NOVA CONTROLS
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A **Hydro** Systems Company

Sprite III
WAREWASH DISPENSING SYSTEM

Reference Manual
DM-700 Series

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NOVA CONTROLS
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A **Hydro** Systems Company

Sprite III Quick Start Guide

Overview

This guide is intended for those who are familiar with installing and using dispensing systems. It provides a quick overview of the installation and use of the Sprite III, with brief instructions for each step. For more complete information, please refer to the Sprite III Reference Manual. If you do not have the Reference Manual, please call customer service at 1-800-252-6682 to obtain a copy.

Follow these steps to begin using the Sprite III:

1. Install mechanical and electrical portions of the system. Refer to *"Mechanical Installation" on page QS2* and *"Electrical Installation" on page QS2* for instructions.
2. Familiarize yourself with the three buttons on the keypad and with the User menus.
3. Within the Program Mode menus, familiarize yourself with the Configuration Settings and Adjustment Menu (probe or probeless) that you will use. Note the name of the function listed above each numbered menu.
4. Input the Installer Password.

5. Configure the system's settings. Press SCROLL to change the blinking digit to **2** (Configuration Settings). Your configuration settings determine how your system operates and which menus are available to you during programming. Choose between:
   - Detergent control (probe or probeless)
   - Machine type (door or conveyer)
   - Detergent type (liquid or capsule)
   - Third-product pump selection (with rinse, with detergent, or disabled).

After setting the configuration, you need only program adjustments that apply to your system.

6. Press SCROLL to change the blinking digit to **3** (Probe Adjustments) or **4** (Probeless Adjustments). Set adjustments as needed.
7. Press ENTER to return to the main menu. To exit, wait 30 seconds; the menu will automatically return to the Home screen after 30 seconds of inactivity.
8. Refer to the Sprite III Reference Manual (which may be attached to this Quick Start Guide) for information on *"Troubleshooting" on page 7-1*, *"Maintenance and Service" on page 8-1*, *"Spare Parts Reference" on page 8-2* and *"Specifications" on page 9-1*.
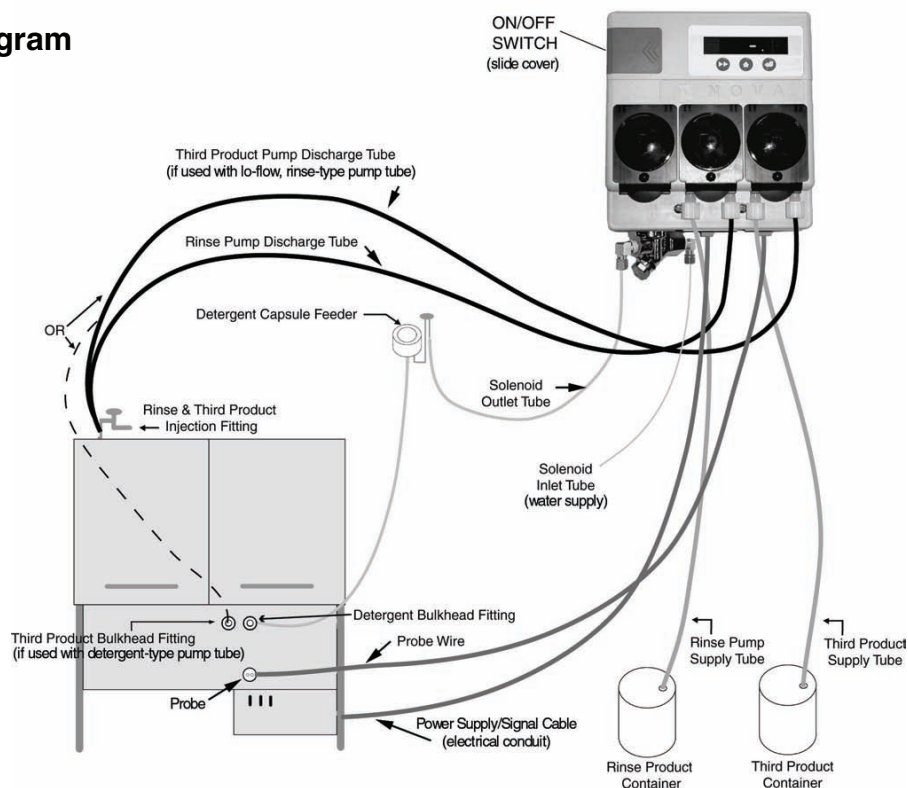
System Diagram

Figure QS-1   System Diagram

Mechanical Installation

Caution	Disconnect power to dish machine and dispenser during installation or any time cabinet is opened.

Wall Mounting Dispenser

1. Install dispenser near product containers and at a height for easy service access.
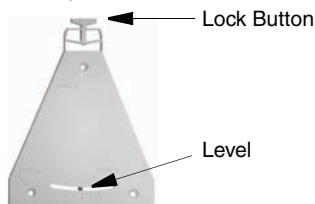2. Place, level and install mounting bracket.

— Lock Button

— Level

Figure QS-1   Mounting Bracket

3. Lower dispenser onto bracket. Press down to lock.
4. If using a Probe, immerse the probe in the wash tank solution near the product entry point and ensure a good solution flow.
5. Install the Rinse Injection Fitting at least 6" below dish machine rinse plumbing vacuum breaker. To prevent leaks, use thread sealant.
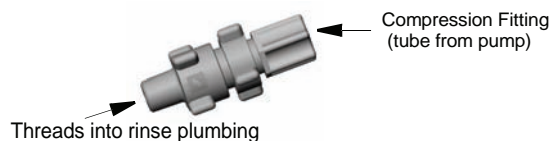

Compression Fitting (tube from pump)

Threads into rinse plumbing

Figure QS-2   Rinse Injection Fitting

6. Mount the Detergent Bulkhead Fitting above water line in tank and as close to probe as possible.
7. Route detergent, rinse and third-product supply tubes as indicated in *'System Diagram" on page QS-1*.

Caution	Use only copper tubing if water source is hot. **DO NOT** connect solenoid to the boosted temperature rinse water line on high temperature dish machines.

Electrical Installation

Caution	Disconnect power to the machine and dispenser during installation or whenever cabinet is opened. Verify all voltage sources with a meter. Refer to *Figure QS-3, "Wiring Diagrams."*

All electrical connections (except the probe) must be made either in the dish machine control circuit panel or an external junction box. The dispenser is pre-wired with a multi-conductor electrical cable that must be run through a conduit to the hard-wired connection on the dish machine. Use a 1/2" (13 mm) ID flexible, water tight conduit that meets all local and national codes. A conduit

fitting is on the bottom of the dispenser, where the power cable exits. The probe wire is also pre-wired and must be routed to the probe location and cut to fit.
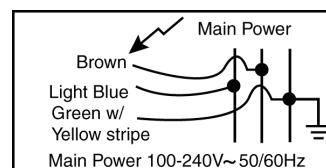
The Sprite III is available in two different wiring versions: terminal block with or without cable.

Caution	For **3-Phase Power System Connections**, refer to *'Main Power Wiring – 3-Phase Power Systems" on page 3-2* of the Sprite III Reference Manual.

Single-Phase, Main Power Connection

Main Power
Brown
Light Blue
Green w/ Yellow stripe
Main Power 100-240V~ 50/60Hz

Rinse Signal Wiring

Rinse Signal Wiring
(+) Violet
(-) White/Violet
Rinse Signal   24-240V ~ 50/60Hz or 24V DC

Detergent Signal Wiring

Detergent Signal Wiring
(+) Yellow
(-) White/Yellow
Detergent Signal 24-240V ~ 50/60Hz or 24V DC
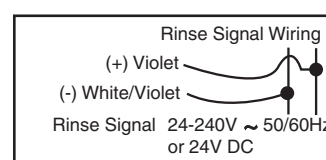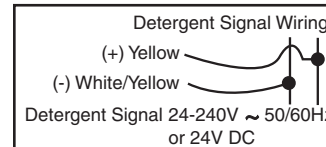
Figure QS-3   Wiring Diagrams

Description of Controls

The keypad shown in *Figure QS-4* displays and controls dispenser functions. Blinking digits prompt you to input a value with the SCROLL key. Use the NEXT key to move to the next digit. When the value displayed is the one you wish to store, press the ENTER key to set the value and return to the main menu.

Next   Scroll   Enter

Figure QS-4   Controller Keys

Key	Description
NEXT	Displays User or Program menus. Moves through each screen that does not have a blinking digit.
SCROLL	Changes the blinking number displayed (0-9). Starts Probeless Manual Initial Detergent Charge.
ENTER	Views and changes settings. Sets value and exits program. Starts and stops pumps and prime.

User Mode Operation

In User Mode, the Sprite III displays operating status, dispenser alarms, and gives access to User Mode menus.

Note	Press any key to silence the alarms.

User Mode Functions

- Rack Count (11)
- Detergent Prime Initial Charge (12)
- Rinse Pump Prime (13.1)
- Third Product Pump Prime (13.2)
- De-lime (14)
- ID Mode
- Live Conductivity Display (if enabled)
- Password Access to Program Mode
- Low Detergent Alarm
- Detergent Overfeed Stop Alarm

Accessing Program Mode

A pre-defined password must be used to enter Program Mode. The factory pre-set password can be changed to any 3-digit password from within Program Mode.

Note	If you change the password from the factory setting, be sure to make note of the new password. If your password is lost, you cannot program the unit and must contact Nova Controls Customer Service for assistance.

Use the following steps to input the factory-set default password (**123)** and enter Program Mode.

Entering the Password

1. Press and hold ENTER for two seconds to enter the password. Three zeros display.
2. Press SCROLL to change the blinking digit to a 1.
3. Press NEXT to move to the next digit.
4. Continue until "123" displays.
5. Press ENTER to enter to Program Mode.

Alarms and Indicators

These alarms and indicators may be seen in User Mode.
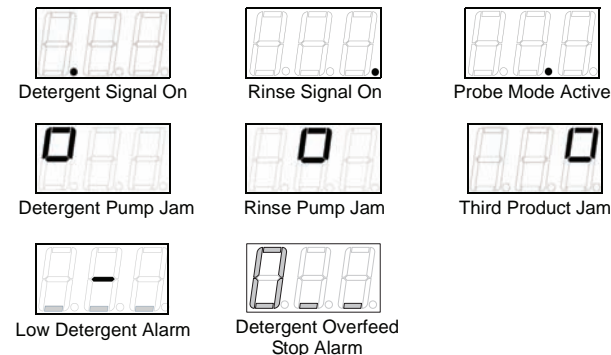
Figure QS-5   Alarms and Status Indicators

User Mode Menus
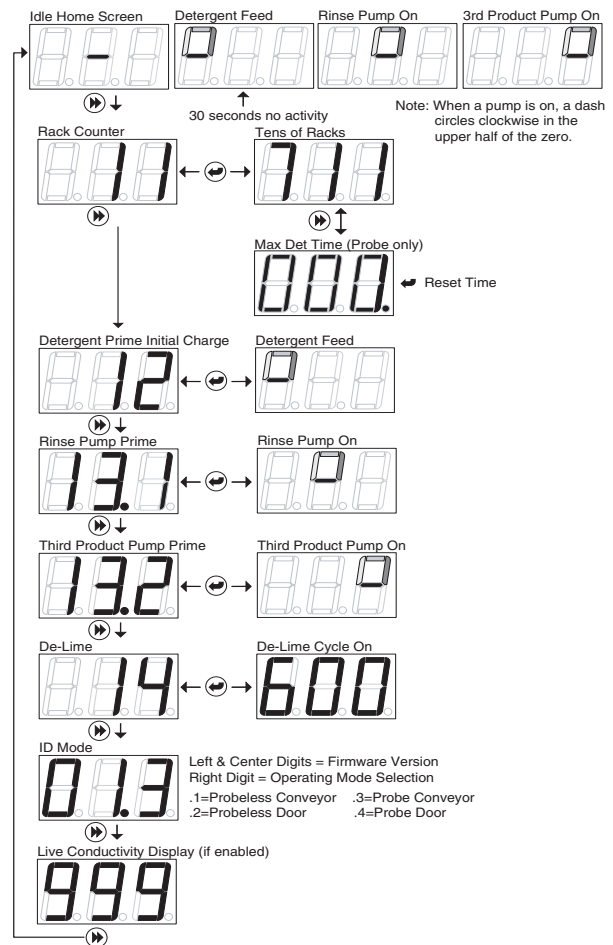
Figure QS-6   User Mode Menus & Pump Functions

Specifications

Size	8" W x 9" H x 6" D (20.3 cm W x 23 cm H x 15.4 cm D)
Weight	6 lbs. (2.72 kg)
Temperature	10° to 40° C (50° to 120° F) Maximum. See the Sprite III Reference manual for a complete list of Environmental Specifications.
Power	Total amperage draw during operation is: 100 to 240 VAC nominal (+/- 10%fluctuation), 50/60 Hz., 1.0 amps (max)
Rinse Pump Flow Rate	0.5 mls/revolution
Detergent Pump Flow Rate	6 oz./min. (178 mls/min)
Third Product Pump Flow Rate	0.60 oz./min. to 6 oz./min. (17.8 mls/min. to 178 mls/min.)

