PS3 Controller
General Operation Guide
with Optional Controller Configurations

Product Manual
Part 1602964-01
Issued 12/12

For parts and technical support, call the
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NORDSON CORPORATION • AMHERST, OHIO • USA

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Contact Us

Nordson Corporation welcomes requests for information, comments, and inquiries about its products.

General information about Nordson can be found on the Internet using the following address:

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Attn: Customer Service
Mail Station 48

Safety

Read and follow these safety instructions. Task- and equipment-specific warnings, cautions, and instructions are included in equipment documentation where appropriate.

Make sure all equipment documentation, including these instructions, is accessible to persons operating or servicing equipment.

Qualified Personnel

Equipment owners are responsible for making sure that Nordson equipment is installed, operated, and serviced by qualified personnel. Qualified personnel are those employees or contractors who are trained to safely perform their assigned tasks. They are familiar with all relevant safety rules and regulations and are physically capable of performing their assigned tasks.

Intended Use

Use of Nordson equipment in ways other than those described in the documentation supplied with the equipment may result in injury to persons or damage to property.

Some examples of unintended use of equipment include

using incompatible materials

making unauthorized modifications

removing or bypassing safety guards or interlocks

using incompatible or damaged parts

using unapproved auxiliary equipment

operating equipment in excess of maximum ratings

Regulations and Approvals

Make sure all equipment is rated and approved for the environment in which it is used. Any approvals obtained for Nordson equipment will be voided if instructions for installation, operation, and service are not followed.

Personal Safety

To prevent injury follow these instructions.

- Do not operate or service equipment unless you are qualified.
- Do not operate equipment unless safety guards, doors, or covers are intact and automatic interlocks are operating properly. Do not bypass or disarm any safety devices.
- Keep clear of moving equipment. Before adjusting or servicing moving equipment, shut off the power supply and wait until the equipment comes to a complete stop. Lock out power and secure the equipment to prevent unexpected movement.
- Relieve (bleed off) hydraulic and pneumatic pressure before adjusting or servicing pressurized systems or components. Disconnect, lock out, and tag switches before servicing electrical equipment.
- While operating manual spray guns, make sure you are grounded. Wear electrically conductive gloves or a grounding strap connected to the gun handle or other true earth ground. Do not wear or carry metallic objects such as jewelry or tools.
- If you receive even a slight electrical shock, shut down all electrical or electrostatic equipment immediately. Do not restart the equipment until the problem has been identified and corrected.
- Obtain and read Material Safety Data Sheets (MSDS) for all materials used. Follow the manufacturer's instructions for safe handling and use of materials, and use recommended personal protection devices.
- Make sure the spray area is adequately ventilated.
- To prevent injury, be aware of less-obvious dangers in the workplace that often cannot be completely eliminated, such as hot surfaces, sharp edges, energized electrical circuits, and moving parts that cannot be enclosed or otherwise guarded for practical reasons.

High-Pressure Fluids

High-pressure fluids, unless they are safely contained, are extremely hazardous. Always relieve fluid pressure before adjusting or servicing high pressure equipment. A jet of high-pressure fluid can cut like a knife and cause serious bodily injury, amputation, or death. Fluids penetrating the skin can also cause toxic poisoning.

If you suffer a fluid injection injury, seek medical care immediately. If possible, provide a copy of the MSDS for the injected fluid to the health care provider. The National Spray Equipment Manufacturers Association has created a wallet card that you should carry when you are operating high-pressure spray equipment. These cards are supplied with your equipment. The following is the text of this card:

WARNING: Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor that you suspect an injection injury.
- Show him this card
- Tell him what kind of material you were spraying

MEDICAL ALERT—WOUNDS:
NOTE TO PHYSICIAN

Injection in the skin is a serious traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the bloodstream.

Consultation with a plastic surgeon or a reconstructive hand surgeon may be advisable.

The seriousness of the wound depends on where the injury is on the body, whether the substance hit something on its way in and deflected causing more damage, and many other variables including skin microflora residing in the paint or gun which are blasted into the wound. If the injected paint contains acrylic latex and titanium dioxide that damage the tissue's resistance to infection, bacterial growth will flourish. The treatment that doctors recommend for an injection injury to the hand includes immediate decompression of the closed vascular compartments of the hand to release the underlying tissue distended by the injected paint, judicious wound debridement, and immediate antibiotic treatment.

Fire Safety

To avoid a fire or explosion, follow these instructions.

- Ground all conductive equipment. Use only grounded air and fluid hoses. Check equipment and workpiece grounding devices regularly. Resistance to ground must not exceed one megohm.
- Shut down all equipment immediately if you notice static sparking or arcing. Do not restart the equipment until the cause has been identified and corrected.
- Do not smoke, weld, grind, or use open flames where flammable materials are being used or stored.Do not heat materials to temperatures above those recommended by the manufacturer. Make sure heat monitoring and limiting devices are working properly.
- Provide adequate ventilation to prevent dangerous concentrations of volatile particles or vapors. Refer to local codes or your material MSDS for guidance.
- Do not disconnect live electrical circuits when working with flammable materials. Shut off power at a disconnect switch first to prevent sparking.
- Know where emergency stop buttons, shutoff valves, and fire extinguishers are located. If a fire starts in a spray booth, immediately shut off the spray system and exhaust fans.
- Shut off electrostatic power and ground the charging system before adjusting, cleaning, or repairing electrostatic equipment.
- Clean, maintain, test, and repair equipment according to the instructions in your equipment documentation.
- Use only replacement parts that are designed for use with original equipment. Contact your Nordson representative for parts information and advice.

