/oFF
(3)	"C4"	Compartment #4 (Design 2 models)	**	on/oFF
(4)	"S1"	Supply #1 (Design 2 models)	**	on/oFF
(5)	"S2"	Supply #2 (Design 2 models)	**	on/oFF
(6)	"S3"	Supply #3 (Design 2 models)	**	on/oFF
(7)	"S4"	Supply #4 (Design 2 models)	**	on/oFF
c.	"SdUr"	Supply Duration	**	Press START keypad to access options
(1)	"SEC"	Seconds	**	0 - 59
(2)	"nIn"	Minutes	**	0 - 9
4.	*"AgSt"*	*Agitate Step*	–	–
a.	"AgEn"	Agitate Step Enable/Disable	**	on/oFF
b.	"AdUr"	Agitate Duration (in minutes)	**	1 - 30
c.	"HEAt"	Heat in Agitate (if heater is present)	**	oFF/1/2**
5.	*"drAn"*	*Drain Step*	–	–
a.	"SPEn"	Extract Step Enable/Disable	**	on/oFF
b.	"SSEC"	Extract Seconds	**	0 - 59

Table 2 (continued)

Table 2 (continued)

Option Number	Option Display	Description	Default Value	Value Range
c.	"SnIn"	Extract Minutes	**	***Intermediate Extract:*** Min. Step Time = 30 seconds Max. Step Time = 3:59 minutes
				Final Extract: Min. Step Time = 30 seconds Max. Step Time = 9:59 minutes
d.	"SSPd"	Extract Speed (VFD only)	**	1 - 3* (Design 1) 1 - 6* (Design 2)
c.	**"Cnin"**	**Cycle Time**	0*	0 - 255 minutes
5	**"SUPC"**	**Supply/Compartment Dispenser Programming (Design 1 models only)**	C	C (Compartment)/S (Supply Dispenser)
6	**"bALr"**	**Number of Balance Retries (VFD only)**	Design 1: 3 Design 2: 1	1 - 7
7	**"IrA"**	**IR Access (On/Off)**	on	on/oFF
8	**"t FC"**	**Fahrenheit/Celsius**	FAHr	FAHr (Fahrenheit)/CEL (Celsius)
9	**"FH"**	**Hot Water Temperature**	140°F (60°C)	35°F - 194°F/2°C - 90°C
10	**"FHC"**	**Warm Water Temperature**	100°F (38°C)	35°F - 194°F/2°C - 90°C
11	**"FC"**	**Cold Water Temperature**	35°F (2°C)	35°F - 194°F/2°C - 90°C
12	**"Codn"**	**Cool Down Enable/Temperature**	oFF	oFF or 50°F - 160°F/10°C - 71°C
13	**"PtEn"**	**Production Test Cycle (On/Off)**	on	on/oFF
14	**"rAEn"**	**Manual Rapid Advance (On/Off)**	on	on/oFF
15	**"nCtd"**	**No Cycle Time Display**	oFF	on/oFF
16	**"PCtd"**	**Programmable Cycle Time Display**	oFF	on/oFF
17	**"SdAd"**	**Slow Drain Detection Adjust**	0*	0 - 255 seconds

* Refer to programming section for value definition.