Program Mode Menus

Figure QS-7   Program Mode Menus

1
Description of Features

This chapter describes the features of the Sprite III.

- **Advanced Design**
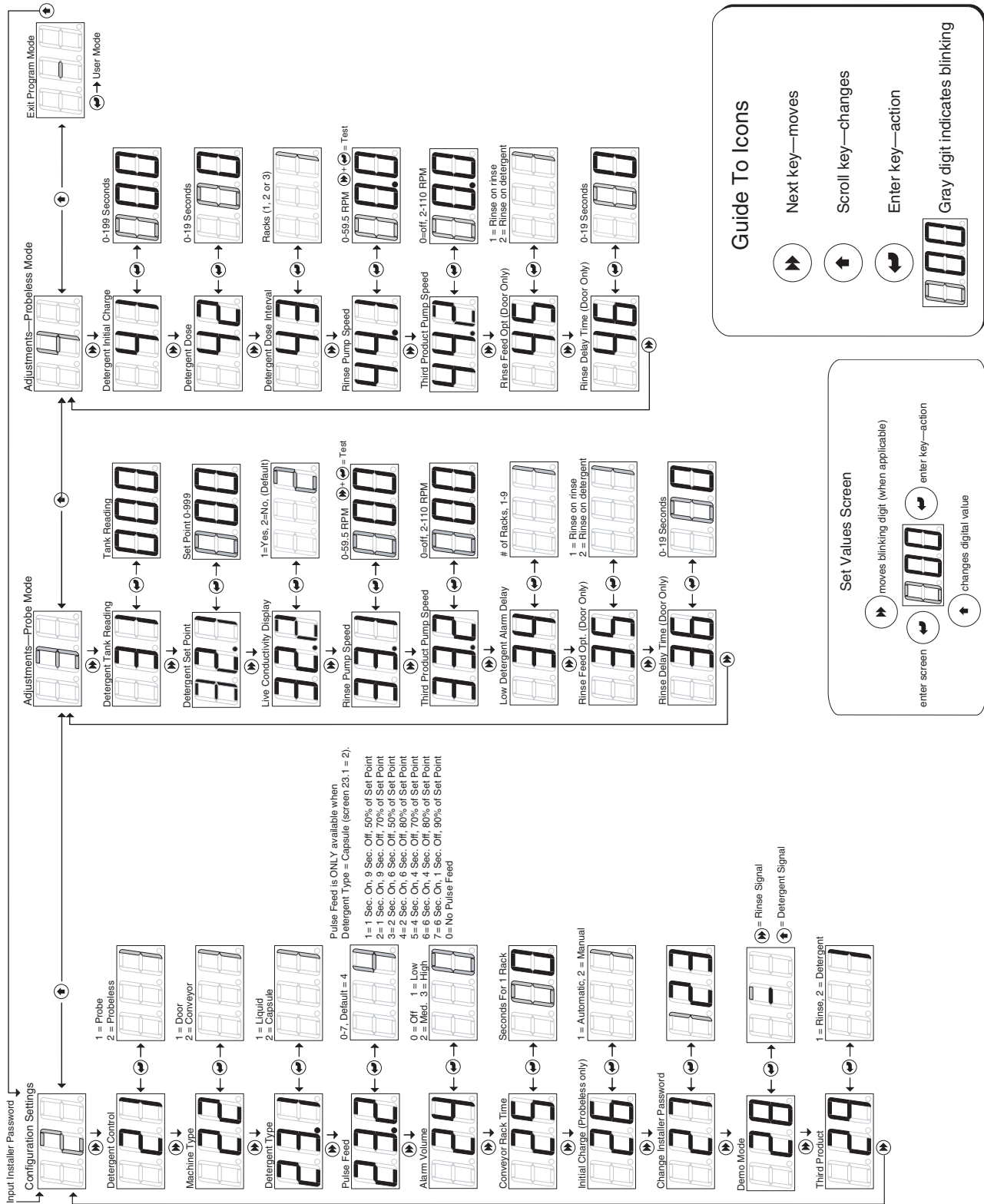 The Sprite III uses miniaturized electronics to provide powerful features in a small package. A digital readout allows simple three-button programming of all options.

- **Reliability**
  The gasket-enclosed Sprite III Warewash Dispenser is highly water resistant. The readout gives confirmation of detergent, rinse and third product feed.

- **Versatility**
  The Sprite III can be configured as a conductivity probe controlled unit or as a probeless, time-based dispenser. It can accept a 100 VAC nominal to 240 VAC nominal (+/- 10% fluctuation) main power input at 50 or 60 Hz. Rinse and Detergent control signals are universal "machine interface" types that are capable of accepting any voltage from 24 to 240 VAC nominal (+/- 10% fluctuation) or 24V DC (+/- 20% fluctuation). Sprite III can control either powder (solid) or liquid detergents.

- **Cost Savings**
  A special Rinse Saver feature prevents rinse additive waste during fills of the washer; digital electronics ensure accurate detergent control and minimize overuse.

- **Intelligence**
  The Sprite III includes a rack counter as a "standard" feature. A unique "De-Lime" mode allows for safe washer cleaning without detergent waste.

- **Robustness**
  A full range of programmable options are included, such as rinse delay, variable alarm volume, and manual prime for both rinse and detergent.

- **Easy Service/Repair**
  The Sprite III features convenient front access for all servicing. No internal access to the cabinet is required for installation and routine maintenance. In the unlikely event that repairs are required, spare parts are available in modular form for fast and convenient service.
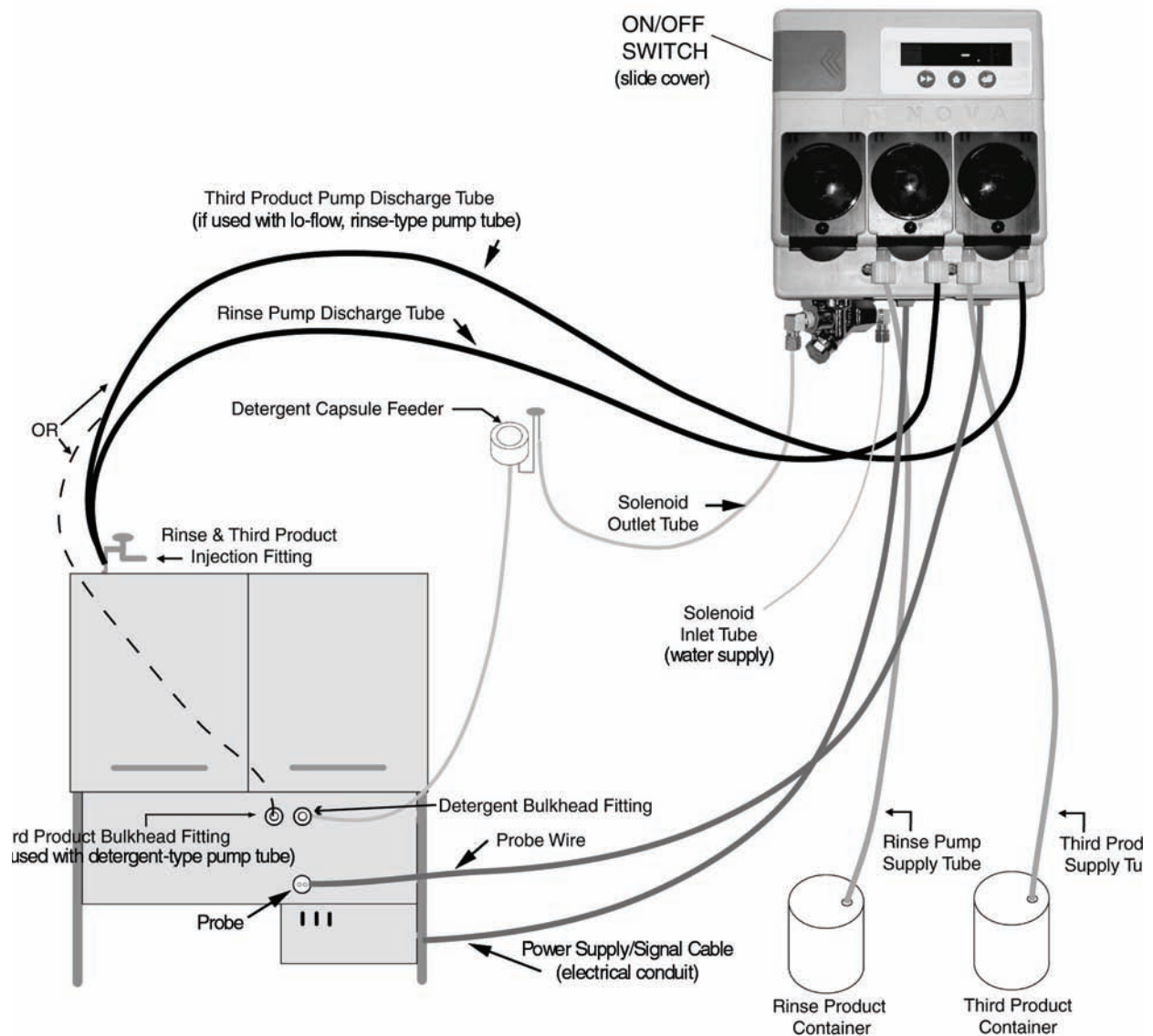
Sprite III Operating System

Figure 1-1   System Diagram and Connections

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2
Mechanical Installation

</div>

Warning ⚠	The Sprite III is intended to be installed by experienced installers, in accordance with all applicable electrical and plumbing codes.
	All dish machine and dispenser power must be disconnected during installation and/or any time the dispenser cabinet is opened.

Wall Mount Dispenser

Choose an installation location that is:

lock button

- Close to product containers.
- At a reasonable height for easy maintenance access.
- Away from direct sources of steam, water spray, and high temperatures.
- Close enough to dish machine electrical panel to allow dispenser wiring without using an external junction box (not provided), when possible.

1. Drill one hole in wall for upper mounting bracket screw wall anchor.
2. Install wall anchor and temporarily attach bracket to the wall (do not fully tighten screw).
3. Level bracket using built-in level and mark drill locations for lower mounting screw holes.

level

Figure 2-1   Mounting Bracket

4. Swing bracket out of the way, drill lower holes, install lower wall anchors.
5. Screw bracket in place and lower dispenser onto wall mount bracket. Press down until unit locks in place.
6. To remove dispenser from bracket, depress lock button on top of bracket as you lift the unit.

Probe Installation

Note ✎	The following instructions are for Probe Mode Operation only.

The probe senses the detergent concentration. Correct probe placement is critical for accurate detergent concentration control. Always use the new probe provided with the dispenser.

Locate the probe so that it will be:

- Completely immersed in the wash tank solution, in an area that has a good flow of solution.
- Close to the product entry point.

Many dish machines have knockouts provided for probe installation and/or existing probes. Previously punched probe holes may be suitable, but always confirm that the probe will be immersed in the wash tank solution before installing. If probe hole is present, skip to Step 2.

1. Drill a 3/8" hole in the center of the probe location. Use a Greenlee (or similar) 7/8" hole punch to cut the final hole.