Halogenated Hydrocarbon Solvent Hazards

Do not use halogenated hydrocarbon solvents in a pressurized system that contains aluminum components. Under pressure, these solvents can react with aluminum and explode, causing injury, death, or property damage. Halogenated hydrocarbon solvents contain one or more of the following elements:

Element	Symbol	Prefix
Fluorine	F	“Fluoro-“
Chlorine	Cl	“Chloro-“
Bromine	Br	“Bromo-“
Iodine	I	“Iodo-“

Check your material MSDS or contact your material supplier for more information. If you must use halogenated hydrocarbon solvents, contact your Nordson representative for information about compatible Nordson components.

Action in the Event of a Malfunction

If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:

- Disconnect and lock out system electrical power. Close hydraulic and pneumatic shutoff valves and relieve pressures.
- Identify the reason for the malfunction and correct it before restarting the system.
- If necessary, contact your Nordson service technician for assistance.

Disposal

Dispose of equipment and materials used in operation and servicing according to local codes.

Description

See Figure 1. The PS3 controller uses signals from a robot or cell controller to control the material dispensing rate. A constant bead size can be maintained by adjusting the material dispensing rate for changes in robot speed.

The controller can be configured with various options for dispensers and system interfaces.

The PS3 controller also

- displays recovery procedures if faults are detected.
- communicates faults to the robot controller.
- stores SPC and fault data.
- controls material temperature of 4 independent zones (integrated TC model only).

Specifications

Input Power: TYP 500 V, 3 Ø, , 60 Hz, 10 A

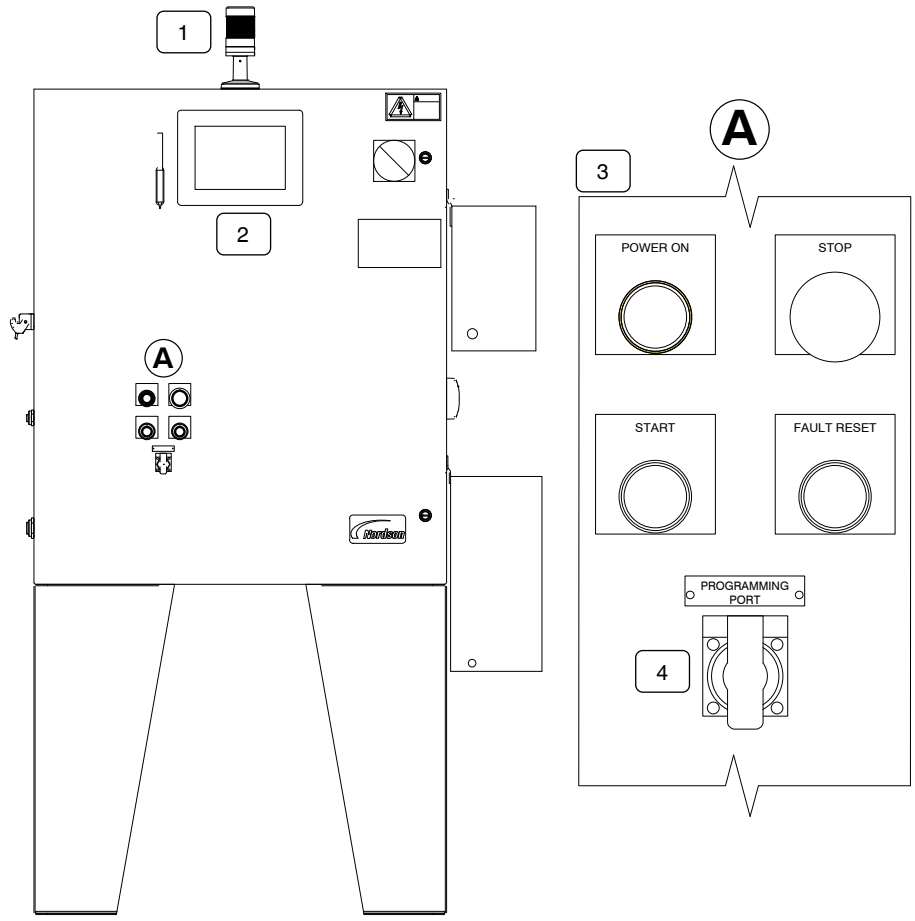


Figure 1 Typical PS3 Controller

1. Alarm Tower: Alerts the operator that a fault condition exists within the system.
2. Touch screen: HMI for the system. Refer to the *Operator Interface* section for more data.
3. Operator Controls:
   START-Enables auxiliary power to the controller
   POWER ON-Main power pilot light
   STOP-Disables auxiliary power to the controller
   FAULT RESET-Resets the servo drive if a fault occurs
4. DATA PORT: SPC data and PC Interface

Theory of Operation

The robot or cell controller sends a 0 to 10 volt DC analog signal that is proportional to the speed of the robot. This voltage can be a 12-bit word in the case of DeviceNet I/O systems, or a single-ended voltage in a discrete I/O system. The voltage controls the material flow rate, allowing the dispensed bead to remain constant through corners.