** Refer to the *Cycle Chart* for default cycle setting informaton.

Table 2

Programming Control

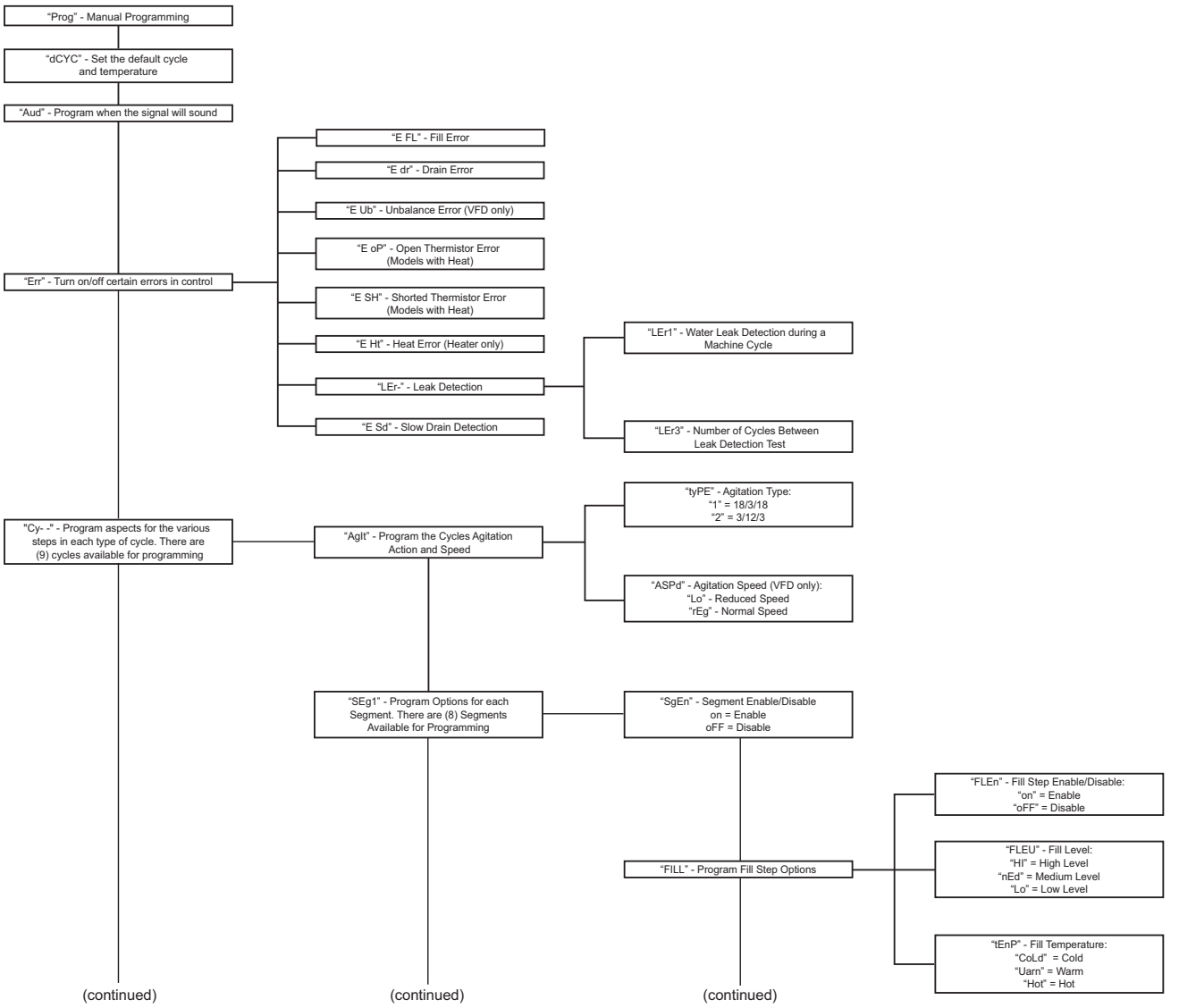


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Figure 4

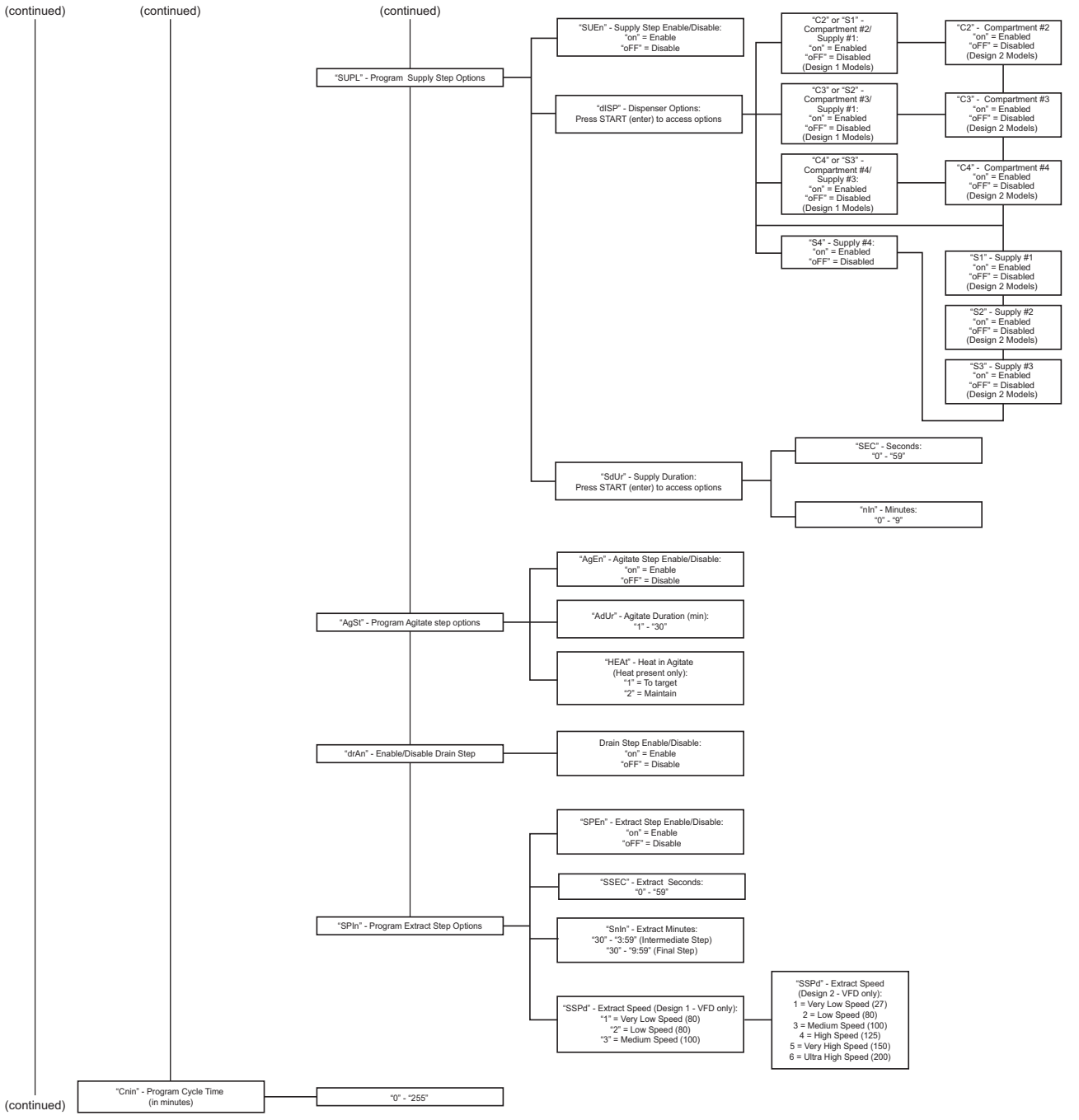

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Figure 5

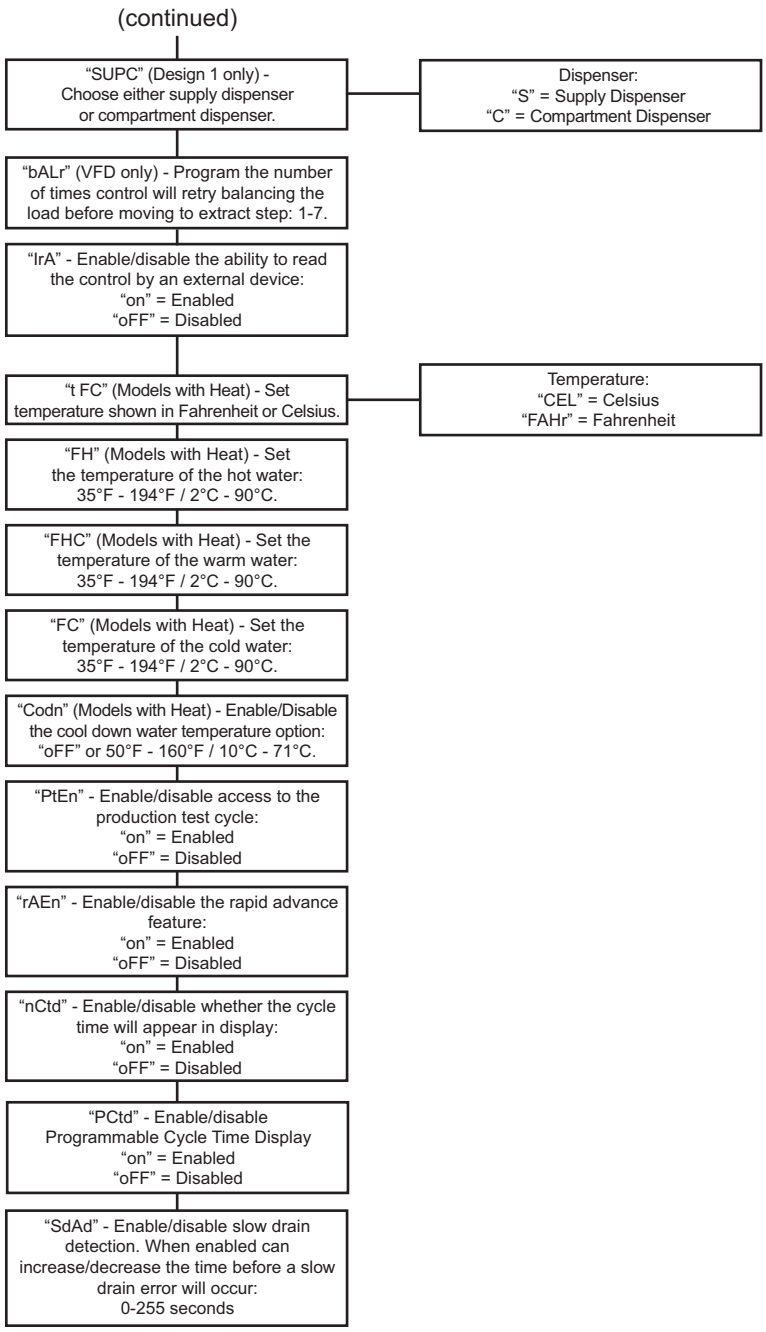

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Figure 6

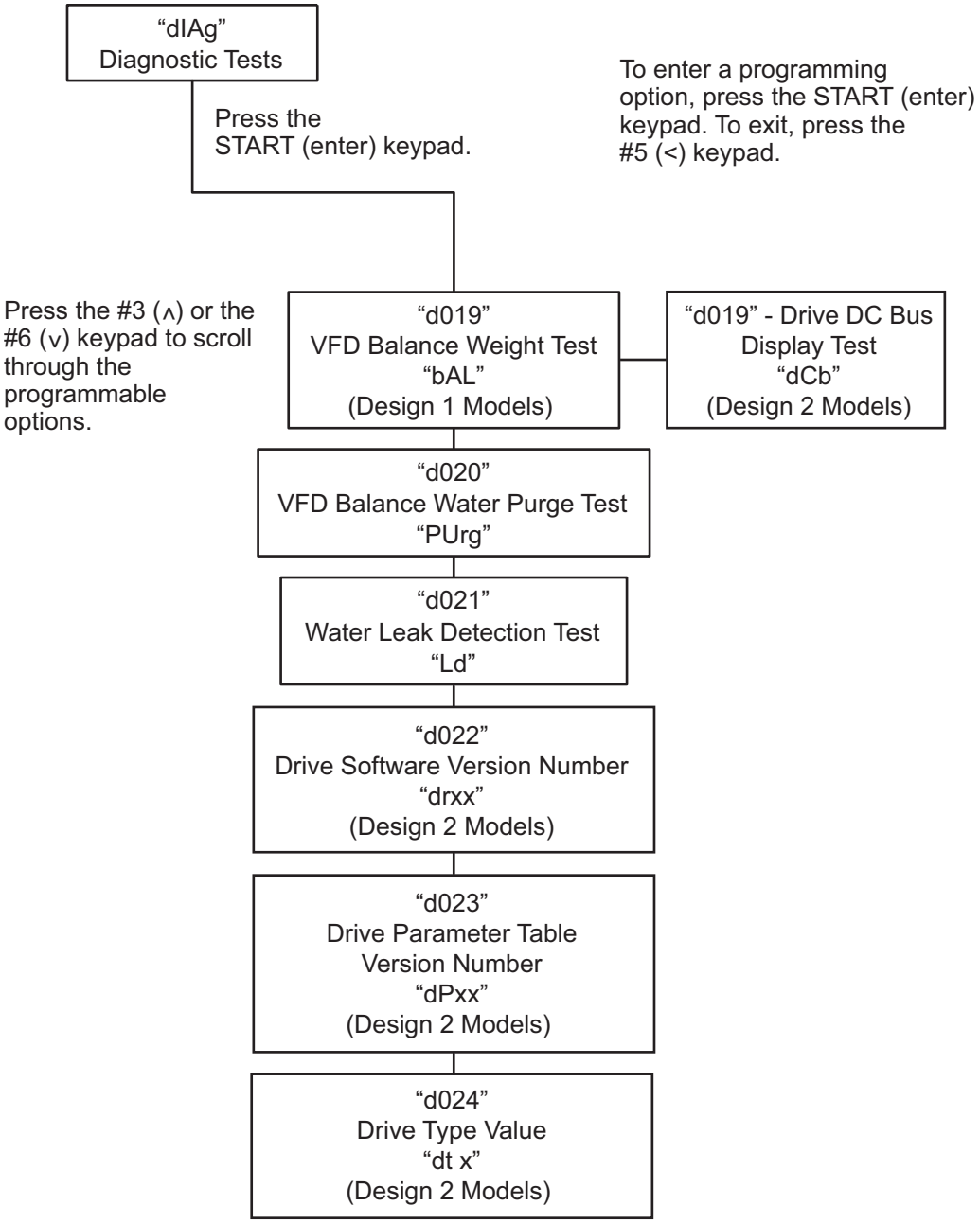

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Figure 7

1. Default Cycle “dCYC”

This option allows the owner to set the default cycle the machine will enter when in the Ready Mode.