2. Remove the probe retaining nut.

3. From inside the dish machine tank wall, insert probe (with rubber gasket) into hole.

4. From outside the dish machine tank wall, install second rubber gasket, plastic washer and probe retaining nut. Tighten finger-tight, plus 1/4 turn, only.
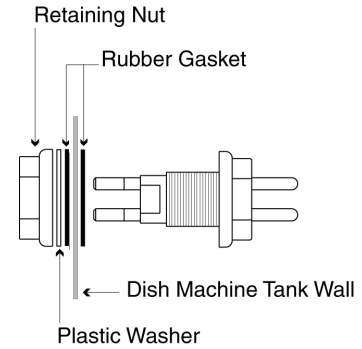

Retaining Nut

Rubber Gasket

Dish Machine Tank Wall

Plastic Washer

Figure 2-2   Probe Mounting

Caution ✋	Do not over-tighten the retaining nut!

Rinse Injection Fitting Installation

The injection fitting threads into 1/8" NPT female threads. If the dish machine rinse plumbing is thin-wall pipe, use a saddle clamp with a 1/8" NPT threaded hole. If an optional pressure switch will be used, thread the injection fitting into one side of the pressure switch water source fitting pipe tee.

Install the rinse injection fitting in a location that is:

- At least 6" below the dish machine rinse plumbing vacuum breaker or solenoid valve (to conform to plumbing codes).

- On continuous rack, flight, or conveyor machines: be sure this location is downstream from any rinse makeup water.

The dish machine may already have a tapped hole present to accommodate the fitting; if this is the case, skip to Step 3.

1. Drill a 7/32" hole in the rinse plumbing injection location.

2. Tap the hole drilled in Step 1 with a 1/8" NPT tap.

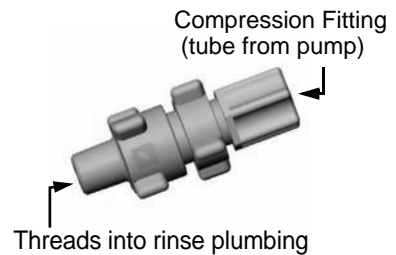3. Install the injection fitting. Use thread sealant to ensure a leak-free assembly.

Compression Fitting
(tube from pump)

Threads into rinse plumbing

Figure 2-3   Rinse Injection Fitting

Detergent Bulkhead Fitting Installation

Note ✑	If you are using a solid, powder, or slurry feed system, follow your system's instructions. Use the following section for liquid detergent applications.

Correct detergent bulkhead fitting placement is critical for accurate detergent concentration control (probe mode only). Choose a mounting location for the detergent bulkhead fitting that is:

- Above the water line in the tank

- Close to the probe location (when possible).

- Discharging detergent directly into the wash tank and not on top of any shelf areas or other obstacles that could prevent detergent from falling directly into the wash tank.

Previously punched holes may be suitable, but always confirm that the fitting is above the water line before installing.

If a hole is present, skip to Step 2.

1. Drill a 3/8" hole in the center of the detergent inlet location. Use a Greenlee (or similar) 7/8" hole punch to cut the final hole. Remove the detergent bulkhead fitting retaining nut.

2. From inside the dish machine, insert detergent bulkhead fitting (with rubber gasket) into hole.

3. From outside the machine, install second rubber gasket, plastic washer, and plastic retaining nut. Tighten finger-tight, plus 1/4 turn, only.
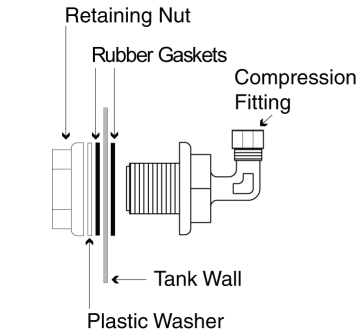

Figure 2-4   Detergent Bulkhead Fitting

Caution 🖐	Do not over-tighten the retaining nut!

Rinse / Detergent Supply and Discharge Tube Installation

Note 🖎	Supply and discharge tubing is only included with the super kits.

Third Product pump discharge tube connection
Third Product pump supply tube connection
Rinse pump discharge tube connection
Rinse pump supply tube connection
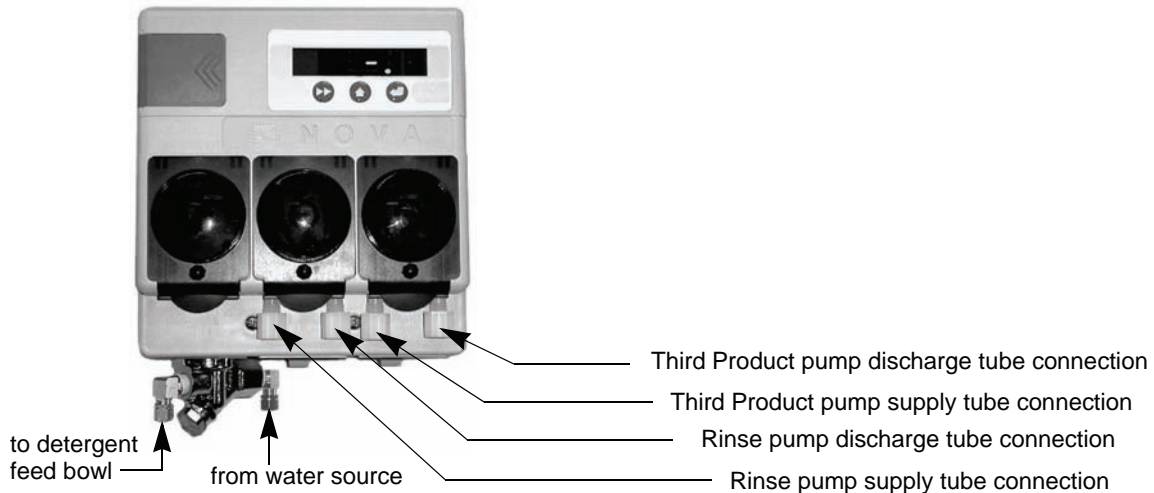to detergent feed bowl
from water source

Figure 2-5   Sprite III Dispensing System

1. Route pump supply tubes from supply containers to the inlet sides (left) of each respective pump. Slip the tube through the compression nut into fitting and tighten.

2. Route pump discharge tubes to the outlet sides (right) of each respective pump. Slip the tube through compression nut into fitting and tighten.

3. Route other end of rinse pump discharge tube to rinse injection fitting. Slip the tube through compression nut into fitting and tighten.

4. Route other end of detergent pump discharge tube to the detergent bulkhead fitting. Slip the tube through compression nut into fitting and tighten.

Solenoid Water Feed Installation

Note 🖎	The following instructions are for Solenoid-equipped units only.

If you are using a solid, powder, or slurry type feed system you will need a water source for the dispenser solenoid valve. This water supply may be hot or cold, but for safety reasons should not come from the boosted temperature rinse water line on high temperature dish machines. The dispenser solenoid valve fittings are 1/4" (6 mm on metric units) compression.

Typically, a saddle clamp is used for the solenoid valve water source. If the plumbing is steel or brass, you can drill a 7/32" hole and tap for 1/8" NPT threads.

Caution 🖐	If the water source is hot, use only copper tubing. DO NOT use poly tubing. DO NOT connect solenoid to the boosted temperature rinse water line on high temperature dish machines.

1. Install petcock valve to water source plumbing. Connect 1/4" copper or plastic tube to the valve.
2. Route tube to the dispenser solenoid valve. Slide tube into water inlet side compression fitting and tighten.
3. Connect another 1/4" tube to the outlet side of the dispenser solenoid valve and route to the water inlet connection for the feed system.
4. Confirm all compression fittings are tight.
5. Be sure to turn on water source valve prior to adjusting dispenser settings.

Third Product Pump Installation (Optional)

Depending on the setting of program menu 29, the third product pump will run either with the rinse pump tube as a sanitizer pump or with the detergent pump tube as a de-stainer pump. (Refer to *"Third Product Pump Selection (Menu 29)" on page 6-6* and *"Third Product Prime (Menu 13.2)" on page 5-2* for configuration information.)

For sanitizer, use a plastic injection fitting and refer to *"Detergent Bulkhead Fitting Installation" on page 2-2* installation instructions.

For de-stainer, use a 1/4" bulkhead fitting and refer to *"Detergent Bulkhead Fitting Installation" on page 2-2* for installation instructions.

To disable the third product pump, set the motor speed to zero in menus 33.2 (probe) or 44.2 (probeless). Refer to *"Third Product Pump Speed (Menu 33.2)" on page 6-8* and *"Third Product Pump Speed (Menu 44.2)" on page 6-11* for configuration information.

3
Electrical Installation

Important! ☞	All high voltage wiring must be performed with the cable provided and must be enclosed in flexible conduit, seal-tite or other housing approved for damp locations.
	The Sprite III dispensing system is intended to be installed by experienced installers in accordance with all applicable electrical and plumbing codes. All dish machine and dispenser power is to be disconnected during installation and/or any time the dispenser cabinet is opened.
	Always verify all voltage sources with a meter.

Please note the following additional electrical information:

- All electrical connections (except the probe) must be in either the dish machine control circuit panel or an external junction box.
- The dispenser is pre-wired with a multi-conductor electrical cable that must be run through a conduit to the hard-wired connections on the dish machine.
- Use a 1/2" (13 mm) ID water tight conduit that meets all local and national codes. A conduit fitting is on the bottom of the dispenser, where the power cable exits.
- The probe wire is also pre-wired and should be routed to the probe location and cut to length if a probe is used.

Probe Wiring

Note ✑	To maintain the IP rating of the unit, watertight, flexible conduit should be used to route the probe wire. Failure to use watertight, flexible conduit will impair water resistance of the unit enclosure.

1. Route the probe wire to the probe location and cut to fit. If you need to extend the probe wire, use high quality, corrosion resistant or waterproof butt splices with a quality crimping tool.
2. Strip wire ends and crimp on the ring lugs provided.
3. Connect the ring lugs to the probe with nuts and split washers provided. Be sure that connections are tight and secure.

Electrical Connections

Note ✍	The Sprite III is available in two different wiring versions: terminal block with or without cable. A wiring information label is located below the terminal blocks, inside the unit enclosure. **The following instructions apply to units with a cable installed.**

Sprite III includes two separate wiring cables: The Main Power Cable (with Input Trigger Signal) must be routed through a conduit fitting; the conductivity probe connection cable does not require a conduit.

Sprite III can be connected to single-phase power systems or to many 3-phase power systems. Instructions for each type of power system follows. Use the type that applies to the power system at your site.

Main Power Wiring – Single-Phase Power Systems

Connection Instructions for Single-Phase Power Systems

1. Power input to the Sprite III can be any voltage, from 100–240VAC nominal, 50Hz or 60 Hz. The neutral source is connected to the Light Blue wire of the seven-wire harness.

2. The Hot source is connected to the Brown wire.

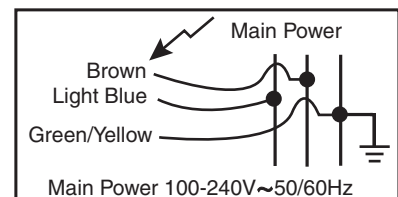3. The Green/Yellow wire must be connected to Earth/Ground.

Figure 3-1   Single-Phase Power Wiring Diagram

Main Power Wiring – 3-Phase Power Systems

The Sprite III can be connected to many common three-phase power systems, if all requirements outlined in "*Requirements for 3-Phase Power Connections*" (below) are met. After meeting these requirements, refer to the illustrations shown in *Figure 3-2 "Connection Diagrams for 3-Phase Power Systems" on page 3-3.*" Use the diagram that applies to the power system at your site.

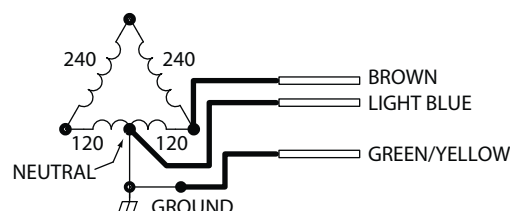### Requirements for 3-Phase Power Connections

1. The Sprite III is a single-phase load. Line voltage is applied using just two wires (Brown and Blue). A separate safety ground is required and must be connected (Green/Yellow wire).

2. Avoid interconnection to power systems that are not ground-referenced.

3. Where several connection options exist, choose a connection between a line (phase) and neutral. Connect the Light Blue wire to the neutral line.