The material dispensing rates can be changed by using the Bead Size feature. The Bead Size feature proportionally controls the percentage of the robot analog signal sent to the dispense controls. It also eliminates the need to change the robot program due to changes in the material dispensing rates. Increasing the bead size value increases the rate dispensing material. Decreasing the bead size value decreases the rate of dispensing material.

NOTE:

A different bead size can be entered for each Part ID. A Global bead size can be entered if the bead size applies to all Part IDs.

Alarms

The PS3 controller alerts the operator when a fault occurs by lighting the alarm tower. The status screen will also flash the graphic of the faulted system component, allowing the user to quickly access help information for the fault by simply touching the flashing icon. The fault help screen provides a description of the fault, the corrective action needed, and how to contact Nordson Corporation for assistance. A fault log screen displays a list of the most recent faults.

Installation

WARNING

- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- The robot controller contains electrical potentials that can be fatal. Disconnect and lock out electrical power before making connections.
- Read and understand this entire section before performing repairs. Contact a Nordson representative regarding these procedures if necessary.

NOTE:

Refer to the *Optional Controller Configurations* section at the end of this manual for additional data that is applicable to this controller configuration.

1. Unpack the PS3 controller and inspect it for dents, scratches, corrosion, or other physical damage. If there is any visible damage, call a local Nordson Corporation representative immediately.
2. Install the controller as close to the robot controller as possible.

Guidelines

Review the following guidelines:

- Hard-wire the controller to a dedicated power supply to provide safe operation and reduce interference from electrical noise.
- Install all electrical connections to local code.
- Install a locking disconnect switch or breaker in the service line ahead of any electrical equipment.
- Electrical, fluid, and air connections are dependent upon application requirements. Use the System Layout and Interconnect drawings provided with the system documentation for all connections.
- Make sure that there is enough slack in all hose and cable routings to allow for proper system operation.

NOTE:

Most of the critical setup parameters that are described in this section are configured prior to shipment. The information on enabling/disabling pump and temperature control is provided for reference and should not be needed during a typical installation.

Schematics and Wiring Diagrams

See the system documentation that shipped with the controller for schematics and wiring diagrams specific to your system.

Notes

Operator Interface and Screens

This section describes the PS3 screens.

Touch the screen to select one of five main menus (1):

SYSTEM STATUS	SYSTEM SET-UP
VIEW FAULTS	PROCESS DATA
TEST POINTS	

NOTE:

Refer to the *Optional Controller Configurations* section at the end of this manual for additional data that is applicable to this controller configuration.

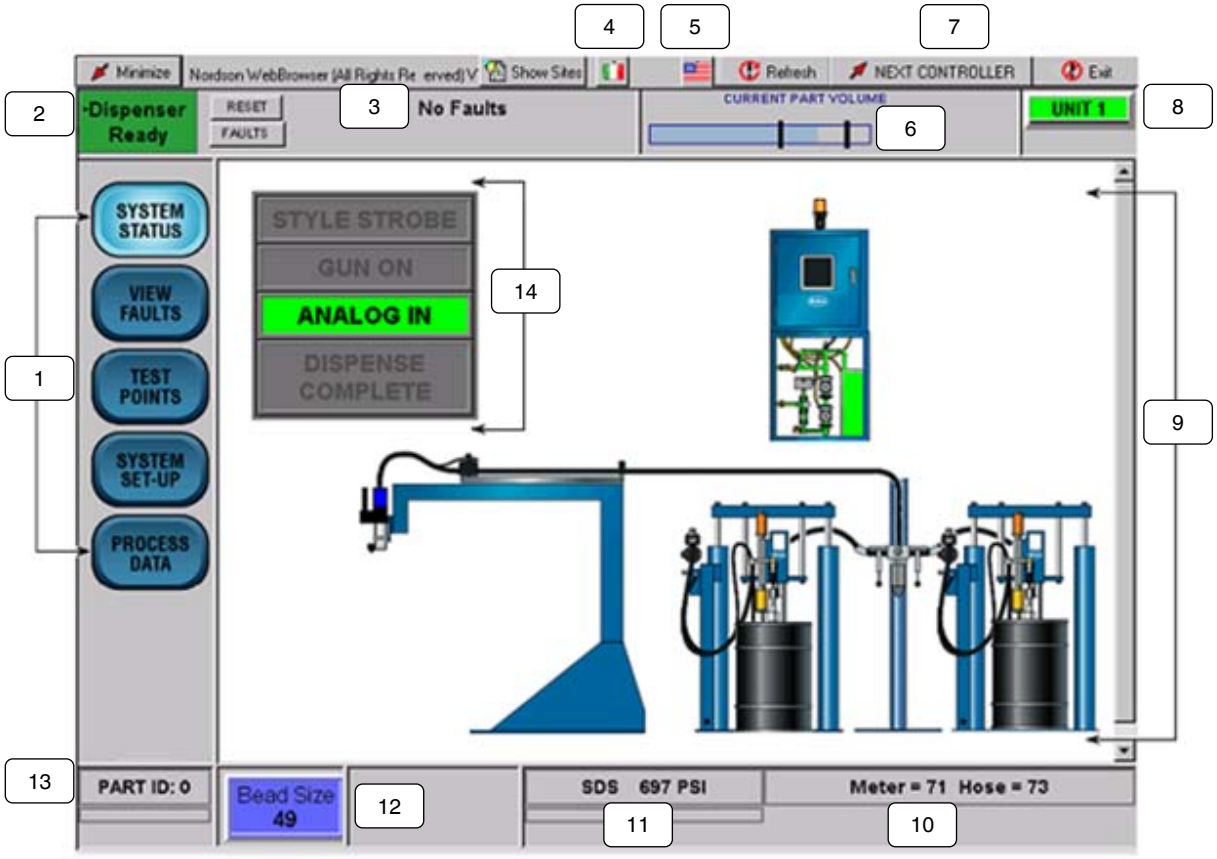
Refer to Table 1 for a description of the operator interface functions.