How to Program Default Cycle

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. When “dCYC” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current default cycle value.

NOTE: The default cycle can be set from 1 to 9. The default value is 5.

4. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current number to the desired number.
5. Press the START (enter) keypad when the correct number appears in the display. The next option, “AUd”, will appear in the display.

NOTE: To program “AUd” (Audio Signal), refer to *option 2*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

2. Audio Signal “AUd”

This option allows the owner to program when the signal will sound.

There are two occasions when a signal may sound during operation. These two occasions are listed below:

1. **End of Cycle Signal**
   By default, the signal is turned off. If turned on, the signal will sound for three (3) seconds at the end of a cycle.
2. **Keypad Depression Signal**
   By default, this signal is turned on and will sound for a quarter of a second. This signal will sound each time a keypad is pressed.

How to Program the Audio Signal

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “AUd” appears in the display.
4. When “AUd” appears in the display press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Audio Signal Programming Value.
5. Locate the desired number in the first column of *Table 3* on the following page.
6. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current number until correct.

For Example: A user might wish to have the signal sound only when a keypad is pressed. Entering the number “1” in step 5 would turn off all the options except KEYPAD. In this instance, the signal would sound only when a keypad is pressed.

7. Press the START (enter) keypad when the correct number appears in the display. The next option, “Err-”, will appear in the display.

NOTE: To program “Err-” (Errors), refer to *option 3*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

How to Read *Table 3*

To determine the correct number required to program the Audio Signal, use the following chart. The Signal Value column contains the number required in step 6. The other columns correspond to individual options.

Each column of options contains a unique combination of the words "ON" and "OFF" that indicates if that column's option is turned on or off when the Signal Value is entered. Select the desired combination of options and enter the number found in the Signal Value column.

Signal Value	Start Mode (Not used)	Remove Card (Not used)	Coin/ Card Input (Not used)	End of Cycle	Key Pressed
0	OFF	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	OFF	**ON**
2	OFF	OFF	OFF	**ON**	OFF
3	OFF	OFF	OFF	**ON**	**ON**
4	OFF	OFF	**ON**	OFF	OFF
5	OFF	OFF	**ON**	OFF	**ON**
6	OFF	OFF	**ON**	**ON**	OFF
7	OFF	OFF	**ON**	**ON**	**ON**
8	OFF	**ON**	OFF	OFF	OFF
9	OFF	**ON**	OFF	OFF	**ON**
10	OFF	**ON**	OFF	**ON**	OFF
11	OFF	**ON**	OFF	**ON**	**ON**
12	OFF	**ON**	**ON**	OFF	OFF
13	OFF	**ON**	**ON**	OFF	**ON**
14	OFF	**ON**	**ON**	**ON**	OFF
15	OFF	**ON**	**ON**	**ON**	**ON**
16	**ON**	OFF	OFF	OFF	OFF
17	**ON**	OFF	OFF	OFF	**ON**
18	**ON**	OFF	OFF	**ON**	OFF
19	**ON**	OFF	OFF	**ON**	**ON**
20	**ON**	OFF	**ON**	OFF	OFF
21	**ON**	OFF	**ON**	OFF	**ON**
22	**ON**	OFF	**ON**	**ON**	OFF
23	**ON**	OFF	**ON**	**ON**	**ON**
24	**ON**	**ON**	OFF	OFF	OFF
25	**ON**	**ON**	OFF	OFF	**ON**
26	**ON**	**ON**	OFF	**ON**	OFF
27	**ON**	**ON**	OFF	**ON**	**ON**
28	**ON**	**ON**	**ON**	OFF	OFF
29*	**ON**	**ON**	**ON**	OFF	**ON**
30	**ON**	**ON**	**ON**	**ON**	OFF
31	**ON**	**ON**	**ON**	**ON**	**ON**

* Factory default setting

Table 3

3. Error Code Programming “Err-”

This option allows the owner to turn on or turn off certain errors in the control.

How to Program Error Code Programming

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “Err-” appears in the display.
4. When “Err-” appears in the display, press the START (enter) keypad. Refer to *Table 4* for a list of programmable error code parameters.
5. Press the #3 (∧) or the #6 (∨) keypad to select error code.
6. Press the START (enter) keypad when the correct code appears in the display. The current status will appear in the display.
   “on” = Error Code enabled
   “oFF” = Error Code disabled

NOTE: The default values for Water Leak Detection Error and Slow Drain Detection Error are “on”. The default values for all other errors are “oFF”.

7. Press the #3 (∧) or the #6 (∨) keypad to change the status.
8. Press the START (enter) keypad when the correct status appears in the display. The next Error Code Programming option will appear in the display.

NOTE: To program “CyC-” (Cycle Programming), press the #5 (<) keypad, then the #3 (∧) keypad and refer to option *4*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

“E FL”	**Fill Error**	
“E dr”	**Drain Error**	
“E Ub”	**Unbalance Error Display (VFD only)**	
“E oP”	**Open Thermistor Error Display**	
“E SH”	**Shorted Thermistor Error Display**	
“E Ht”	**Heat Error Display (Heater only)**	
“LEr-”	**Leak Detection Error** If Water Leak Detection during a machine cycle is enabled, then, on the enabled day(s) of the week, the control will check for water leaks during running machine cycles. If a leak is detected, the control will display the “E Ld” error for one (1) minute after the cycle is completed. It will also light the right-most decimal point on the display. The Water Leak Detection diagnostic can be used to verify the leak.	
	“LEr1”	Water Leak Detection During a machine cycle - Determines if water level drops below target level.
	“LEr3”	Number of cycles between Leak Detection Tests.
“E Sd”	**Slow Drain Detection - Determines if machine is draining slower than normal.** If Slow Drain Detection is enabled, the control will check for slow drain operation during running machine cycles. If a slow drain is detected, the control will display the “E Sd” error for one minute after the cycle is completed. It will also light the right-most decimal point on the display.	

Table 4

4. Cycle Programming “CyC-”

This option allows the owner to program different aspects for various steps in each type of cycle. There are 9 cycles available for programming.

How to Enter Cycle Programming

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “CyC-” appears in the display. Press the START (enter) keypad and “CyC1” will appear in the display.
4. Press the #3 (∧) or the #6 (∨) keypad to scroll through the 9 cycles to program. Press the START (enter) keypad when the desired cycle appears in the display.
5. The first Cycle Programming option, “Agit”, will appear in the display.

NOTE: To program “Agit” (Cycle Agitate), continue to next option. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

How to Program Cycle Agitate“AgIt”

This option allows the owner to program the cycle’s agitation action and speed. These options apply to the entire cycle.

1. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Cycle Programming options until “Agit” appears in the display.
2. When “Agit” appears in the display, press the START (enter) keypad. The first Cycle Agitate option will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options. Refer to *Table 5*.
4. Press the START (enter) keypad when the desired programmable option appears in the display. The current status will appear in the display. Refer to *Table 5*.

Final Spin Step	Description	Status
“tyPE”	Agitate Type	“1” - “2” 1 = 18/3/18 Agitation Action 2 = 3/12/3 Agitation Action
“ASPd”	Agitate Speed (VFD only)	“Lo” = Reduced Speed “rEg” = Normal Speed

Table 5

5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next Cycle Agitate option will appear in the display.

NOTE: To program “SEg1” (Cycle Segment 1) press the #5 (<) keypad and continue to next Cycle Programming option. To program other options, press the #5 (<) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

How to Program Cycle Segment "SEg1"

There are eight (8) programmable cycle segments. Within each segment, there are several programmable options.

1. Press the #3 (∧) or the #6 (∨) keypad to scroll through the eight programmable Cycle Segments until the desired segment appears in the display.
2. When the desired segment appears in the display, press the START (enter) keypad. "SgEn" (Segment Enable/Disable) will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the Cycle Segment programmable options.

NOTE: If the Segment Enable/Disable is programmed "oFF", the other Cycle Segment programming options can't be accessed.