4. The nominal AC voltage (between Brown and Light Blue wires) MUST NOT exceed 240 volts.

5. The Green/Yellow wire is for interconnection to earth ground only. Do not connect line, phase or neutral wires to the Green/Yellow wire.

6. For operation from 220/380 and 240/415 power systems, a neutral connection MUST be available.
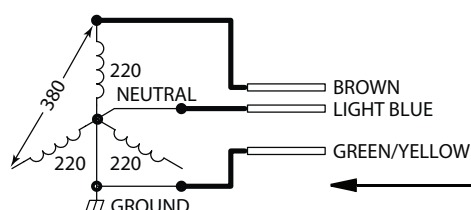
Connection Diagrams for 3-Phase Power Systems

① **120/208 VAC WYE**
includes Neutral and Ground
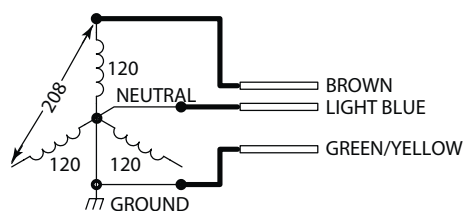
② **120/240 VAC Delta**
with High Leg

③ **220/380VAC or 240/415VAC WYE**
includes Neutral and Ground

Note:
An accessible neutral is required. Connect between line and neutral ONLY.

Figure 3-2   Connection Diagrams for 3-Phase Power Systems

Detergent Signal Wiring

The detergent signal input is an optically isolated signal input that draws no more than 20 mA. It is a universal DC voltage input that accepts any voltage between 24 and 240 VAC nominal (+/- 10% fluctuation), or 24 VDC nominal (+/- 20% fluctuation).

Detergent Signal Wiring
(+) Yellow
(-) White/Yellow
Detergent Signal 24-240V ∼ 50/60Hz or 24V DC

Figure 3-3   Detergent Signal Voltage

Detergent Signal Wiring – Probe Mode

Typical wiring locations are dispenser detergent power source or the wash motor contacts in the dish machine control panel. This power source is on when the dishwasher is running the wash pump.

- Connect yellow (DC +) and white/yellow (DC -) colored wires to detergent power source.

Detergent Signal Wiring – Probeless Mode

On conveyor type dishwashers, the detergent signal must occur only once per dish machine fill/drain occurrence–beginning when the dish machine fills. Typical wiring locations are an "on light" or an electrical tank heat circuit between the tank heater switch and the thermostat. Each time this power source comes on, and stays on for ten seconds, the dispenser will feed the detergent initial charge amount (with probeless and automatic initial charge modes set).

On door-type dishwashers, connect the detergent signal input to the dispenser detergent power source or the wash motor contacts in the dish machine control panel. This power source is on when the dishwasher is running the wash pump.

- Connect yellow (DC +) and white/yellow (DC -) colored wires to initial charge power source.
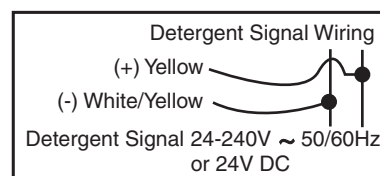
Rinse Signal Wiring

The rinse signal input is an optically isolated signal input that draws no more than 20 mA. It is a universal DC voltage input that accepts any voltage between 24 and 240 VAC nominal (+/- 10% fluctuation), or 24 VDC nominal (+/- 20% fluctuation).

Typical wiring locations are dispenser rinse power source or the rinse solenoid valve circuit in the dish machine control panel. This power source must be live whenever the dish-washer is rinsing. When no suitable rinse signal connection is available, an optional pressure switch may be used with a constant power source instead.

Figure 3-4   Rinse Signal Voltage

- Connect violet (DC +) and white/violet (DC -) colored wires to rinse (or constant power for pressure switch installations) power source

Probeless Mode

Note	Certain dishwasher designs require that the rinse aid be dispensed upon the detergent signal rather than the rinse signal. In this case, you must still connect the rinse signal input to either the fill solenoid or the rinse solenoid circuit of the dishwasher to enable automatic initial charge function in probeless mode

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4
Description of Controls

</div>

Key Description

The Sprite III makes use of only 3 buttons and a 3-digit LED display for all dispenser operation and programming. Use the menu screen illustrations as a guide when learning to program the Sprite III. Use the NEXT key to move to all available main menu screens in Program Mode.

Figure 4-1   Program Mode Key Descriptions

NEXT Key

Use the **NEXT** key to move to the next menu or task. The tasks under the **NEXT** key are:

- User Mode - moves through User Mode menus.
- Program Mode - moves through the Program Mode menu screens.
- Input Screens - moves blinking digit to the right.

SCROLL Key

Use the **SCROLL** key to change the blinking digit value. The tasks under the **SCROLL** key are:

- User Mode - Changes the values of blinking digits. Activates Probeless Manual Initial Detergent Charge. *See "Password Access to Program Mode" on page 5-2.*
- Program Mode - Changes value of blinking digits. Selects menu group.
- Input Screens - Changes value of blinking digits.

ENTER Key

Use the **ENTER** key to save your setting or to perform a task. The tasks under the **ENTER** key are:

- User Mode - starts and stops rinse pump and detergent prime; Accesses Password input screen (press and hold for two seconds); Performs actions as prompted in User Mode menu screens.
- Program Mode - accesses all input screens from main menu loop screens. Exits program mode.
- Input Screens - sets the displayed value in all input screens (via Scroll key). Exits back to main menu loop.

Guide to Icons

Throughout this manual, you will see icons that represent the **Next**, **Scroll** and **Enter** keys, as illustrated below.
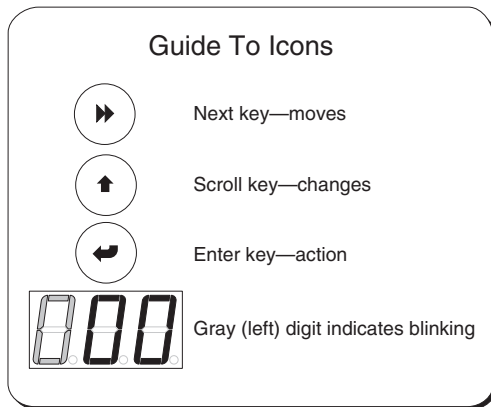

Figure 4-2   Guide to Icons

User Mode Menus

Note	Additional User Mode features are described in the following sections: *"Third Product Pump Installation (Optional)" on page 2-4* *"Third Product Prime (Menu 13.2)" on page 5-2*.

Press **NEXT** to access and move through the User Mode menu loop. Screens are numeric only, without the text seen in the illustration. To a exit from a menu, wait 30 seconds; the menu will automatically return to either the Home Screen or the Live Conductivity Display, if enabled.
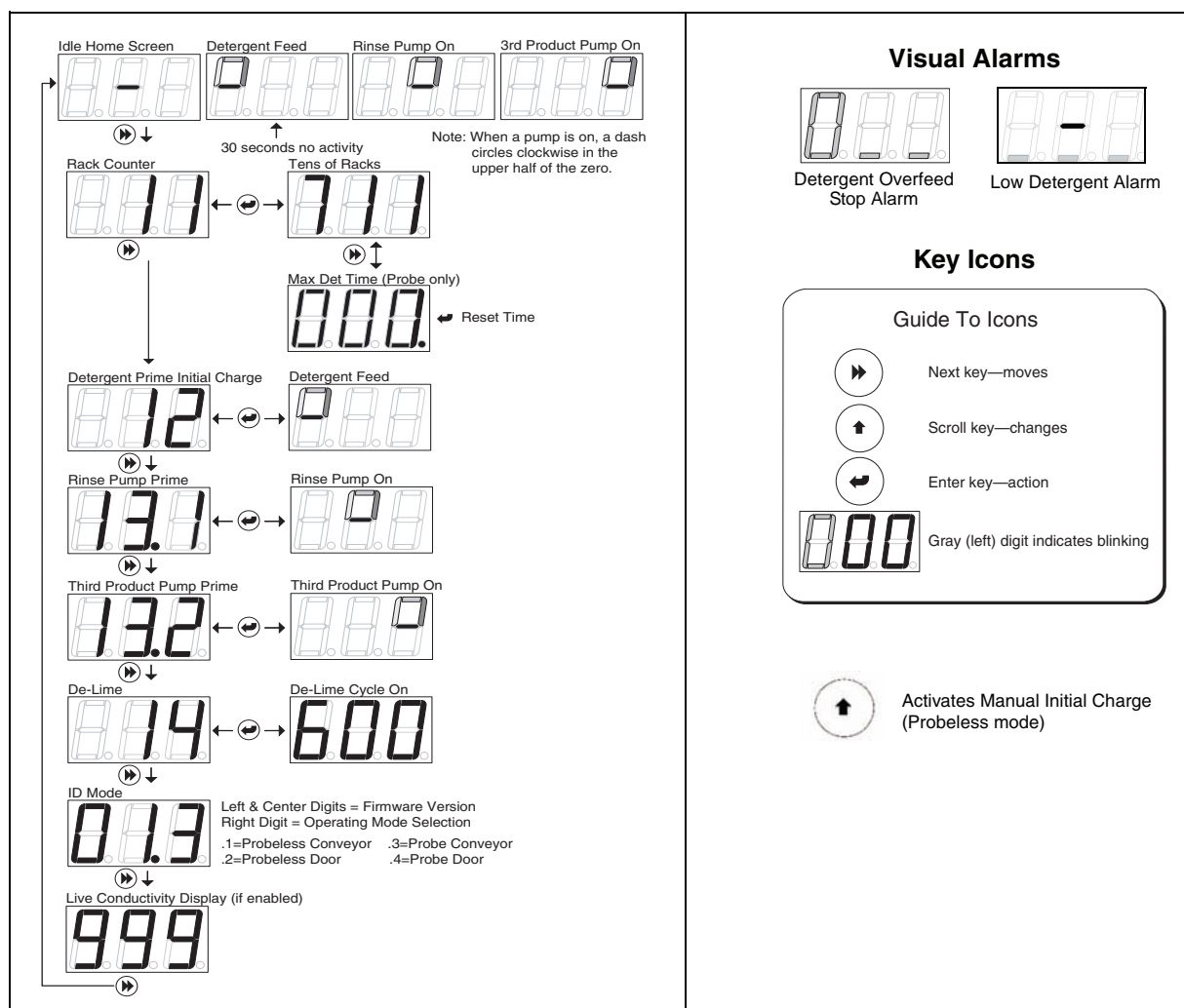

Figure 5-1   User Mode Menus

Rack Counter (Menu 11)

The rack counter counts by tens of racks. On door-type dishwashers, a rack is counted each time the door is opened. On conveyer-type dishwashers, a rack is counted based on the time set in menu 25.

1. Press **NEXT** to display **11**. Press **ENTER** to display racks washed.
2. In Probe Mode only, press **NEXT** to display "Max Det Time," the longest time the detergent feed has to run to satisfy the setpoint. Make note of this time after a new installation.
3. Press **NEXT** to toggle back to Rack Count, then press ENTER to return to the main menu loop.

Detergent Prime (Menu 12)

Press **NEXT** to display **12**. Press **ENTER** to start detergent feed. Press **ENTER** again to stop detergent feed and return to the main menu loop. Prime automatically stops after 30 seconds.

Rinse Prime (Menu 13.1)

Press **NEXT** to display **13.1**. Press **ENTER** to start (or stop) the selected pump. Prime automatically stops after 30 seconds.

Third Product Prime (Menu 13.2)

Press **NEXT** to display **13.2**. Press **ENTER** to start (or stop) the selected pump. Prime automatically stops after 30 seconds.

De-Lime (Menu 14)

Press **NEXT** to display **14**. Press **ENTER** to start the De-Lime Cycle (10 minutes). During this time, all dispenser operation is stopped. Press **ENTER** to stop the De-Lime Cycle early, and return to the main menu loop.

ID Mode Screen

Press **NEXT** to display the ID Mode screen. Used primarily for troubleshooting, ID Mode displays the Sprite III version and current operating mode. The left and center digits display the unit version. The right digit displays the current operating mode, as defined below:

    .1 = Probeless Conveyer   **.2** = Probeless Door   **.3** = Probe Conveyer   **.4** = Probe Door

Live Conductivity Display

The current conductivity reading is displayed, if enabled. This displays continuously and does not time out after 30 seconds.