SYSTEM STATUS

The **SYSTEM STATUS** screen (9) is the default screen displayed at power up.

This screen shows the layout of major system components including material supply pumps, the applicator, and the controller itself. Each component image can flash red when a fault condition occurs involving that component. When an image or applicator is flashing, touching the flashing image or **VIEW FAULTS** takes the user to the **VIEW FAULTS** screen where detailed information on the fault and recovery instructions is appears.

The status screen also features indicators for the status of digital inputs and meter pressure.



Typical Status Screen

Table 1

Item	Description	Function
1	MENU BUTTONS	Access to various screens and setup menus.
2	DISPENSER STATUS	Green when Ready, Red if Not Ready.
3	FAULT INDICATOR FIELD	Displays latest current fault message.
4	COUNTRY FLAG	Touch to display alternate language.
5	USA FLAG	Touch to display English language.
6	CURRENT PART VOLUME	Visually indicates the percent of the job that is completed and the actual dispense volume at the end of the part cycle.
7	NEXT CONTROLLER	Use to toggle between systems.
8	UNIT NAME	User-defined label; indicates the current operator interface that is displayed on the screen. The user-defined label can be up to 10 characters.
9	SYSTEM STATUS	Appears as the default screen; displays the system configuration.
10	TEMPERATURE	Displays meter and hose temperatures.
11	PRESSURE	Displays system operating pressure.
12	BEAD SIZE	Bead size is percentage of robot analog sent to motor. Touch to access adjustment menu.
13	PART I.D.	Displays the current part I.D.
14	I/O INDICATORS	Displays status of primary robot dispense signals.

Pump Stand Control

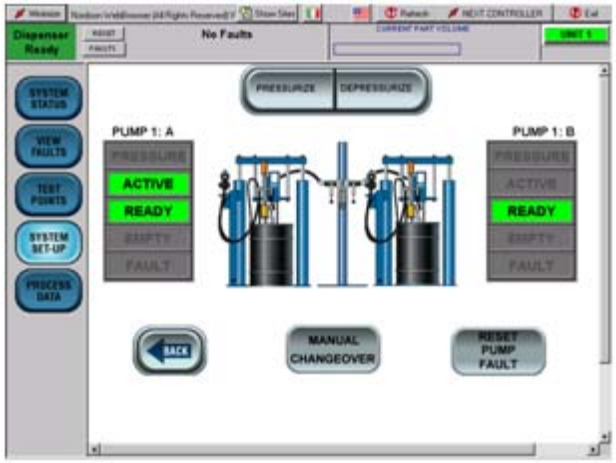
Touch **Pump Stand** on the System Setup menu or touch the crossover valve stand between the pump icons of the System Status screen to open the **Pump Stand Control** screen.

Touch the **PRESSURIZE** button to pressurize the pump stand.

Touch the **DEPRESSURIZE** button to depressurize the pump stand.

NOTE:

The length of time the depressurization valve remains open is user-adjustable through the hidden service menu. The length of time required to depressurize the system can vary depending on material viscosity and system volume.



Pump Stand Control Screen

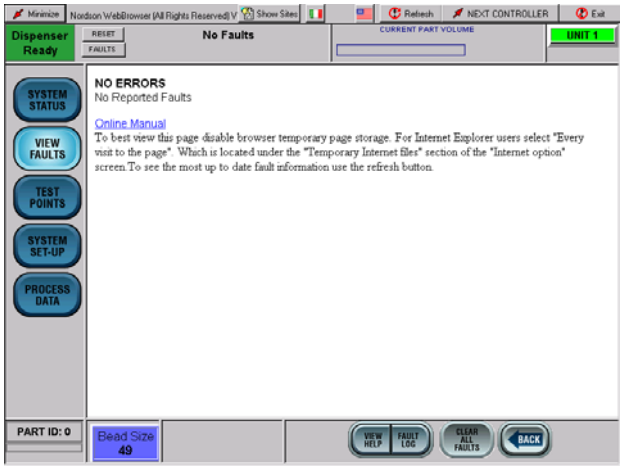
VIEW FAULTS

The **VIEW FAULTS** screen displays the description of the current fault(s) and the corrective action required.

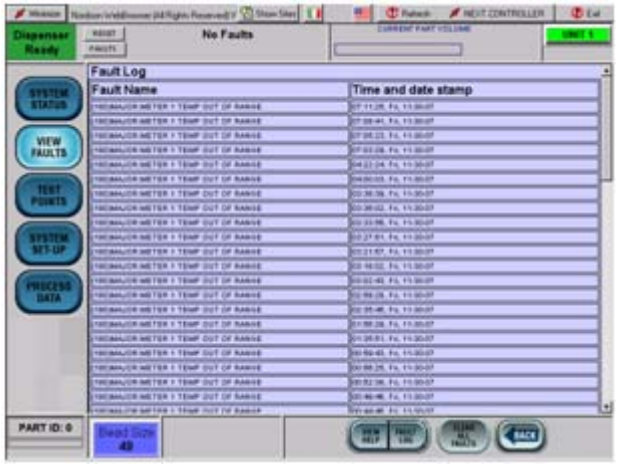
Touch **VIEW HELP/FAULT LOG** to toggle between the fault log and help screens.