4. Press the START (enter) keypad when the desired Cycle Segment programmable option appears in the display.

Programming Segment Enable/Disable

1. When "SgEn" appears in the display, press the START (enter) keypad. The current Segment Enable/Disable status will appear in the display.
   "on" = Segment is enabled
   "oFF"= Segment is disabled
2. Press the #3 (∧) or the #6 (∨) keypad to change the current status.

NOTE: If the Segment Enable/Disable is programmed "oFF", the other Cycle Segment programming options can't be accessed.

3. Press the START (enter) keypad when the desired status appears in the display. The next Cycle Segment option, "FILL", will appear in the display.

NOTE: To program "FILL" (Fill Step), continue to next Cycle Segment option. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

Programming Fill Step

1. When "FILL" appears in the display, press the START (enter) keypad. The first Fill step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Fill step options. Refer to *Table 6*.

NOTE: Fill Step "FLEn" must be enabled to scroll through all Fill Step options.

3. Press the START (enter) keypad when the desired option appears in the display. The current status will appear in the display. Refer to *Table 6*.

Fill Step	Description	Status
"FLEn"	Fill Step Enable/Disable	"on"/"oFF"
"FLEU"	Fill Level	"HI" = high level "nEd" = medium level "Lo" = low level
"tEnP"	Fill Temperature	"CoLd" = Cold "UArn" = Warm "Hot" = Hot

Table 6

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
5. Press the START (enter) keypad when the desired status appears in the display. The next Fill step option will appear in the display.

NOTE: To program "SUPL" (Supply Step), continue to next Cycle Segment option. To program other options, press #3 (∧) or the #6 (∨) keypad the and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

Programming Supply Step

1. When "SUPL" appears in the display, press the START (enter) keypad. The first Supply step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Supply step options. Refer to *Table 7*.

NOTE: Supply Step "SUEn" must be enabled to scroll through all Supply Step options.

3. Press the START (enter) keypad when the desired option appears in the display. The current status value will appear in the display. Refer to *Table 7*.

NOTE: For the Dispenser options, the display will show "Cx" or "Sx" depending whether or not the control is programmed as compartment-oriented or supply-oriented. Refer to *option 5*, *Supply/ Compartment Dispenser Programming*.

Supply Step		Description	Status/Value
"SUEn"		Supply Step Enable/Disable	"on"/"oFF"
"diSP"	Dispenser options (Design 1 Models only)		Press START (enter) to access options
	"C2" or "S1"	Compartment 2/ Supply #1	"on"/"oFF"
	"C3" or "S2"	Compartment 3/ Supply #2	"on"/"oFF"
	"C4" or "S3"	Compartment 4/ Supply #3	"on"/"oFF"
	"S4"	Supply #4	"on"/"oFF"
	Dispenser options (Design 2 Models only)		Press START (enter) to access options
	"C2"	Compartment 2	"on"/"oFF"
	"C3"	Compartment 3	"on"/"oFF"
	"C4"	Compartment 4	"on"/"oFF"
	"S1"	Supply #1	"on"/"oFF"
	"S2"	Supply #2	"on"/"oFF"
	"S3"	Supply #3	"on"/"oFF"
	"S4"	Supply #4	"on"/"oFF"
"SdUr"	Supply Duration		Press START (enter) to access options
	"SEC"	Seconds	0-59
	"nIn"	Minutes	0-9

Table 7

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display. The next Supply step option will appear in the display.

NOTE: To program "AgSt" (Agitate Step), continue to next Cycle Segment option. If in the Dispenser Options or Supply Duration programming option, press the #5 (<) keypad first. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

Programming Agitate Step

1. When "AgSt" appears in the display, press the START (enter) keypad. The first Agitate step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Agitate step options. Refer to *Table 8*.

NOTE: Agitate Step "AgEn" must be enabled to scroll through all Agitate step options.

3. Press the START (enter) keypad when the desired option appears in the display. The current status/value will appear in the display. Refer to *Table 8*.

Agitate Step	Description	Status/Value
"AgEn"	Agitate Step Enable/Disable	"on"/"oFF"
"AdUr"	Agitate Duration (in minutes)	"1" - "30"
"HEAt"	Heat in Agitate (If heater is present)	"oFF", "1" or "2" 1 = To Target 2 = Maintain

Table 8

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display. The next Agitate step option will appear in the display.

NOTE: To program "drAn" (Drain Step), continue to next Cycle Segment option. To program other options, press #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

Programming Drain Step

1. When "drAn" appears in the display, press the START (enter) keypad. The current status will be displayed.
2. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
   "on" = Drain step is enabled
   "oFF" = Drain step is disabled

NOTE: Drain must be enabled to activate Extract Step.

3. Press the START (enter) keypad when the desired status appears in the display. The next Cycle Segment option, "SPIn", will appear in the display.

NOTE: To program "SPIn" (Extract Step), continue to next Cycle Segment option. To program other options press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

∧

Programming Extract Step

1. When "SPIn" appears in the display, press the START (enter) keypad. The first Extract step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Extract step options. Refer to *Table 9*.

NOTE: Extract Step "SPEn" must be enabled to scroll through all Extract step options.

3. Press the START (enter) keypad when the desired option appears in the display. The current status/value will appear in the display. Refer to *Table 9*.

Extract Step	Description	Status/Value
"SPEn"	Extract Step Enable/Disable	"on"/"oFF"
"SSEC"	Extract Seconds	"0" - "59"
"SnIn"	Extract Minutes	***Intermediate Extract:*** Minimum Step Time = "30" seconds Maximum Step Time = "3:59" minutes ***Final Extract:*** Minimum Step Time = "30" seconds Maximum Step Time = "9:59" minutes
"SSPd"	Extract Speed (Design 1 - VFD only)	"1" = very low speed (80) "2" = low speed (80) "3" = medium speed (100)
	Extract Speed (Design 2 - VFD only)	"1" = very low speed (27) "2" = low speed (80) "3" = medium speed (100) "4" = high speed (125) "5" = very high speed (150) "6" = ultra high speed (200)

Table 9

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display. The next Cycle Segment step option, "SEg2" will appear in the display.

NOTE: To program "Cnin" (Cycle Time), continue to next Cycle Segment option. To program other options press the #3 (∧) or the #6 (∨) keypads and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

How to Program Cycle Time "Cnin"

This option allows the owner to program minutes to the cycle's display time.

1. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Cycle Programming options until "Cnin" appears in the display.

NOTE: The option "PCtd" Programmable Cycle Time Display must be programmed "on" to access the "Cnin" option, refer to *option 16*.

2. When "Cnin" appears in the display, press the START (enter) keypad. The first cycle time value will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to change the current value.

NOTE: The Program Cycle Time can be set from 0 to 255 minutes. The default value is 0.

4. Press the START (enter) keypad when the desired cycle time value appears in the display.

NOTE: Programming display time (in minutes) does not actually change time in the cycle, only the displayed cycle time for the user.

NOTE: To program another cycle, repeat Cycle Programming steps. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Ready Mode.

5. Supply/Compartment Dispenser Programming "SUPC" (Design 1 Models only)

This option allows the owner to choose between the supply dispenser or compartment dispenser.

NOTE: "Supply Dispenser" must only be selected if machine is connected to an external chemical supply system.

How to Program Supply/Compartment Dispenser Programming

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "Prog" appears in the display. Press the START (enter) keypad, and "dCYC" will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until "SUPC" appears in the display.
4. When "SUPC" appears in the display, press the START (enter) keypad. The current dispenser option will appear in the display.
   "S" = Supply Dispenser
   "C" = Compartment Dispenser (Default Setting)
5. Press the #3 (∧) or the #6 (∨) keypad to change the dispenser type.
6. Press the START (enter) keypad when the desired dispenser type appears in the display. The next option, "bALr" (VFD models) or "lrA" (2 Speed models), will appear in the display.

NOTE: For VFD models: To program "bALr" (Number of Balance Retries), refer to *option 6*. For 2 Speed models: To program "lrA" (lR Access [on/off]), refer to *option 7*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

6. Number of Balance Retries “bALr” (Variable Frequency Drives Only)

This option allows the owner to program how many times the control will retry balancing the load before moving into Extract step.

How to Program Number of Balance Retries

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad, and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “bALr” appears in the display.
4. When “bALr” appears in the display, press the START (enter) keypad. The current value will appear in the display.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current value.

NOTE: The number of balance retries can be set from 1-7. The default value is 3 for Design 1 models and 1 for Design 2 models.

6. Press the START (enter) keypad when the desired value appears in the display. The next option, “IrA”, will appear in the display.

NOTE: To program “IrA” (IR Access [on/off]), refer to *option 7*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

7. IR Access (On/Off) “IrA”

This option allows the owner to enable or disable allowing the control to be read by an external device.