Password Access to Program Mode

Press and hold **ENTER** for 2 seconds to access the Password input screen. The factory-set password is **123**. Press **SCROLL** to change the blinking digit to the desired value. Press **NEXT** to move the blinking digit. Press **ENTER** to set all numbers and exit to Program Mode. An incorrect password entry returns you to the home screen.

Manual Initial Charge Function

Note	This function is valid only in Probeless mode, Manual Initial Charge setting.

From the Home Screen, press **SCROLL** to activate manual initial charge.
Press **SCROLL** again to terminate manual initial charge early.

Rinse Saver Feature

Rinse Saver prevents product waste when filling the tank and assures that rinse will only operate under the following conditions:

- The detergent signal has occurred within the previous 90 seconds.
- There is a rinse input signal on the board. On door-type dishwashers, Rinse will operate until the rinse input signal is not present. In no case, however, will rinse operate for longer than 20 seconds continuously.

Rinse Saver is always operational and does not require additional programming.

Display Indicators

In User Mode, operating status of the dispenser is indicated in the following displays:

- Idle Home Screen (Center Digit): Dash in center digit indicates that power is on.
- Detergent Feed On (Top Half of Left Digit): One segment continuously rotates clockwise.
- Rinse Pump On (Top Half of Center Digit): One segment continuously rotates clockwise.
- Third Product Feed On (Top Half of Right Digit): One segment continuously rotates clockwise.
- Alarms (Probe Mode Only):
  - Low Detergent Visual Alarm: Bottom segments flash on all three digits.
  - Detergent Overfeed Stop Alarm: Left digit displays a zero; bottom segments of center and right digits flash.

Note	Combinations of displays occur during normal operation.

Low Detergent Alarm

Note ✍	This function is valid only in Probe mode.

The low detergent alarm (audible and visual) occurs if the detergent concentration does not increase when the detergent feeds within a preset number of racks washed (as programmed in menu 34 of Program Mode).

Visual Alarm: Flashing lower lines on the display

Audible Alarm: Beeps three times per rack

The low detergent alarm resets itself when the dispenser senses an increase in the detergent concentration in the wash tank. It cannot be manually reset.

Detergent Overfeed Stop Alarm

Note ✍	This function is valid only in Probe mode.

The detergent overfeed stop alarm occurs if a low detergent alarm condition continues for twice the preset number of racks washed (as programmed in menu 34 of Program Mode). In this case, the detergent feed stops and the audible and visual alarm changes to indicate the detergent overfeed stop.

Visual Alarm: Flashing left zero and flashing center and right lower lines
Audible Alarm: Sounds continually in bursts of three beeps.

Overfeed stop can be reset (e.g., to initiate detergent feed after changing the product container) by pressing any key.

<div align="right">

6
Program Mode Operation

</div>

Overview

 Program Mode consists of three circular, main-menu loops. The Configuration Settings loop (menu 2) is always available. There are two Adjustment Main Menu loops: probe and probeless. To simplify programming, only one Adjustment Main Menu is accessible (as determined by Detergent Control selection–Probe or Probeless) in the Configuration Settings, Machine Type menu, menu 21.

The Menus are illustrated in *Figure 6-1"Program Mode Menus" on page 6-2*.

Important! ☞	When programming the dispenser for a new installation, always set the Configuration Settings first. After the Configuration has been set, program the dispenser adjustments (either Probe or Probeless) in the available Adjustment Menu loop. Subsequent maintenance adjustments will typically be made in the same Adjustment Menu loop.

Password Access to Program Mode

You must input the correct password to enter Program Mode. Use the factory-default setting, as described below, or change customize the password, as described in *"Change Installer Password (Menu 27)" on page 6-5*.

1. Input Installer Password as described in *"Password Access to Program Mode" on page 5-2* or see *"Configuration Settings" on page 6-3* for a graphic illustration of password input.
2. Press SCROLL to change the blinking digit value from **2** (Configuration Settings), to **3** (Adjustments—Probe) or **4** (Adjustments—Probeless), or to **–** (dash) to exit Program Mode.
3. Press NEXT to move through main menu loops 2, 3 and 4.
4. Press ENTER to exit Program Mode at the blinking dash screen (Exit Program Mode). Program Mode is automatically exited after 5 minutes of inactivity.
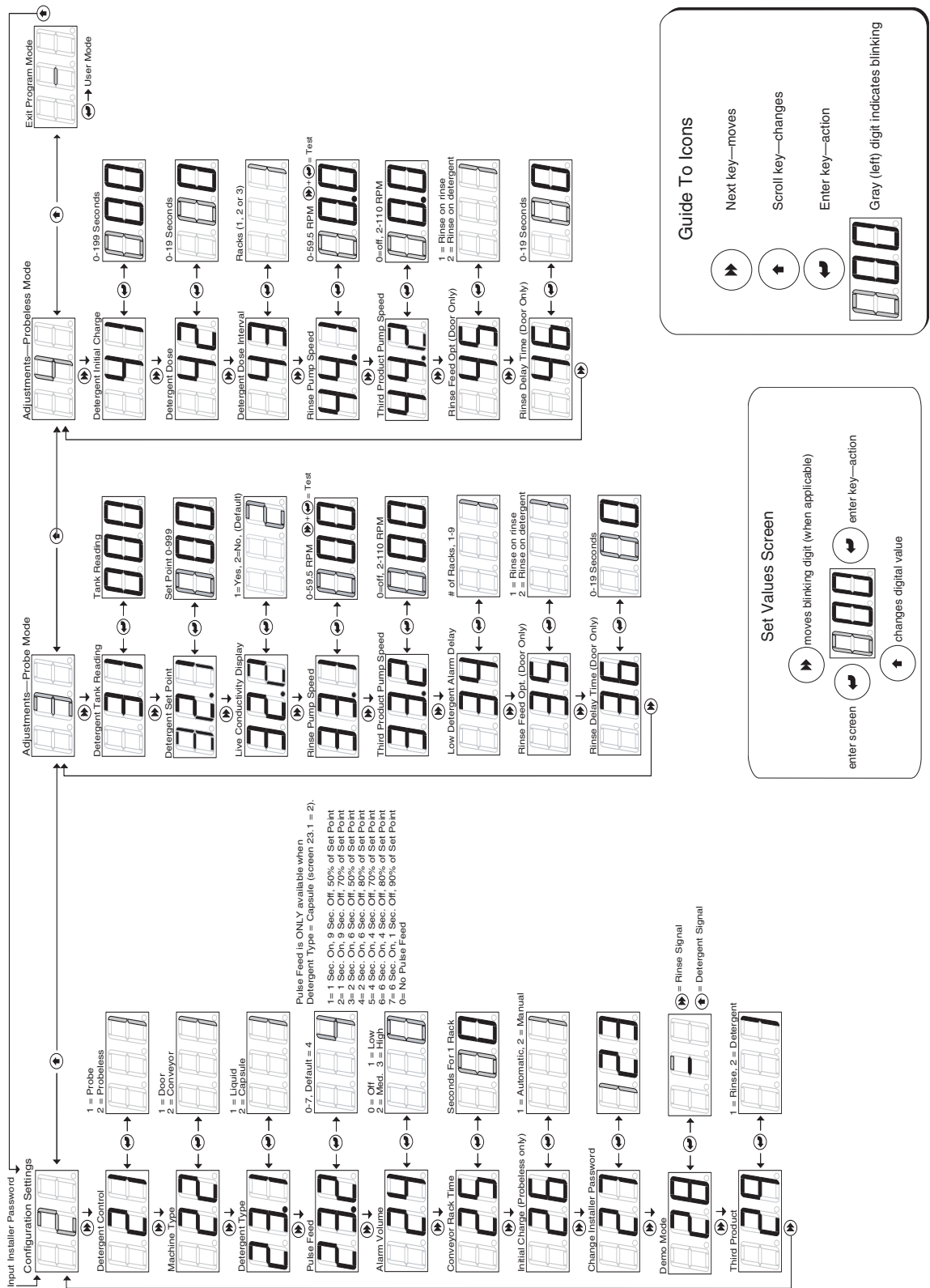
Program Mode Menu Screens

Figure 6-1   Program Mode Menus
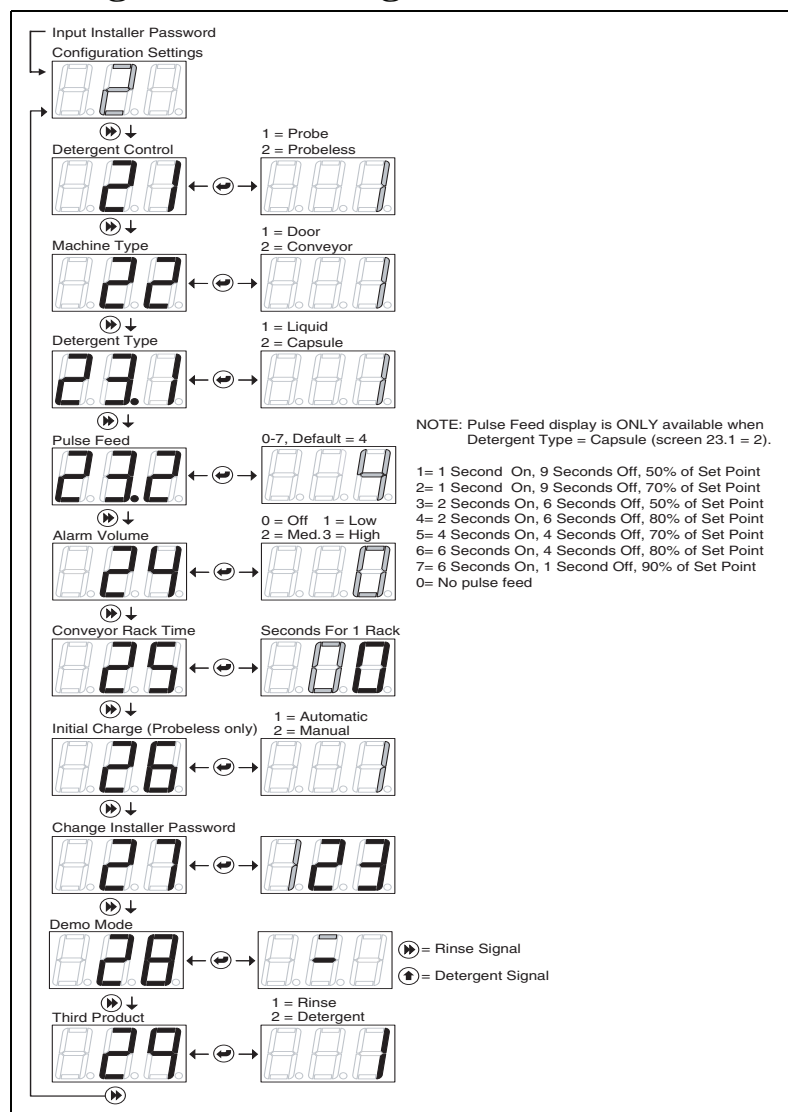
Configuration Settings

Figure 6-2   Configuration Settings (Menu Loop 2)
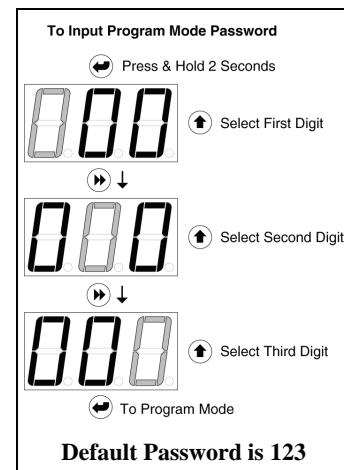
Detergent Control (Menu 21)

This selection determines which adjustment menu is available for programming (probe or probeless).

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select between **1** (Probe) and **2** (Probeless) detergent control.
3. Press **ENTER** to save the setting and return to the main menu loop.

Machine Type (Menu 22)

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select between **1** (Door) and **2** (Conveyor) machine type.
3. Press **ENTER** to save the setting and return to the main menu loop.

Detergent Type (Menu 23.1)

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select the detergent type. Select **1** for liquid product or **2** for capsule product. Pulse feed times for liquid detergent are 3 seconds on/3 seconds off at 80-100% of set point.
3. Press **ENTER** to save the setting and return to the main menu loop.