Touch **FAULT LOG** to view the history of faults by time and date (most recent at top).

Touch **RESET FAULTS** at the top of screen or **CLEAR ALL FAULTS** at the bottom of the screen to clear the current faults. Note that this only applies to non-self-clearing faults.



View Faults Screen



Fault Log Screen

TEST POINTS

These screens are used to verify the state of IO signals to/from the robot and peripheral devices (pump stand, temp controller, etc.). The screen displays depend on the system configuration.

NOTE:

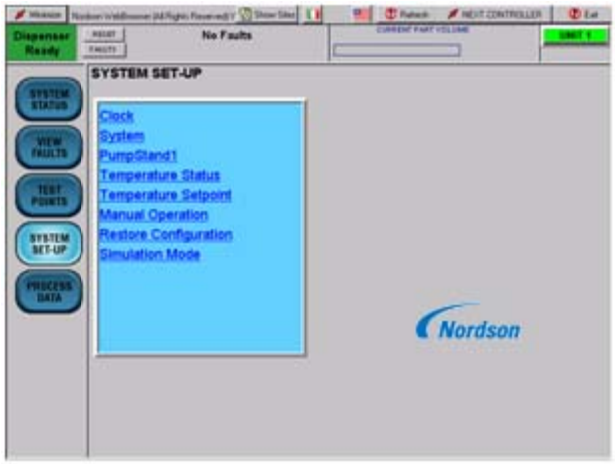
The refresh rate of the browser can affect the ability of the indicators to light in response to fast-acting signals.

Touch **NEXT I/O SCREEN** to toggle through the available IO screens.

Typical Test Points Screens

SYSTEM SET-UP

Use the **SYSTEM SET-UP** screen to configure the system parameters and to access control screens for pumps and temperature controller. The following paragraphs provide a description of each link.



System Setup Screen

Clock

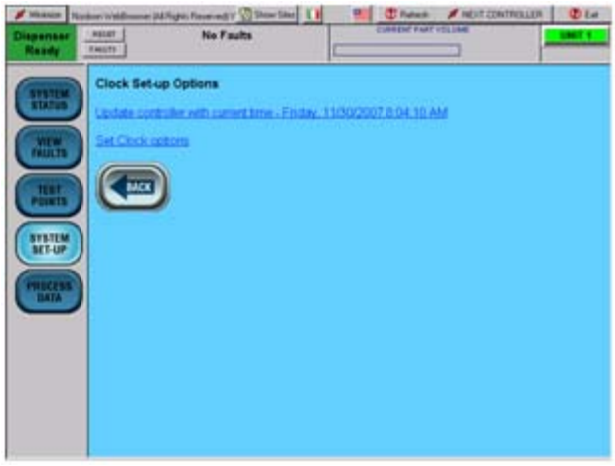
The time and date used in the Process Data screen, and in the stored SPC and fault logs is based on a clock that runs on the PS3 controller board. To synchronize the on-board clock with the time set in the PC, touch the link named **Update controller with current time**.

To view the current PC time/date, touch **Clock Options** link. The **Clock Set-up** screen appears.

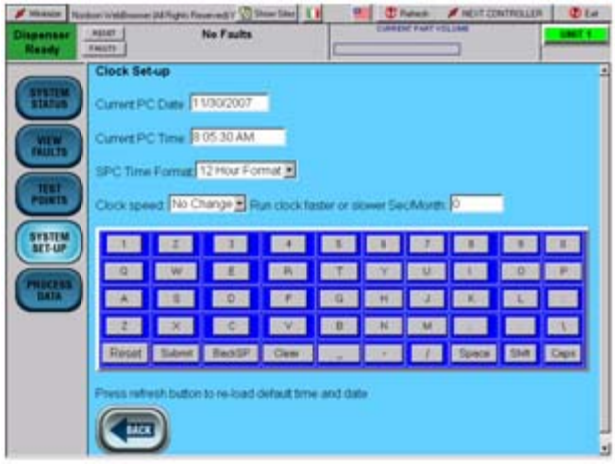
NOTE:

The time and date fields are read-only, changes to the PC clock should be done by minimizing the browser window and opening the Windows clock.

To select the SPC time format, use the drop down box to select either **12 Hour Format** or **24 Hour Format**.