How to Program the IR Access (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “IrA” appears in the display.
4. When “IrA” appears in the display, press the START (enter) keypad. The current IR Access status will appear in the display.
   “on” = Option Enabled (Default Setting)
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “t FC”, will appear in the display.

NOTE: To program “t FC” (Fahrenheit/Celsius), refer to *option 8*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

8. Fahrenheit/Celsius “t FC”

This option allows the owner to set whether the display will be shown in Fahrenheit or Celsius.

How to Program Fahrenheit/Celsius

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “t FC” appears in the display.
4. When “t FC” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Fahrenheit/Celsius setting.
   “CEL” = Celsius
   “FAHr” = Fahrenheit (Default Setting)
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current number to the desired number.
6. Press the START (enter) keypad when the correct number of degrees appears in the display. The new value is saved and the next option, “FH”, will appear in the display.

NOTE: To program “FH” (Hot Water Temperature), refer to *option 9*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

9. Hot Water Temperature “FH”

This option allows the owner to program the hot water temperature for models equipped with heat.

How to Program Hot Water Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FH” appears in the display.
4. When “FH” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Hot Water Temperature value.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current Hot Water Temperature value to the desired Hot Water Temperature value.

NOTE: Hot Water Temperature is selectable between 35° and 194° Fahrenheit (2° and 90° Celsius). Default temperature is 140° Fahrenheit (60° Celsius).

WARNING

To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit (51° Celsius) and hot surfaces.

W748

NOTE: Refer to *option 8* to select Celsius or Fahrenheit display.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, “FHC”, will appear in the display.

NOTE: To program “FHC” (Warm Water Temperature), refer to *option 10*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

10. Warm Water Temperature "FHC"

This option allows the owner to program the warm water temperature for models equipped with heat.

How to Program Warm Water Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "Prog" appears in the display. Press the START (enter) keypad and "dCYC" will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until "FHC" appears in the display.
4. When "FHC" appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Warm Water Temperature value.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current Warm Water Temperature value to the desired Warm Water Temperature value.

NOTE: Warm Water Temperature is selectable between 35° and 194° Fahrenheit (2° and 90° Celsius). Default temperature is 100° Fahrenheit (38° Celsius).

WARNING

To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit (51° Celsius) and hot surfaces.

W748

NOTE: Refer to *option 8* to select Celsius or Fahrenheit display.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, "FC", will appear in the display.

NOTE: To program "FC" (Cold Water Temperature), refer to *option 11*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

11. Cold Water Temperature "FC"

This option allows the owner to program the cold water temperature for models equipped with heat.

How to Program Cold Water Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "Prog" appears in the display. Press the START (enter) keypad and "dCYC" will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until "FC" appears in the display.
4. When "FC" appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Cold Water Temperature value.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current Cold Water Temperature value to the desired Cold Water Temperature value.

NOTE: Cold Water Temperature is selectable between 35° and 194° Fahrenheit (2° and 90° Celsius). Default temperature value is 35° Fahrenheit (2° Celsius).

WARNING

To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit (51° Celsius) and hot surfaces.

W748

NOTE: Refer to *option 8* to select Celsius or Fahrenheit display.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, "Codn", will appear in the display.

NOTE: To program "Codn" (Cool Down Enable/ Temperature), refer to *option 12*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

12. Cool Down Enable/Temperature "Codn"

This option allows the owner to enable or disable the Cool Down Water Temperature option. If enabled, the owner can also set the cool down water temperature.

How to Program Cool Down Enable/ Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "Prog" appears in the display. Press the START (enter) keypad and "dCYC" will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until "Codn" appears in the display.
4. When "Codn" appears in the display, press the START (enter) keypad. A number or "oFF" will appear in the display. The number corresponds to the current Cool Down Water Temperature value and "oFF" appears when cool down is disabled.
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.

NOTE: Cool Down Water Temperature is selectable between 50° and 160° Fahrenheit (10° and 71° Celsius). Default is off.

6. Press the START (enter) keypad when the desired value appears in the display.

NOTE: Refer to *option 8* to select Celsius or Fahrenheit display.

7. Press the START (enter) keypad when the correct number appears in the display. The next option, "PtEn", will appear in the display.

NOTE: To program "PtEn" (Production Test Cycle [on/off]), refer to *option 13*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

13. Production Test Cycle (On/Off) "PtEn"

This option allows the owner to enable or disable access to the production test cycle. Refer to ***Production Test Cycle*** section for more information.

How to Program the Production Test Cycle (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "Prog" appears in the display. Press the START (enter) keypad and "dCYC" will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until "PtEn" appears in the display.
4. When "PtEn" appears in the display, press the START (enter) keypad. The current Production Test Cycle status will appear in the display.
   "on" = Option Enabled (Default Setting)
   "oFF"= Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, "rAEn", will appear in the display.

NOTE: To program "rAEn" (Manual Rapid Advance [on/off]), refer to *option 14*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

14. Manual Rapid Advance (On/Off) “rAEn”

This option allows the owner to enable or disable the rapid advance feature. Refer to ***Rapid Advance Feature*** section for more information.

How to Program the Manual Rapid Advance (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “rAEn” appears in the display.
4. When “rAEn” appears in the display, press the START (enter) keypad. The current Manual Rapid Advance status will appear in the display.
   “on” = Option Enabled (Default Setting)
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “nCtd”, will appear in the display.

NOTE: To program “nCtd” (No Cycle Time Display), refer to *option 15*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

15. No Cycle Time Display “nCtd”

This option allows the owner to enable or disable whether the cycle time will appear in the display

How to Program No Cycle Time Display

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCyC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “nCtd” appears in the display.
4. When “nCtd” appears in the display, press the START (enter) keypad. The current No Cycle Time Display status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled (Default Setting)
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “PCtd”, will appear in the display.

NOTE: To program “PCtd” (Programmable Cycle Time Display), refer to *option 16*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

16. Programmable Cycle Time Display “PCtd”

This option allows the owner to program the displayed cycle time.

How to Program Programmable Cycle Time Display

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCyC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “PCtd” appears in the display.
4. When “PCtd” appears in the display, press the START (enter) keypad. The current Programmable Cycle Time Display status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled (Default Setting)

NOTE: Enabling this option will not change the cycle time, only the display time for the user. Refer to option “Cnin” in Cycle Programming to program minutes to the cycle time display.

5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “SdAd”, will appear in the display.

NOTE: To program “SdAd” (Slow Drain Detection Adjust Value), refer to *option 17*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Ready Mode.

17. Slow Drain Detection Adjust Value “SdAd”

This option allows the owner to increase the slow drain detection threshold by adding additional seconds to the threshold value. When enabled, it increases the time before a slow drain error will occur.

How to Program the Slow Drain Detection Adjust Value

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “SdAd” appears in the display.
4. When “SdAd” appears in the display, press the START (enter) keypad. The current Slow Drain Detection Adjust status will appear in the display.
5. Press the #3 (∧) or the #6 (∨) keypad to change the current value.

NOTE: The slow drain detection adjust value can be set from 0 to 255 seconds. The default value is 0.

6. Press the START (enter) keypad when the desired value appears in the display. The next option, “dCyC”, will appear in the display.

NOTE: To program “dCyC” (Default Cycle), refer to *option 1*. To program other options, refer to the appropriate section.

How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

Collecting Audit Information

This feature allows the owner to retrieve audit information stored in the machine by pressing a sequence of pads on the control.

How to Enter Audit Feature

1. Control must be in Manual Mode to start. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "AUdt" appears.
3. Press the START (enter) keypad. "CyC" will appear.

How to Read Audit Data

1. Use the #3 (∧) or the #6 (∨) keypad to scroll through various options until the desired option is shown in the display. Refer to the Audit Options List, *Table 10*, for an explanation of the audit options available.

Audit Options List		
#	**Display**	**Description**
1	"CyC"	Total # of machine cycles
2	"rCyC"	Total # of rapid advanced cycles

Table 10

2. Press the START (enter) keypad **once** to start the audit count. At this point, the display will show the first four-digit segment of the audit value. If the audit count is 10,000 or higher, press the START (enter) keypad again to view the last four digits of the number.

NOTE: The display can show up to 4 digits at one time. Audit counts 10,000 or higher are separated into two 4-digit segments. Each time the START (enter) keypad is pressed in step 2, the display will show the next 4-digit segment in the audit value. If the value is 9,999 or less, only one 4-digit segment will be shown.

3. Press the START (enter) keypad again. The control will go to the next audit option in the Audit Options List.

How to Exit Audit Feature

Press the #5 (<) keypad.

Manual Reset

This feature allows the owner to reset the machine control's programming data to the factory default settings by pressing a sequence of pads on the control.