Capsule Pulse Feed (Menu 23.2)

Note 🖎	This menu is displayed only if menu 23.1 (Detergent type) is set to 2 (Capsule)

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to change the value (0-7). Press **ENTER** to save the setting and return to the main menu loop. The settings are as follows:
   1 = 1 Second on, 9 Seconds off, 50% of set point
   2 = 1 Second on, 9 Seconds off, 70% of set point
   3 = 2 Seconds on, 6 Seconds off, 50% of set point
   4 = 2 Seconds on, 6 Seconds off, 80% of set point (Default)
   5 = 4 Seconds on, 4 Seconds off, 70% of set point.
   6 = 6 Seconds on, 4 Seconds off, 80% of set point.
   7 = 6 Seconds on, 1 Second off, 90% of set point.
   0 = No pulse feed

Alarm Volume (Menu 24)

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select between **0** (Off), **1** (Low), **2** (Medium), or **3** (High) alarm volume. A half-second beep will sound for each level as **SCROLL** is pressed.
3. Press **ENTER** to save the setting and return to the main menu loop.

Conveyor Rack Time (Menu 25)

Note 🖎	Conveyor Rack Time applies only to conveyor type dishwashers. It is used to count racks and to determine detergent dose intervals when in Probeless Mode.

To determine the time value to input in this screen, time (and make note of) the number of seconds the dish machine conveyor takes to move one rack a single rack length's distance.

1. Press **ENTER** to view/change this setting. The range is 0-29 seconds. The default is 10 seconds.
2. Press **SCROLL** to change the value of the blinking center digit (tens), then press **NEXT** to move to the right digit (ones), which begins blinking.
3. Press **SCROLL** to change the value of the blinking right digit.
4. Press **ENTER** to save the setting and return to the main menu loop.

Initial Charge - Probeless Only (Menu 26)

Note ✍	This setting only applies to probeless detergent control when selected in menu 21. It determines whether the Initial Charge is Manual or Automatic.

In **Manual Initial Charge**, the user presses SCROLL to start an Initial Charge from the User Mode.

The **Automatic Initial Charge**–in a **door-type dishwasher**–occurs each time the dispenser receives a rinse signal that was not preceded by a detergent signal within 90 seconds prior (i.e. on an initial fill). When this condition occurs after a 1 second signal qualification, the dispenser detects an Automatic Initial Charge; it then disables the rinse feed and feeds detergent for the preset time, as set in menu 41 (Detergent Initial Charge). Normal rinse signal activations (within 90 seconds after a detergent signal) will not generate an initial charge.

A five minute lockout timer begins at the start of initial charge; this prevents an additional initial charge from occurring if multiple rinse signals are detected during fill.

The **Automatic Initial Charge**–in a **conveyor-type dishwasher**–occurs each time the dispenser detects a detergent signal input (three second filter) that remains on for 10 seconds continuously. Then, the rinse pump turns off for 90 seconds (or Detergent Initial Charge time, if longer), and the detergent feeds for the preset time as set in menu 41. See *"Detergent Initial Charge (Menu 41)" on page 6-10* for more information.

Note that this will happen each time a detergent signal occurs, so the source of this signal must remain on for the duration of time the tank is full, or must not occur more than one time per machine fill. (See Chapter 2 *"Electrical Installation"* for more information.)

To set the Initial Charge to Automatic or Manual:

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select between **1** (Automatic) and **2** (Manual) initial detergent charge.
3. Press **ENTER** to save the setting and return to the main menu loop.

Change Installer Password (Menu 27)

Caution ✋	Be sure to note the new password if you change it from the factory setting (123). If your password is lost, contact Nova Controls Technical Support.

1. Press **ENTER** to change to view or change the password (any three-digit number may be input). The left-hand digit will blink.
2. Press **SCROLL** to change the blinking digit to the desired value, then press **NEXT** to move the blinking digit. Repeat to set the value for all digits.
3. Press **ENTER** to save the setting and return to the main menu loop.

Demo Mode (Menu 28)

This menu is used to test or demonstrate dispenser functions. Press **ENTER** to access demo mode, then press **NEXT** to simulate Rinse Signal or SCROLL to simulate Detergent Signal. Press **ENTER** to exit.

Third Product Pump Selection (Menu 29)

1. Press **ENTER** to view/change this setting. Select number **1** to set the third product pump to run with the Rinse, or number **2** to set the third product pump to run with Detergent.
2. Press **ENTER** to save the setting and return to the main menu loop.

Adjustments—Probe Mode (Menu 3)

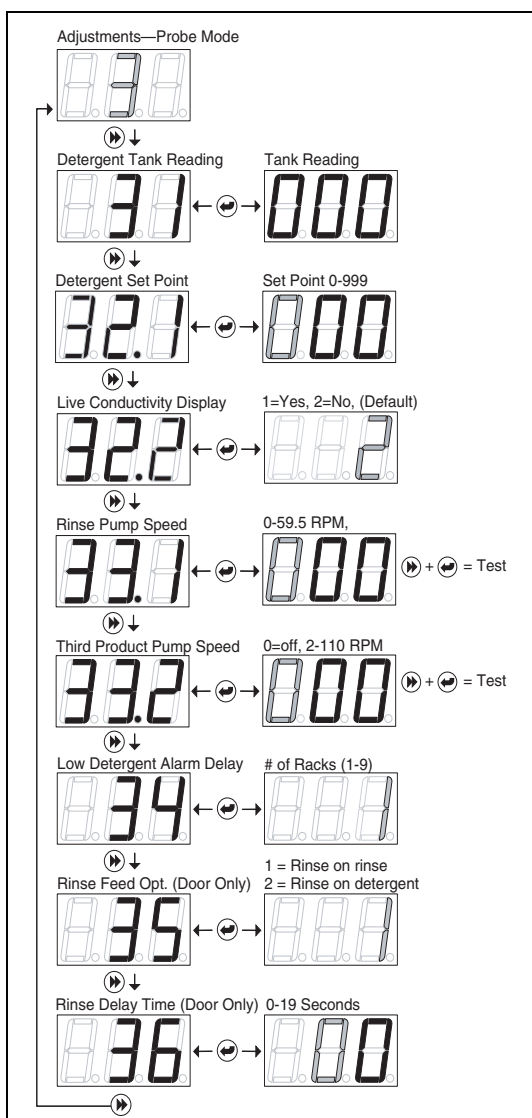| Note	This menu is only available when Detergent Control (menu 21) is set to 1 (Probe).

Figure 6-3   Adjustments - Probe Mode

Detergent Tank Reading (Menu 31)

Note ✍	Prepare for this reading by manually adding product to proper concentration, then test via titration or measured volume. The dishwasher tank solution must be well mixed (wash pump running) and at operating temperature.

1. Press **ENTER** to view this number, which is an average that is updated every 0.1 seconds.
2. Make note of the tank reading displayed. This is your set point.

Manual Operation of Detergent Output (Menu 31)

This enables the user to manually add more product in order to achieve the desired titration level.

1. Press **SCROLL** to run detergent output. Product is added for the length of time **SCROLL** is pressed.
2. When the proper concentration is reached (determined through reliable means), press **ENTER** for a minimum of two seconds. This adjusts the set point to the present filtered tank reading and displays menu 32.
3. Press **ENTER** (hold for 2 seconds) to confirm new set point. If **ENTER** is pressed for less than 2 seconds, the display returns to menu 31 and no setting is stored in menu 32.

Detergent Set Point (Menu 32.1)

Input the number noted in *"Detergent Tank Reading (Menu 31)" on page 6-7*.

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to change the blinking digit to the desired value then press **NEXT** to move the blinking digit. Repeat for all three digits. The range of this adjustment is 0-999.
3. Press **ENTER** to save the setting and return to the main menu loop.

Note ✍	It is a good practice to run a few racks through the dish machine and retest concentration with a titration kit. If the concentration is not at the desired level, adjust accordingly.

Enable User Live Conductivity Display (Menu 32.2)

1. Press **ENTER** to view/change this setting.
2. Select **1** to enable User Live Conductivity Display and **2** to disable this display. The default is **2**.
3. Press **ENTER** to save the setting and return to the main menu loop.

Rinse Pump Speed (Menu 33.1)

Note ✍	Adjust the rinse pump speed for appropriate amount of product needed for good results on wares.

To determine this adjustment, note the amount of rinse product per unit of water (check the dish machine specifications for rinse water flow rate per minute), or observe the sheeting action of the product on wares. With the standard rise pump tube, the Sprite III will dispense 0.5 ml per revolution.

To test run or view the rinse pump speed, press and hold **NEXT**, followed by **ENTER**.
The pump will run at the current speed setting.

To change the rinse pump speed:

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to change the blinking digit to the desired value, then press **NEXT** to move the blinking digit. Repeat for all digits. The range is 0-59.5 RPM, in 0.5 RPM steps.
3. Press **ENTER** to save the setting and return to the main menu loop.

Third Product Pump Speed (Menu 33.2)

Note ✍	To disable the third product pump, set the motor speed to zero.

Adjust the third product speed so that the proper amount of third product is dispensed during the Rinse On or Detergent On time (depending on mode selected in Menu 29). The third product pump will dispense 6 oz. per minute at its maximum speed. The speed is adjustable from 2-110 RPM in steps of 1 RPM. A setting of 0 means that this pump is off.

To test run or view the third product pump speed, press and hold **NEXT** followed by **ENTER**. The pump will run at the current speed setting.

To set the third product pump speed:

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to change the blinking digit to the desired value.
3. Press **NEXT** to move the blinking digit. Repeat for all digits.
4. Press **ENTER** to save the setting and return to the main menu loop.

Low Detergent Alarm Delay (Menu 34)

This setting determines how many racks can run before the Low Detergent Alarm is activated.

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select the number of racks (1-9) that may run with a low detergent concentration.
3. Press **ENTER** to save the setting and return to the main menu loop.

Note ✍	The low detergent alarm will only occur only if there is no increase in detergent concentration and the unit is below setpoint for the number of racks set. The low detergent alarm resets itself when it detects a rise in detergent concentration.

Rinse Feed Option (Menu 35)

This setting determines when the rinse feed is activated.

1. Press **ENTER** to view/change this setting.
2. Press **SCROLL** to select rinse feed option (**1** or **2**). Select Option **1** to run the rinse pump each time the rinse signal activates (for the duration of time the signal is present). Select Option **2** to run the rinse pump for a fixed time of 12 seconds each time the detergent signal activates.
3. Press **ENTER** to save the setting and return to the main menu loop.

Rinse Delay Time (Menu 36)

Note	This menu is only available when 1 (Door) is selected in menu 22 (Machine Type) and rinse feed option is set to 1 in menu 35.

Minimizes rinse product waste by injecting product only during the last few seconds of each rack.

1. Press **ENTER** to view/change this setting.
2. Press **ENTER** to change the blinking digit to the desired time in seconds, then press **ENTER** to move the blinking digit. Repeat for both digits. The range is 0-19 seconds.
3. Press **ENTER** to save the setting and return to the main menu loop.

Adjustments—Probeless Mode (Menu 4)

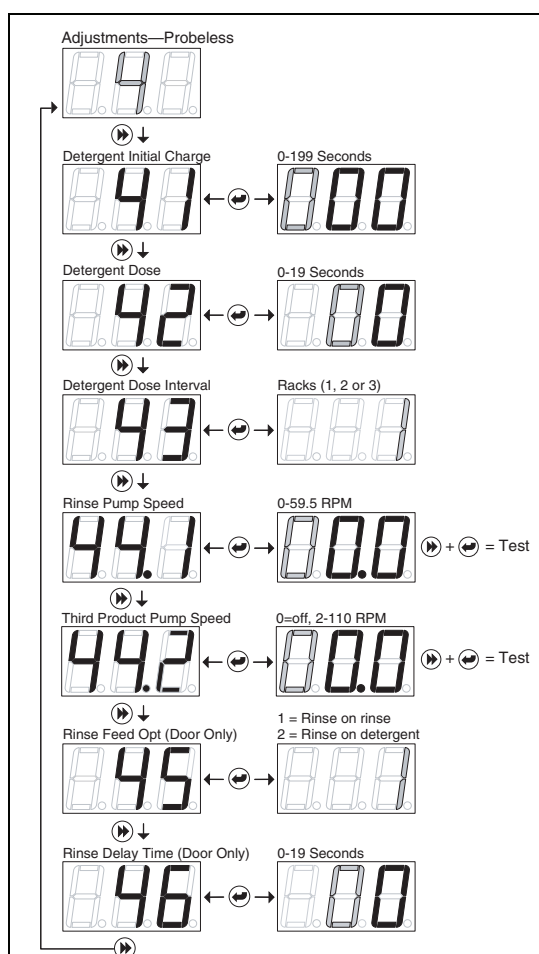| Note	This menu loop is only available when Detergent Control (menu 21) is set to 2 (Probeless).