Clock Options Screen

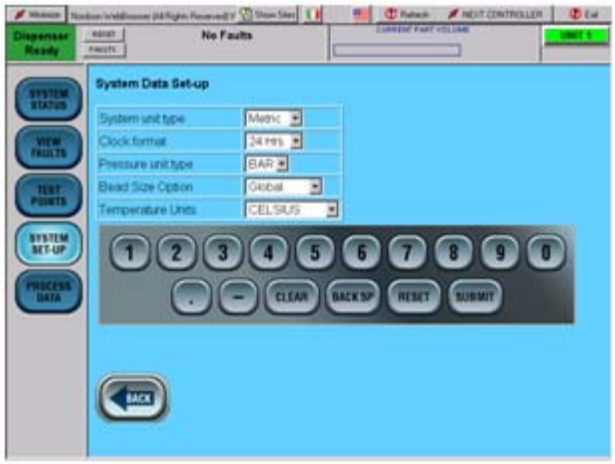


Clock Screen

System

Touch the keyboard to select

System unit type (Metric or US)
Clock format (24 Hrs or 12 Hrs)
Pressure unit type (Metric or US)
Bead Size Option (Global or Part ID)
Temperature Units (°F or °C)



System Screen

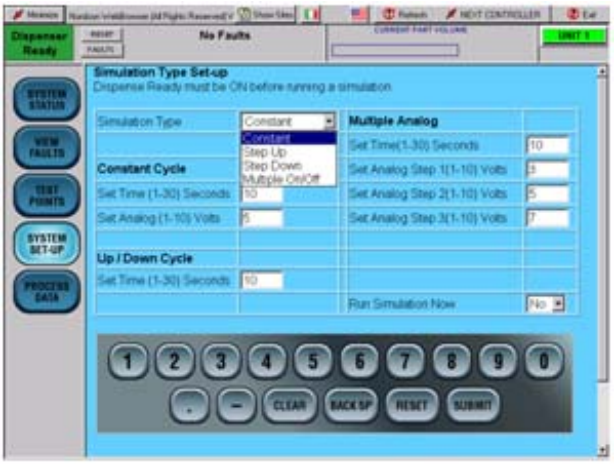
Restore Configuration

Use the drop-down list box on the **Restore Configuration** screen to reload either of two previously-stored configurations from battery-backed RAM. This is useful to return to a known good set of parameters when adjusting dispense settings.

Restore Configuration Screen

Simulation Mode

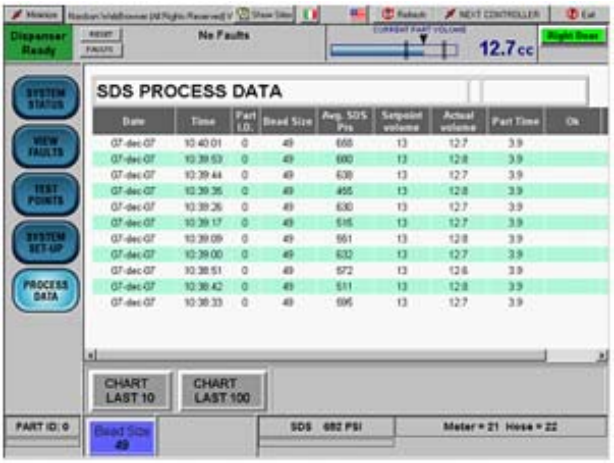
The **Simulation Mode** screen is used to dispense part cycles without the use of the robot. The dispensed parts are logged on the **Process Data** screen.



Simulation Mode Screen

PROCESS DATA

Touch **PROCESS DATA** to view production data. This list will show the last 11 part cycles in first-in and first-out order.



Process Data Screen

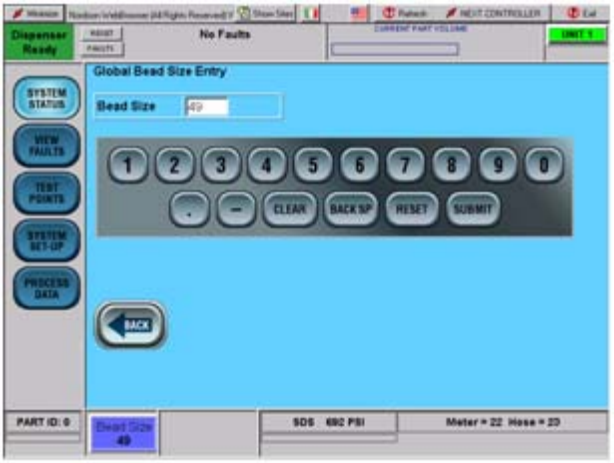
Bead Size

Touch **Bead Size** to view and adjust bead sizes. Bead size is an arbitrary number between 1 and 99. Bead sizes can be either by Part ID or Global.

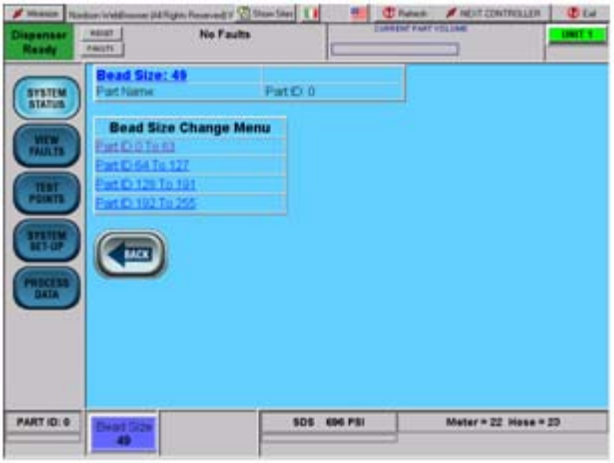
A Part ID bead size value applies to one part. Up to 256 Part ID bead sizes can be entered.

A Global bead size value applies to all Part IDs. If the Global bead size value changes, the bead size for all Part IDs change to that value.