How to Enter Manual Reset

1. Control must be in Manual Mode to start. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "rSEt" appears.

Press the START (enter) keypad. The control will be blank until the programming is complete. Once the program has been reset, the control will display the next Manual Mode option, "dIAg".

Testing Machine and Electronic Control Functions

This feature allows the owner to run diagnostic tests on various machine operations without servicing the machine. The following tests are available:

- VFD Balance Weight Test (Design 1 models only)
- Water Purge Test
- Water Leak Detection Test

The following tests are available on Design 2 models only:

- Drive Software Version Number
- Drive Parameter Table Version Number
- Drive Type Value
- Drive DC Bus Display Test

For an overview of the manual diagnostic test feature, refer to the flowchart on the following page.

How to Enter Diagnostic Testing Feature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "dIAg" appears.
3. Press the START (enter) keypad. Display will change to "d019" indicating the VFD Balance Weight test.
4. Press the #3 (∧) or the #6 (∨) keypad to scroll through the diagnostic test options.

How to Start Tests

To start a diagnostic test, refer to the quick reference chart (*Table 11*). Press the START (enter) keypad when the desired test number is displayed. For detailed information on each test, read the appropriate description.

How to Exit Diagnostic Testing Feature

Press the #5 (<) keypad. The display will return to the previous mode of operation.

Diagnostic (Testing) Mode – Quick Reference Chart

Test Number	Diagnostic Mode	Display
"d019"	VFD Balance Weight Test (Design 1 models)	"bAL"
	Drive DC Bus Display Test (Design 2 models)	"dCb"
"d020"	Water Purge Test	"PUrg"
"d021"	Water Leak Detection Text	"Ld"
"d022" (Design 2 models only)	Drive Software Version Number	"drxx"
"d023" (Design 2 models only)	Drive Parameter Table Version Number	"dPxx"
"d024" (Design 2 models only)	Drive Type Value	"dt x"

Diagnostic Test Descriptions

VFD Balance Weight Test (Design 1 Models)

This test is only available on machines equipped with a variable frequency motor drive.

To start test, control must be in the Diagnostic Testing Mode. Refer to ***How to Enter Diagnostic Testing Feature*** at the beginning of this section.

To enter, press the START (enter) keypad. The display will show "bAL" and the START keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The motor will turn at distribution speed. The control monitors the VFD balance switch for frequency and displays a corresponding message. Refer to *Table 11*.

VFD Balance Switch Frequency	Description	Display
0	Switch is always closed	"CLoS"
1 Hz		"1 H"
2 Hz		"2 H"
3 Hz		"3 H"
	Switch is always open	"oPEn"

Table 11

Press the START (enter) keypad to stop the test. The door will not unlock until the basket stops or the coast time has expired.

Drive DC Bus Display Test (Design 2 Models)

This test is only available on machines equipped with a custom drive.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show "dCb" and the START keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The control will turn on the drive and ramp up the motor to distribution speed. The drive's DC Bus Voltage will display.

Water Purge Test

This option empties all water from the machine.

To start test, control must be in the Diagnostic Testing Mode. Refer to ***How to Enter Diagnostic Testing Feature*** at the beginning of this section.

To enter, press the START (enter) keypad. The display will show "PUrg" and the START keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The display will show "FLSH". The control will energize all water valves and supply outputs while keeping the drain valves open.

The test will end, return to Water Purge Test start prompt, and door will unlock if any keypad is pressed, the door is unlocked or opened, if an end test communication is received or if two minutes has occured since the test began. The control will prevent the door from being unlocked until there is no water in the machine.

Water Leak Detection Test

This option allows the owner to test for a water leak in the machine.

To start test, control must be in the Diagnostic Testing Mode. Refer to ***How to Enter Diagnostic Testing Feature*** at the beginning of this section.

To enter, press the START (enter) Keypad. The display will show "Ld" and the START keypad LED will flash if the door is closed. Press the START (enter) keypad. The door will lock. The control closes the drain valve, turns the pump off and fills the machine with cold water to low level. The water level is monitored for 2 minutes and the display shows an alternating horizontal segment while the control is monitoring the water level. If after 2 minutes the water level is the same, control will display "PASS", water will drain, door will unlock and control will return to Ready Mode. If water level is lower indicating a leak in the drain, control will display "FAIL", water will drain, door will unlock and water leak detection error will display as "E Ld".

On Design 2 models, if water level is higher, indicating a leak in the fill valve, control will display "FAIL", water will drain, door will unlock and water leak detection error will display as "E LF".

Drive Software Version Number Test (Design 2 models only)

This option displays the custom drive software version number. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show "drxx" where "xx" is the custom drive software version number.

To exit the Custom Drive Software Version Number Test, press the #3 (<) keypad. The control will return to the Diagnostic Testing Mode.

Drive Parameter Table Version Number (Design 2 models only)

This option displays the custom drive parameter table version number. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show "dPxx" where "xx" is the custom drive parameter table version number.

To exit the Custom Drive Parameter Table Version Number Test, press the #3 (<) keypad. The control will return to the Diagnostic Testing Mode.

Drive Type Value (Design 2 models only)

This option displays the custom drive type value. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show "dt x" where "x" is the custom drive type value. Refer to *Table 12*.

Display	Drive Type
"dt 1"	2 HP drive
"dt 2"	3 HP drive
"dt 3"	5 HP 280V drive
"dt 4"	5 HP 480V drive

Table 12

To exit the Custom Drive Type Value, press the #3 (<) keypad. The control will return to the Diagnostic Testing Mode.

Production Test Cycle

To Enter Production Test Cycle

1. Be certain control is in Ready Mode and top cover is open.
2. While pressing and holding the #3 keypad with one hand, press the #7 keypad with the other hand.
3. When the control enters the Production Test Cycle, it will first display "S xx" with the "xx" showing the software version of the front end control.
4. The control will advance through the sequence of test steps whenever any key is pressed. Refer to *Table 13* for all tests in the Production Test Cycle.

To Exit Production Test Cycle

To exit a test step, power down the machine.

Production Test Cycle Quick Reference Chart		
Display	**Test Cycle Step**	**Comments**
“S xx”	FEC Control Software Version	xx is the software version number.
“o xx”	Output Board Software Version	xx is the software version number.
“Ct 2”	Control Type	2 is the control type.
“oPL”	Control Type	OPL
“USA” or “IntL”	Control Type	Domestic or International
“drAn”	Drain Type	
“tEnP”	Temp Sensor	Step skipped if not equipped with temp sensor.
“HEAt”	Heater	Step skipped if not heater-equipped.
“rot”	Rotation Sensor	Step skipped if not Rotation Sensor-equipped.
“L dC” or “L AC”	Door Lock Type	“L dC” if 24 VDC lock or “L AC” if 240 VAC unlock solenoid.
“droP” or “drCL”	Door Status	Door open or closed.
“drUL” or “drLo”	Door Lock Status	Door will lock.
“8.8.8.8” + all LEDs	Display Test	All display elements are lit.
“PAxx” where xx = 1 through 12	Keypad Test step	Advance after all keypads are pressed.
“A xx”	Top Cover Switch Test	xx is either “CL” for closed or “oP” for open.
“Cxxx”	Machine Type/Size	
“drxx”	Drive Software Version Number	xx is the drive software version number. Design 2 models only.
“dPxx”	Drive Parameter Table Version Number	xx is the drive parameter table version number. Design 2 models only.
“dt x”	Drive Type Value	xx is the drive type value. Design 2 models only.
“HFIL”	Hot Fill to Low Level	All water outputs turned off when Low Level reached.
“CFIL”	Cold Fill to Low Level	All water outputs turned off when Low Level reached.
“bFIL”	Warm Fill to Low Level	All water outputs turned off when Low Level reached.
“bFIH”	Warm Fill to High Level	All water outputs turned off when High Level reached.
“S1” for supply or “C2Co” for compartment	Supply #1 or Compartment #2 Cold Fill	
“S2” for supply or “C2Ho” for compartment	Supply #2 or Compartment #2 Hot Fill	
“S3” for supply or “C3Co” for compartment	Supply #3 or Compartment #3 Cold Fill	
“S4” for supply or “C4Ho” for compartment	Supply #4 or Compartment #4 Hot Fill	

Table 13 (continued)

Table 13 (continued)

Production Test Cycle Quick Reference Chart		
Display	**Test Mode**	**Comments**
"xxxF" degrees F or "xxxC" degrees C depending on the Fahrenheit/Celsius programming parameter	Heat water to 110°F or display temperature	xxx is degree temperature. This step skipped if not model with heat. Heater turned off when temperature reached.
"LoAg"	Reduced Wash Speed Forward with no agitation action	This step skipped on 2 Speed models.
"Ag"	Wash Speed Forward with no agitation action	
"rAg"	Wash Speed Reverse with no agitation action	
"drAl"	Drain Distribution Speed	
"PUrg"	Factory Valve Purge	
"SP 1"	Extract Speed #1 "very low"	This step skipped on 2 Speed models.
"SP 2"	Extract Speed #2 "low"	This step skipped on 2 Speed models.
"SP 3"	Extract Speed #3 "medium"	This step skipped on 2 Speed models.
"SP 4" (VFD Models) or "SPIn" (2 Speed Models)	Extract Speed #4 "high"	Design 2 models only. This step skipped on F-Speed Models.
"SP 5"	Extract Speed #5 " very high"	Design 2 models only. This step skipped on 2 Speed and F-Speed Models.
"SP 6"	Extract Speed #6 "ultra high"	Design 2 models only.
"Prdn"	End of test	Turn Power off.