Figure 6-4   Adjustments - Probeless Mode

Detergent Initial Charge (Menu 41)

Note ✍	Prepare for this reading by determining the detergent feed time (in seconds) required to charge the wash tank to the correct concentration on an initial fill.

1. Press **ENTER** to change this setting. Input the initial charge detergent feed time.
2. Press **ENTER** to change the blinking digit to the desired value, then press **ENTER** to move the blinking digit. Repeat for all three digits. The range is 0-199 seconds. The default is 12 seconds.
3. Press **ENTER** to save the setting and return to the main menu loop.

Detergent Dose (Menu 42)

Note ✍	The amount of detergent dose time required depends on the detergent dose interval you will set in the next step. The available dose intervals are: Every rack, every second rack, or every third rack.

1. Press **ENTER** change this setting. Input the detergent recharge dose feed time.
2. Press **ENTER** to change the blinking digit to the desired value, then press **ENTER** to move the blinking digit. Repeat for all three digits. The range is 0-19 seconds. The default is 2 seconds.
3. Press **ENTER** to save the setting and return to the main menu loop.

Detergent Dose Interval (Menu 43)

1. Press **ENTER** to view/change this setting.
2. Press **ENTER** to select the detergent signal interval between detergent doses (1, 2 or 3 detergent signals). A detergent dose occurs when the accumulated number of detergent signals is reached.
3. Press **ENTER** to save the setting and return to the main menu loop.

Rinse Pump Speed (Menu 44.1)

Note ✍	Adjust rinse pump speed for the appropriate amount of product need for good results.

To determine this adjustment, note the amount of rinse product per unit of water (check the dish machine specifications for rinse water flow rate per minute), or observe the sheeting action of the product on wares. With the standard size rinse pump tube, the Sprite III will dispense 0.5 ml per revolution.

To test run or view/edit the rinse pump speed:

1. Press and hold **ENTER**, followed by **ENTER**, and the pump will run at the current speed setting.
2. Press **ENTER** to view/change this setting.
3. Press **ENTER** to change the blinking digit to the desired value, then press **ENTER** to move the blinking digit. Repeat for all digits. The range is 0-59.5 RPM, in 0.5 RPM steps.
4. Press **ENTER** to save the setting and return to the main menu loop.

Third Product Pump Speed (Menu 44.2)

Note	To disable the third product pump, set the motor speed to zero.

Adjust the third product speed so that the proper amount of third product is dispensed during the Rinse On or Detergent On time (depending on the mode selected in Menu 29). The third product pump will dispense 6 oz. per minute at its maximum speed. The speed is adjustable from 2-110 RPM in steps of 1 RPM. A setting of 0 means that this pump is off.

To test run or view the third product pump speed, press and hold **ENTER** followed by **ENTER**; the pump will run at the current speed setting.

To set the pump speed:
1. Press **ENTER** to change this setting.
2. Press **ENTER** to change the blinking digit to the desired value.
3. Press **ENTER** to move the blinking digit. Repeat for all digits.
4. Press **ENTER** to save the setting and return to the main menu loop.

Rinse Feed Option (Menu 45)

1. Press **ENTER** to view/change this setting.
2. Press **ENTER** to select rinse feed option (1 or 2). Either option will run both the rinse feed and the detergent dose at the intervals noted in *"Detergent Dose Interval (Menu 43)" on page 6-10*.
    *   Select Option 1 to run rinse pump each time the rinse signal activates (for the duration of time the signal is present).
    *   Select Option 2 to run the rinse pump for a fixed time of 12 seconds each time detergent signal activates.
3. Press **ENTER** to save the setting and return to the main menu loop.

Rinse Delay Time (Menu 46)

Minimizes rinse product waste by injecting product only during the last few seconds of each rack.

Note	This menu option is only available when 1 (Door) is selected in menu 22 (Machine Type) and rinse feed option is set to 1 in menu 35.

1. Press **ENTER** to view/change this setting.
2. Press **ENTER** to change the blinking digit to the desired time in seconds.
3. Press **ENTER** to move the blinking digit. Repeat for both digits.
    The range of this adjustment is from 0 to 19 seconds.
4. Press **ENTER** to save the setting and return to the main menu loop.

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7
Troubleshooting

Alarms and Indicators

The following alarms and display indicators can be seen when in the User Mode Home Screen. They provide useful information for troubleshooting purposes.

Detergent Signal On   Rinse Signal On   Probe Mode Active   Low Detergent Alarm

Detergent Pump Jammed   Rinse Pump Jammed   Third Product Pump Jammed   Detergent Overfeed Stop Alarm
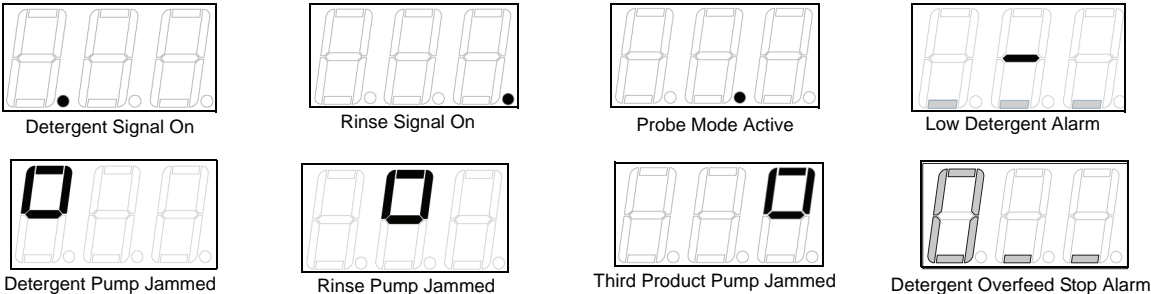
Alarm Reset

The **low detergent alarm** resets itself when the dispenser senses an increase in the detergent concentration in the wash tank.

The **Detergent Overfeed Stop Alarm** can be reset (e.g., to initiate detergent feed after changing the product container) by pressing any key.

Power Supply Input and Output

Refer to the images below when using the *"Problems and Solutions List" on page 7-2*.

Power Supply Input
(Brown & Light Blue Wires)
AC Volts

J12

J3

100 - 240 AC ?
Yes: Measure output
No: Go to Step 3

Power Supply Output
(Black and Red Wires)
DC Volts

+ −

J13

26 - 28 DC ?
Yes: Replace Logic PCB
No: Replace Power Supply

20-07668-00 D
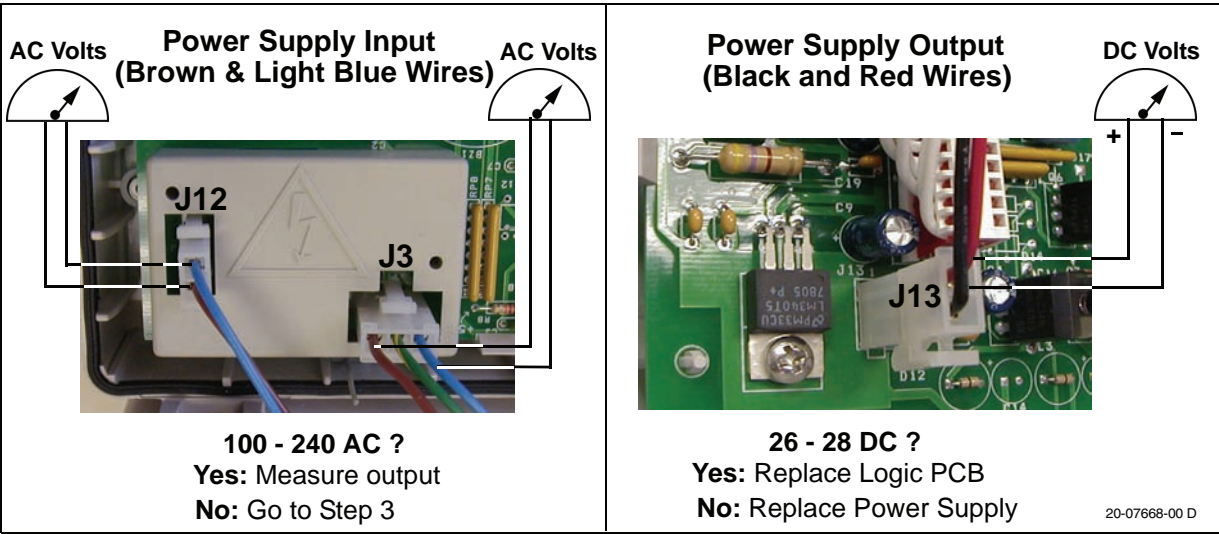
Figure 7-1   AC and DC Readings

Problems and Solutions List

Problem	Possible Cause	Solution
No voltage to main power terminals.	1. Tripped breakers or blown fuses at power source. 2. Main power wires.	1. Reset breakers or replace fuse at power source. 2. Check connections at plug or washer power terminals.
There is power at the main power terminals, but: **<u>NO power to Logic PCB at J3</u> (3-input connector) outside pins.**	Blown fuses on the power supply board.	Replace the power supply assembly (board and power supply)
There is power at the main power terminals and at J3, but: **<u>NO power at J12</u>.**	1. Power switch may be off. 2. Bad power switch.	1. Turn power switch on. 2. Replace Logic PCB.
There is AC power at main power terminals, and at J3 and at J12, but: <u>NO DC power at J13</u> (24VDC).	Bad power supply.	Replace power supply module.
The correct voltages are present at all four locations (main power terminals, J3, J12 and J13) but: <u>there is NO LED display.</u>	Damaged logic board.	Replace the logic PCB.
Password will not access Program Mode.	1. Password has been changed.	Call Nova Controls technical service.
Pump runs slowly.	1. Pump not properly plugged in. 2. Pump failure.	1. Verify pump electrical connectors are properly plugged in. 2. Replace failed pump.
Pump runs but will not deliver product, producing poor results.	1. Squeeze tube failure. 2. Product tubing plugged. 3. Pump roller failure.	1. Replace squeeze tube. 2. Replace product tubing. 3. Replace spinner assembly.
Pump does not run–Pump Jam displays.	1. Broken spinner (a.k.a. roller). 2. Pump motor has power but will not move (frozen). 3. Pump motor starts at full speed, and then stalls.	1. Replace spinner assembly. 2. Replace pump motor. 3. Replace pump motor.
Rinse Product not dispensed. **NOTE:** The **Rinse Saver** feature will prevent rinse from being dispensed unless: (1) There is a rinse input signal to the board and (2) A detergent signal has occurred within the previous 90 seconds. See *"Rinse Saver Feature" on page 5-3* for a more detailed explanation.	1. No power to rinse signal–wires loose or incorrectly wired. (Signal has power when decimal point displays, even if pressure switch controlled.) 2. Refer to "Pump runs, will not deliver product...poor results." 3. Verify time set for Rinse Delay (can delay rinse product being dispensed for up to 19 seconds). 4. Rinse Saver Feature operating.	1. Check and correct rinse signal wiring to washer (see *"Rinse Signal Wiring" on page 3-4*). 2. Replace squeeze tube, product tubing or pump roller (spinner) if needed. 3. Reset Rinse Delay Time. 4. Must have both: 1) a rinse signal input to the board and 2) a detergent signal within the previous 90 seconds.

8
Maintenance and Service

Overview

This chapter describes maintenance needed by the Sprite III and includes a list of spare parts:

- Routine Maintenance
- Maintenance Visits
- Pump Tube Replacement
- Spare Parts List

Routine Maintenance

Routine maintenance on the Sprite III unit includes:

- Keeping the probe clean (probe mode operation only).
- Keeping pump tubes fresh.
- Keeping the unit clean.