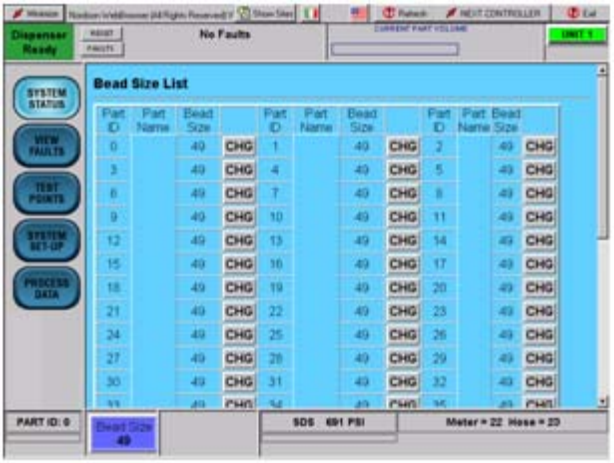
Touch the applicable link on the **Bead Size Menu** to access the **Bead Size Setup** screen and change the bead sizes.



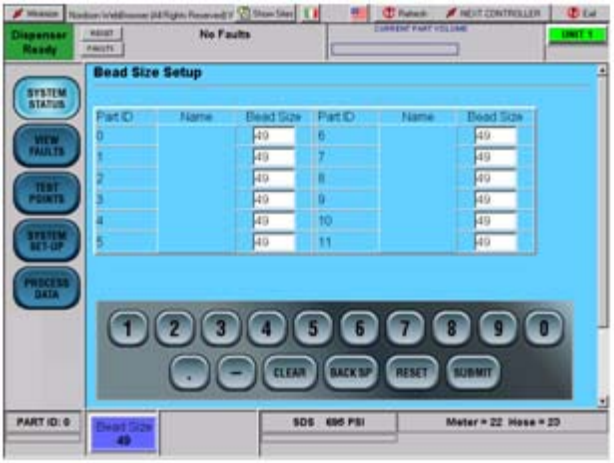
Global Bead Size Entry Screen



Bead Size Change Menu Screen



Bead Size List by Part ID Screen



Bead Size Setup Screen

Operation

WARNING

- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- Read and understand this section before operating the PS3 controller. The procedures in this section assume that the PS3 controller was configured by a Nordson Corporation representative.
- Review the applicable *Optional Controller Configuration* data in this manual if necessary.

NOTE:

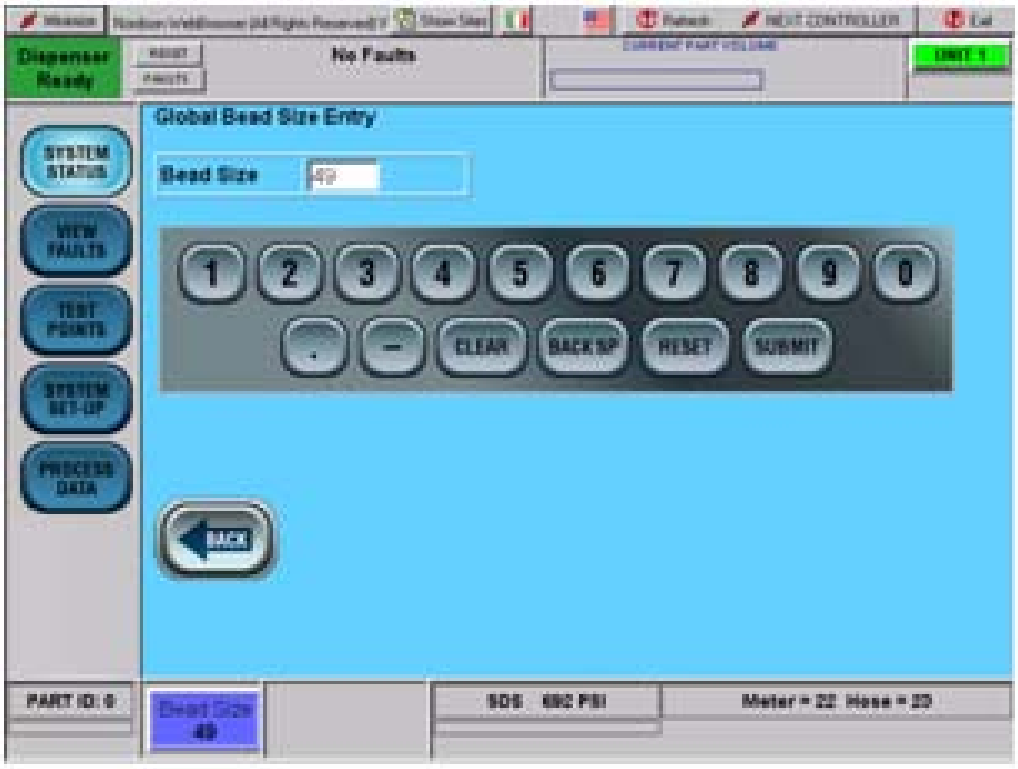
- Before operating the controller, make sure that each robot is taught the proper tool path. Refer to the robot controller manual for procedures.
- When entering data, touching the field next to the corresponding parameter positions the cursor inside of the field.

Some parameters require the use of the screen keyboard to enter data. When entering data, touch:

- **CLEAR** to delete the current value in a field.
- **BACK SP** to backspace.
- **RESET** to restore a value.
- **SUBMIT** to save changes.

NOTE:

The system software only recognizes integer values. Do not use the decimal point button when entering numerical values.