Table 13

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with “EI” refer to external device Infra-red communication errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
EI01	Transmission Failure	Communication failure. Re-aim external device and try again.
EI02	Time-out Error	Communication failure. Re-aim external device and try again.
EI03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EI04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
EI05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option’s value and try again.
EI09	CRC-16 Error	Communication failure. Re-aim external device and try again.
EI0A	Framing Error	Communication error. Re-aim external device and try again.
EI0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
EI0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
EI0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
E FL	Fill Error	Water level not reached within 10 minutes in any fill agitate cycle. End cycle. Power down machine to clear.
E SP	SPI Communications Error	Front End control cannot communicate with output board. Power down the machine, power up and try again.
E dL	Door Lock Error	Door does not lock immeadiately upon closing (open and reclose door) or doesn’t unlock 5 seconds after cycle completion. Power down machine and retry.

Table 14 (continued)

Table 14 (continued)

Display	Description	Cause/ Corrective Action
E do	Door Open Error	Control detects door open. Caused by pulling on door while locked or about to lock. Correct inoperative door locking system. End cycle. Power down machine to clear.
E Ub	Unbalance Error	Unable to balance load. Redistribute load and run cycle.
door	Door Open Indicator	Door is not closed in Start Mode. If door is closed, check for improper wiring or faulty door switch.
E dr	Drain Alarm Error	Machine not drained within 15 minutes (or other programmed length of time) in any drain step. End cycle. Power down machine to clear.
E Ht	Heat Alarm Error	Programmed heat alarm time of 120 minutes or other programmed length of time is exceeded. Turns off heater output for remainder of cycle.
E oP	Open Temperature Sensor Error	Control senses temperature less than 0°F (-18°C) in machine equipped with temperature sensor. Heater and thermistor related operations are disabled for remainder of cycle.
E SH	Shorted Temperature Sensor Error	Control senses temperature greater than 220°F (104°C) in machine equipped with temp sensor. Heater and thermistor related operations are disabled for remainder of cycle.
E ro	Rotation Sensor Error	Invalid signal received from Rotation Sensor. Control will activate coast times to complete cycle.
E FS	Frame Balance Switch Error	Control detects Frame Balance Switch open. End cycle.
E db	Drive Balance Switch Error	Control detects VFD Balance Switch input closed at start of drain step. End cycle. Power down machine to clear.
E Ld	Water Leak Detection Error	If control senses a drop in water level during diagnostic testing. Power down machine to clear. When error occurs during a cycle, “E Ld” is displayed for one minute after opening the door at the end of the cycle and lights the right-most decimal point* on the display. When the error occurs during a test, “E Ld” is displayed immediately after the test until the machine is powered down to clear the error.
E Sd	Slow Drain Error	If control shows error after door is open (when cycle is completed) for one minute and lights the right-most decimal point* on the display, the error information will be logged in audit data.

* To clear the decimal point on display, press the START (enter) keypad 3 times in succession (within 5 seconds).

Table 14 (continued)

Table 14 (continued)

Display	Description	Cause/ Corrective Action
E LF**	Water Leak Detection Error	Control senses an increase in water level during diagnostic testing. Power down machine to clear. Control shows error after door is open (when cycle is completed) for one minute or after test has been completed, the right-most decimal point on display lights* and the error information will be logged in audit data.
Ed01**	SPI Communication Error	Front End control cannot communicate with motor drive. Power down, verify input power and 6-pin communication connection on drive and Front End control, power up and try again.
Ed02**	DC Bus Error	The control detects the DC bus is too high. Power down, verify line voltage is within specification, power up and try again.
Ed03**	Tachometer Error	The drive detects the tachometer input is damaged during power up or no tachometer signal is detected after initiating motor output. Power down, verify H3 on drive and tachometer connections on motor, power up and try again.
Ed04**	Locked Rotor Error	Motor does not reach speed at startup. Power down, verify motor mounting and look for obstructions, power up and try again.
Ed05**	IGBT Overcurrent Error	The drive detects an overcurrent shunt condition. Power down machine for a minimum of two minutes, verify the motor is not shorted phase to phase or phase to ground. Power up and try again. If problem persists, replace drive.
Ed06**	Thermal Error	The control detects a high IPM temperature. Power down, verify convection around drive heat sink, power up and try again.
Ed07**	No Setup Error	The drive receives movement commands without receiving a setup packet. Power down, power up and try again.
Ed08**	Max Over Current Error	The drive detects motor output overcurrent condition. Power down, power up and try again.
Ed09**	Current Sensor Error	The drive detects a current sensor is not operating properly at startup. Power down, power up and try again. If problem persists, replace drive.

* To clear the decimal point on display, press the START (enter) keypad 3 times in succession (within 5 seconds).
** Design 2 models only.

Table 14

Rapid Advance Feature

The Rapid Advance feature allows the owner to quickly advance through active cycles.

How to Use Rapid Advance

Control must be in an active cycle to use the Rapid Advance feature.

While in the Rapid Advance Mode, pressing the START (enter) keypad will advance the machine to the next cycle step. The cycle indicator lights will tell which cycle step the machine is in.

For Example: If the washer is in the first Fill cycle step, pressing the START (enter) keypad will advance the washer into the Agitate cycle step.

Continue pressing the START (enter) keypad until the cycle is completed.

How to Exit Rapid Advance Feature

1. Advance through the cycles until reaching the Start Mode.

NOTE: The Rapid Advance option must be turned on for Rapid Advance to work. Refer to *option 14* in *Programming Control*.

Communications Mode

Infra-red Communications

The Infra-red Communications feature allows the control to communicate with an external device. The control can be programmed without using the keypad.

How to Begin Communications with An External Device

The control will go blank and the display will show "-C-" until the communication is complete. If an error occurs that terminates communication, the display will show "EIXX" ("XX" represents the error code).

NOTE: The Infra-red Communications option must be turned on. Refer to *option 7* in *Programming Control*.

Cycle Charts

Domestic Model Cycle Chart									
Cycle Steps	**Perm Press Light Soil**	**Cotton/ Terry Light Soil**	**Perm Press Medium Soil**	**Cotton/ Terry Medium Soil**	**Perm Press Heavy Soil**	**Cotton/ Terry Heavy Soil**	**Rags Heavy Soil**	**Reclaim**	**Delicates Cold**
Cycle reference (display in Program Mode)	**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**
Wash 1 (ON/OFF)	ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)	7	7	2	2	2	2	2	2	6
Fill Temperature	Hot	Hot	Warm	Warm	Warm	Warm	Warm	Warm	Cold
Fill Level	Low	Low	High	High	High	High	High	High	High
Supply	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1	C1	C1	C1	C1	C1	C1, C2, (S1)
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 2 (ON/OFF)	OFF	OFF	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)	2	2	6	6	7	7	10	12	2
Fill Temperature	Cold	Cold	Hot	Hot	Hot	Hot	Hot	Hot	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	High
Supply	C1, C2, C3	C1, C2, C3	C1, C2 (S1)	C1, C2 (S1)	C1, C2 (S1)	C1, C2 (S1)	C1, C2 (S1)	C1, C2 (S1)	C1, C2
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 3 (ON/OFF)	OFF	OFF	ON	ON	ON	ON	ON	ON	OFF
Time for agitation (min.)	2	2	7	7	7	7	6	12	2
Fill Temperature	Cold	Cold	Hot	Hot	Hot	Hot	Hot	Hot	Cold
Fill Level	Low	Low	Low	Low	Low	Low	High	High	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3 (S2)	C1, C2, C3 (S2)	C1, C2, C3 (S2)	C1, C2, C3 (S2)	C1, C2, C3 (S2)	C1, C2, C3 (S2)	C1, C2
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 4 (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0

(continued)

Cycle Charts

(continued)