Every Maintenance Visit

Each maintenance visit should include the following steps:

- Titrate the wash tank solution to verify that unit is holding accurate concentration.
- Clean probe, if required.
- Clean the unit cabinet with a damp cloth.
- Check the pump tube's condition and replace if needed.

Pump Tube Replacement

Replace pump tubes at regular maintenance intervals, well before the tube fails and ruptures.
In the event that the tube does rupture, clean all product from the pump with a damp cloth.

- Loosen the pump front captive screw and remove the pump front.
- Remove the old tube with barbed connectors and compression nuts.
- Install the new tube with barbed connectors and compressions nuts oriented with flat sides facing towards the front.
- Insert new tube from the left side of the pump, with pump spinner oriented in an 11/1 o'clock position.
- Turn the spinner clockwise using a screwdriver as you press the pump tube in place.

Spare Parts Reference

1a. Power Supply Module Only

2
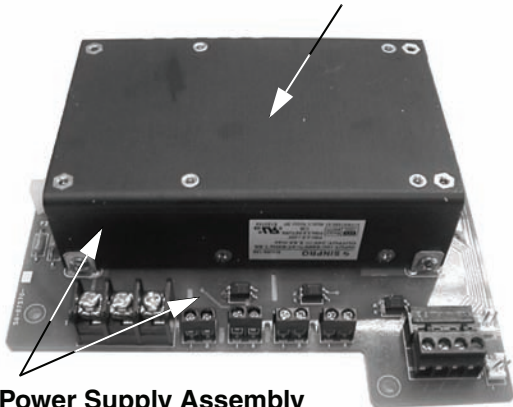
1b. Power Supply Assembly
(includes module, PCB, harness)

3

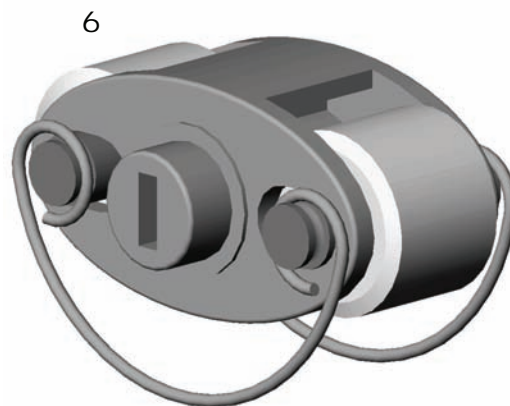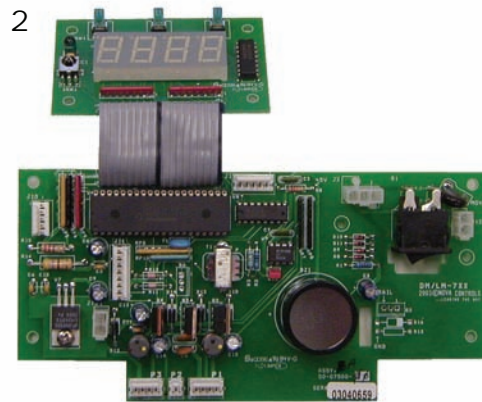**4**

5

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Figure 8-1   Spare Parts

Spare Parts List

Table 8-1   Spare Parts Listing (see *Figure 8-1 on page 8-2*)

Ref. Number	Part Number	Description
1a	13-07724-00	Power Supply Module Only
1b	13-07724-01	Power Supply Assembly (includes module, PCB and Harness)
2	13-07725-10	Logic Circuit Board
3	13-06524-01	Pump Motor Detergent w/2-Pin Plug
4	13-06523-01	Pump Motor Rinse w/5-Pin Plug
5	13-06398-00	Pump Front, w/Captive Screw
6	13-06396-00	Pump Spinner Assembly (all pumps)
*	37-07584-02	Cabinet Front
*	37-07585-32	Cabinet Rear
*	13-07268-06	Power Switch Cover
*	13-07122-00	Dispenser Mounting Bracket Kit
*	13-07191-00	Solenoid Valve Kit, 1/4" Fitting
*	13-07191-01	Solenoid Valve Kit, 6mm Fitting
*	13-07191-02	Solenoid Valve Kit, 5/16" Fitting
*	13-06528-00	Solenoid Valve Nut w/Sleeve, 1/4" 10 pk.
*	13-06528-01	Solenoid Valve Nut w/Ferrule, 6mm 10 pk.
*	13-06528-02	Solenoid Valve Nut w/Sleeve, 5/16" (8mm) 10 pk.
*	13-06395-10	Pump Tube, Rinse / Sanitizer Lo-Flow, EPDM (incl. 1/4" Barb Fittings) 10 pk.
*	13-06395-20	Pump Tube, Rinse / Sanitizer Lo-Flow, EPDM (incl. 1/4" and 1/8" Barb Fittings) 10 pk.
*	13-06395-30	Pump Tube, Rinse / Sanitizer Lo-Flow, EPDM (incl. 1/8" Barb Fittings) 10 pk.
*	13-06928-10	Pump Tube, Rinse / Sanitizer Lo-Flow, Silicone (incl. 1/4" Barb Fittings) 10 pk.
*	13-06928-20	Pump Tube, Rinse / Sanitizer Lo-Flow, Silicone (incl. 1/4" and 1/8" Barb Fittings) 10 pk.
*	13-06928-30	Pump Tube, Rinse / Sanitizer Lo-Flow, Silicone (incl. 1/8" Barb Fittings) 10 pk.
*	13-06399-10	Pump Tube, Detergent / Sanitizer, EPDM (incl. 1/4" Barb Fittings) 10 pk.
*	13-06563-00	Pump Tube Compression Nut w/Sleeve, 1/4", 10 pk.
	13-06563-01	Pump Tube Compression Nut w/Sleeve, 6mm 10 pk.
*	13-06563-02	Pump Tube Compression Nut and Ferrule, 1/8" (3mm) 10 pk.
*	13-06529-00	Rinse Injection Fitting, Straight, Kynar, 1/8" NPT x 1/4" Tube
*	13-06529-01	Rinse Injection Fitting, Straight, Kynar, 1/8" NPT x 1/8" (3mm) Tube
*	13-06529-02	Rinse Injection Fitting, Straight, Kynar, 1/8" NPT x 6mm Tube
*	13-06531-00	Rinse Injection Fitting, 90°, Elbow, 1/8" NPT x 1/4" Tube
*	13-06531-01	Rinse Injection Fitting, 90°, Elbow, 1/8" NPT x 1/8" (3mm) Tube
*	13-06531-02	Rinse Injection Fitting, 90°, Elbow, 1/8" NPT x 6mm Tube

* Denotes items not shown.

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9
Specifications

Note	Specifications subject to change without notice.
✍	

Dimensions	
Size	8" W x 9" H x 6" D (20.3 cm W x 22.2 cm H x 15.4 cm D)
Weight	6 lbs. (2.72 kg)
Power Requirements	
Total Amperage draw during operation	100 to 240 VAC nominal (+/- 10%fluctuation), 50/60 Hz. 1.0 amps (max.)
General	
Rinse Pump Flow Rate	0.5 mls/revolution
Detergent Pump Flow Rate	6 oz./min. (178 mls/min)
Third Product Pump Flow Rate	0.10 oz./min. to 6 oz./min. (3 mls/min. to 178 mls/min.)
Environmental	
Pollution	2
Installation Category	II
Temperature	10° to 40° C (50° to 120° F) (max.)
Humidity	95% relative humidity (max.)
Indoor Installation	Approved for indoor use only. Must not be installed outdoors.
Altitude	Install at or below 6,500 ft. (2000m) max.

Limited Warranty

SELLER warrants solely to BUYER the Products will be free from defects in material and workmanship under normal use and service for a period of one year from the date of completion of manufacture. This limited warranty does not apply to (a) hoses; (b) and products that have a normal life shorter than one year; or (c) failure in performance or damage caused by chemicals, abrasive materials, corrosion, lightning, improper voltage supply, physical abuse, mishandling or misapplication. In the event the Products are altered or repaired by BUYER without SELLER'S prior written approval, all warranties will be void.

NO OTHER WARRANTY, ORAL, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, IS MADE FOR THESE PRODUCTS, AND ALL OTHER WARRANTIES ARE HEREBY EXPRESSLY EXCLUDED.

SELLER'S sole obligation under this warranty will be, at SELLER'S option, to repair or replace F.O.B. SELLER'S facility in Watsonville, California any Products found to be other than as warranted.

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SELLER'S WARRANTY OBLIGATIONS AND BUYERS REMEDIES ARE SOLELY AND EXCLUSIVELY AS STATED HEREIN. SELLER SHALL HAVE NO OTHER LIABILITY, DIRECT OR INDIRECT, OF ANY KIND, INCLUDING LIABILITY FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER CLAIMS FOR DAMAGE OR LOSS RESULTING FROM ANY CAUSE WHATSOEVER, WHETHER BASED ON NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR BREACH OF WARRANTY.

Index

Configuration Settings

Input Password to Start

Detergent Control
1 = Probe
2 = Probeless

Machine Type
1 = Door
2 = Conveyor

Detergent Type
1 = Liquid
2 = Capsule

Pulse Feed
0-7 (0 = No pulse feed)

NOTE: Pulse Feed display is ONLY available when
Detergent Type = Capsule (screen 23.1 = 2).

1= 1 Second On, 9 Seconds Off, 50% of Set Point
2= 1 Second On, 9 Seconds Off, 70% of Set Point
3= 2 Seconds On, 6 Seconds Off, 50% of Set Point
4= 2 Seconds On, 6 Seconds Off, 80% of Set Point (Default)
5= 4 Seconds On, 4 Seconds Off, 70% of Set Point
6= 6 Seconds On, 4 Seconds Off, 80% of Set Point
7= 6 Seconds On, 1 Second Off, 90% of Set Point

Configuration Settings con't.

Alarm Volume
0 = Off
1 = Low
2 = Med
3 = High

Conveyor Rack Time
Seconds For 1 Rack

Initial Charge (Probeless only)
1 = Automatic
2 = Manual

Change Installer Password

Demo Mode
= Rinse Signal
= Detergent Signal

Third Product Pump
1 = Rinse
2 = Detergent

Exit to User Menu
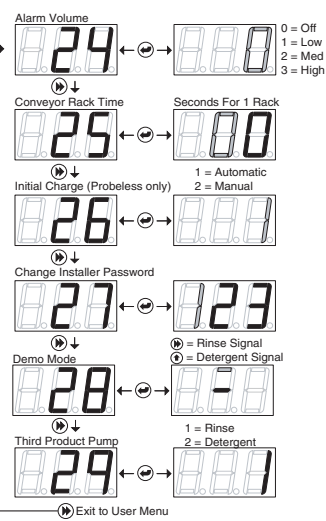
NOVA CONTROLS
A Hydro Systems Company
WATSONVILLE, CALIFORNIA USA 95076

20-07668-00 Rev. J   **Quick Reference Card**   **Sprite III Warewash**

Adjustments, Probe Mode

Detergent Tank Reading — Tank Reading
3.1 → 000

Detergent Set Point — 0-999
32.1 → 000

Live Conductivity Display — 1=Yes, 2=No, (Default)
32.2 → 2

Rinse Pump Speed — 0-59.5 RPM
33.1 → 000

Third Product Pump Speed — 0=Off, 2-110 RPM
33.2 → 000

Low Detergent Alarm Delay — # of Racks, 1-9
34 → 1

Rinse Feed Opt (Door Only) — 1 = Rinse on rinse, 2 = Rinse on detergent
35 → 1

Rinse Delay Time (Door Only) — 0-19 Seconds
36 → 0

Adjustments, Probeless Mode

Detergent Initial Charge — 0-199 Seconds
41 → 000

Detergent Dose — 0-19 Seconds
42 → 0.0

Detergent Dose Interval — Racks (1, 2 or 3)
43 → 1

Rinse Pump Speed — 0-59.5 RPM
44.1 → 0.0

Third Product Pump Speed — 0=off, 2-110 RPM
44.2 → 0.0

Rinse Feed Opt (Door Only) — 1 = Rinse on rinse, 2 = Rinse on detergent
45 → 1

Rinse Delay Time (Door Only) — 0-19 Seconds
46 → 0