Domestic Model Cycle Chart									
Cycle Steps		**Perm Press Light Soil**	**Cotton/ Terry Light Soil**	**Perm Press Medium Soil**	**Cotton/ Terry Medium Soil**	**Perm Press Heavy Soil**	**Cotton/ Terry Heavy Soil**	**Rags Heavy Soil**	**Reclaim**	**Delicates Cold**
Cycle reference (display in Program Mode)		**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type		**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**
Rinse 1 (ON/OFF)		ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)		2	2	2	2	2	2	2	4	2
Fill Temperature		Warm	Warm	Hot	Hot	Hot	Hot	Hot	Cold	Cold
Fill Level		High	High	Low	Low	Low	Low	High	High	High
Supply		C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)		0	0	0	0	0	0	0	0	0
Rinse 2 (ON/OFF)		ON	ON	ON	ON	ON	ON	ON	ON	OFF
Time for agitation (min.)		2	2	2	2	2	2	2	2	2
Fill Temperature		Warm	Warm	Warm	Warm	Warm	Warm	Warm	Warm	Cold
Fill Level		High	High	High	High	High	High	High	High	Low
Supply		C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.) (Spin Speed)		1 (High)	1 (High)	1 (High)	1 (High)	1 (High)	1 (High)	0	1 (High)	0
Rinse 3 (ON/OFF)		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)		2	2	2	2	2	2	2	2	2
Fill Temperature		Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level		Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply		C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.) (Spin Speed)		0	0	0	0	0	0	0	0	0
Rinse 4 (ON/OFF)		ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)		4	4	4	5	4	5	4	4	4
Fill Temperature		Warm	Warm	Warm	Warm	Warm	Warm	Warm	Warm	Cold
Fill Level		Low	Low	Low	Low	Low	Low	Low	Low	High
Supply		C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C4 (S3, S4)
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.) (Spin Speed)		4 (Design 1: Very High) (Design 2: Ultra High)	5 (Design 1: Very High) (Design 2: Ultra High)	4 (Design 1: Very High) (Design 2: Ultra High)	5 (Design 1: Very High) (Design 2: Ultra High)	4 (Design 1: Very High) (Design 2: Ultra High)	5 (Design 1: Very High) (Design 2: Ultra High)	5 (Design 1: Very High) (Design 2: Ultra High)	3 (Design 1: Very High) (Design 2: Ultra High)	3 (Low)
Default Cycle Time (hh:mm:ss)	2 speed	00:28:20	00:29:20	00:40:20	00:42:20	00:41:20	00:43:20	00:43:20	00:54:20	00:25:20
	V or F-speed (Design 1)	00:29:50	00:30:50	00:41:50	00:43:50	00:42:50	00:44:50	00:44:50	00:55:50	00:26:05
	V or F-speed (Design 2)	00:30:02	00:31:02	00:44:02	00:44:02	00:43:02	00:45:02	00:44:02	00:56:02	00:25:32

International Model Cycle Chart									
Cycle Steps	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)	**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**	**3/12/3 Gentle**
Wash 1 (ON/OFF)	ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Warm	Warm	Warm	Warm	Warm	Warm	Warm	Warm	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	High
Supply	C1	C1	C1	C1	C1	C1	C1	C1	C1
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 2 (ON/OFF)	ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)	6	6	6	6	6	6	6	6	3
Fill Temperature	Hot	Hot	Hot	Hot	Hot	Hot	Hot	Hot	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	High
Supply	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)	C1, C2, C3 (S1, S2)
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 3 (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	High	High	Low	High	High	Low	High	High	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 4 (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0

(continued)

Cycle Charts

(continued)

International Model Cycle Chart										
Cycle Steps		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)		**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type		**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**	**3/12/3 Gentle**
Rinse 1 (ON/OFF)		ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)		2	2	2	2	2	2	2	2	2
Fill Temperature		Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level		High	High	High	High	High	High	High	High	High
Supply		C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)		0	0	0	0	0	0	0	0	0
Rinse 2 (ON/OFF)		ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)		2	2	2	2	2	2	2	2	2
Fill Temperature		Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level		High	High	High	High	High	High	High	High	High
Supply		C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.) (Spin Speed)		1 (High)	1 (High)	1 (High)	1 (High)	1 (High)	1 (High)	1 (High)	1 (Low)	1 (Low)
Rinse 3 (ON/OFF)		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)		2	2	2	2	2	2	2	2	2
Fill Temperature		Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level		Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply		C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.) (Spin Speed)		0	0	0	0	0	0	0	0	0
Rinse 4 (ON/OFF)		ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)		3	3	3	3	3	3	3	3	3
Fill Temperature		Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level		High	High	High	High	High	High	High	High	High
Supply		C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)
Heat (if enabled)		0	0	0	0	0	0	0	0	0
Drain		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.) (Spin Speed)		5 (Design 1: Very High) (Design 2: Ultra High)	5 (Design 1: Very High) (Design 2: Ultra High)	5 (Design 1: Very High) (Design 2: Ultra High)	3 (Design 1: Very High) (Design 2: Ultra High)	3 (Design 1: Very High) (Design 2: Ultra High)	3 (Design 1: Very High) (Design 2: Ultra High)	3 (Design 1: Very High) (Design 2: Ultra High)	3 (Low)	2 (Low)
Default Cycle Time (hh:mm:ss)	2 speed	00:31:20	00:31:20	00:31:20	00:29:20	00:29:20	00:29:20	00:29:20	00:29:20	00:25:20
	V or F-speed (Design 1)	00:32:50	00:32:50	00:32:50	00:30:50	00:30:50	00:30:50	00:30:50	00:30:50	00:26:50
	V or F-speed (Design 2)	00:33:02	00:33:02	00:33:02	00:31:02	00:31:02	00:31:02	00:31:02	00:29:32	00:25:32

Domestic Model Blank Cycle Chart									
Cycle Steps	**Perm Press Light Soil**	**Cotton/ Terry Light Soil**	**Perm Press Medium Soil**	**Cotton/ Terry Medium Soil**	**Perm Press Heavy Soil**	**Cotton/ Terry Heavy Soil**	**Rags Heavy Soil**	**Reclaim**	**Delicates Cold**
Cycle reference (display in Program Mode)	**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									

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Domestic Model Blank Cycle Chart										
Cycle Steps		**Perm Press Light Soil**	**Cotton/ Terry Light Soil**	**Perm Press Medium Soil**	**Cotton/ Terry Medium Soil**	**Perm Press Heavy Soil**	**Cotton/ Terry Heavy Soil**	**Rags Heavy Soil**	**Reclaim**	**Delicates Cold**
Cycle reference (display in Program Mode)		**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type		**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**
Rinse 1 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.)										
Rinse 2 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 3 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 4 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Default Cycle Time (hh:mm:ss)	2 speed									
	V or F-speed (Design 1)									
	V or F-speed (Design 2)									

Domestic Model Blank Cycle Chart									
Cycle Steps	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)	**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									

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Domestic Model Blank Cycle Chart										
Cycle Steps		**Perm Press Light Soil**	**Cotton/ Terry Light Soil**	**Perm Press Medium Soil**	**Cotton/ Terry Medium Soil**	**Perm Press Heavy Soil**	**Cotton/ Terry Heavy Soil**	**Rags Heavy Soil**	**Reclaim**	**Delicates Cold**
Cycle reference (display in Program Mode)		**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type		**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**
Rinse 1 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.)										
Rinse 2 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 3 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 4 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Default Cycle Time (hh:mm:ss)	2 speed									
	V or F-speed (Design 1)									
	V or F-speed (Design 2)									

International Model Blank Cycle Chart									
Cycle Steps	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)	**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**	**3/12/3 Gentle**
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									

(continued)

Cycle Charts

(continued)

International Model Blank Cycle Chart									
Cycle Steps		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)		**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type		**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**	**3/12/3 Gentle**
Rinse 1 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.)										
Rinse 2 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 3 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 4 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Default Cycle Time (hh:mm:ss)	2 speed									
	V or F-speed (Design 1)									
	V or F-speed (Design 2)									

International Model Blank Cycle Chart									
Cycle Steps	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)	**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**	**3/12/3 Gentle**
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									

(continued)

Cycle Charts

(continued)

International Model Blank Cycle Chart										
Cycle Steps		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Cycle reference (display in Program Mode)		**CYC1**	**CYC2**	**CYC3**	**CYC4**	**CYC5**	**CYC6**	**CYC7**	**CYC8**	**CYC9**
Agitation type		**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**18/3/18 Normal**	**3/12/3 Gentle**	**3/12/3 Gentle**
Rinse 1 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.)										
Rinse 2 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 3 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Rinse 4 (ON/OFF)										
Time for agitation (min.)										
Fill Temperature										
Fill Level										
Supply										
Heat (if enabled)										
Drain										
Spin (min.) (Spin Speed)										
Default Cycle Time (hh:mm:ss)	2 speed									
	V or F-speed (Design 1)									
	V or F-speed (Design 2)									