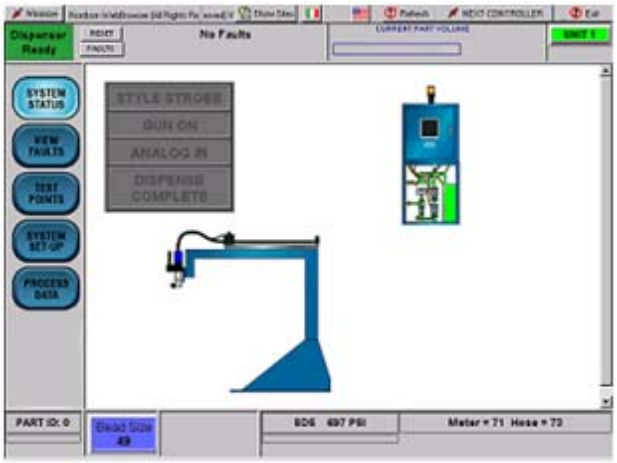
Using Screen Keyboard to Enter a Bead Size

Load Material into the System

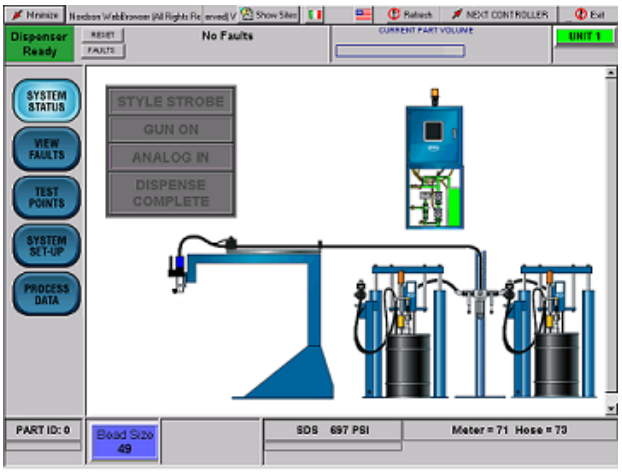
Enable the Pump Stand

The pump stand must be enabled before the PS3 controller can operate it. Perform the following to enable the pump stand:

1. Touch **SYSTEM SETUP**.
2. Touch the Nordson logo to access the hidden service menu.
3. Enter the password in the password field. Contact your local Nordson representative if necessary to obtain the password.
4. Touch **FAULT SETUP**.
5. Set the **PUMP STAND** option to **ENABLED**. Touch **SUBMIT** to save changes. The pump stand appears on the Main Status screen.



Pumps Disabled Screen



Pumps Enabled Screen

6. Touch **PUMP STAND** to configure the pump faults and the timeout values for automatic depressurization. This feature allows the system to automatically depressurize at a preset time after the last dispense cycle.

Pump Stand Setup Screen

Pre-Pressurization Setpoints

Perform the following to optimize the start of the dispensed bead.

1. Touch **SYSTEM SETUP**.
2. Touch the Nordson logo to access the hidden service menu.
3. Enter the password in the password field. Contact your local Nordson representative if necessary to obtain the password.
4. Touch Prepressure Setpoints. The Meter Fault Setup screen appears.

The value entered for prepressure should be close to the dynamic value seen during dispensing of the specific part ID.

When the style strobe is received, the ball screw will begin moving forward until the prepressure value entered for the current Part ID is reached. At this point, the ball screw stops and the Meter Prepressurized signal is sent to the robot, indicating that dispensing can begin.

Pre-Pressurization Setpoints Screen

Target Volume Setpoints / Alarms

For each part ID, a target volume value must be entered equal to the desired volume of the part.

Enter target volumes as integer values; no decimal point. For example, to enter a target volume of 31.5 CC, enter 315 and touch **SUBMIT** to save the changes.

Alarm values should also be entered that define the acceptable percentage above and below the target before a fault is posted. Both these menus are accessed via the hidden service menu.

Target Volume Screen

Typical Startup

NOTE:

Operating procedures may vary due to specific application requirements. Refer to your System Parameter Sheet for specific operating settings.

1. Turn on power to the controller. After the system finishes the boot-up process, press the POWER ON button.
2. Place a waste container under the dispense gun.
3. If equipped, start the temperature controller zones as required and pressurize the bulk unloader. When temperatures reach their setpoints, any temperature zone faults will **Self-Clear**.
4. Verify that the pumps are at operating pressure.
5. To purge the nozzle manually, perform the applicable steps:

   SDS Applicator:

   a. Touch **System Setup**, and then touch **Manual Operation** on the setup screen.
   b. Touch **Manual** to place the controller in the manual mode.
   c. Touch **PURGE ON** to begin dispensing. The meter will continue to purge until empty or **PURGE OFF** is touched.
   d. Touch **PURGE OFF** to stop dispensing.
   e. Touch **REFILL** to refill the meter, or touch **Auto Mode** to put the system back into **AUTO** mode, at which time a refill will automatically be performed.

   CP Gun:

   a. Touch **PURGE ON** to remove air from the material supply hose and nozzle.
   b. Purging stops when the purge time has elapsed. If desired, press **PURGE OFF** to immediately stop the purge.
6. Check the bead size for the part being run. Touch **BEAD SIZE** to access the **Bead Size Menu** and make adjustments if necessary.
7. Touch **PROCESS DATA** to monitor material dispensing characteristics.
8. Position the part and begin dispensing from the robot controller.

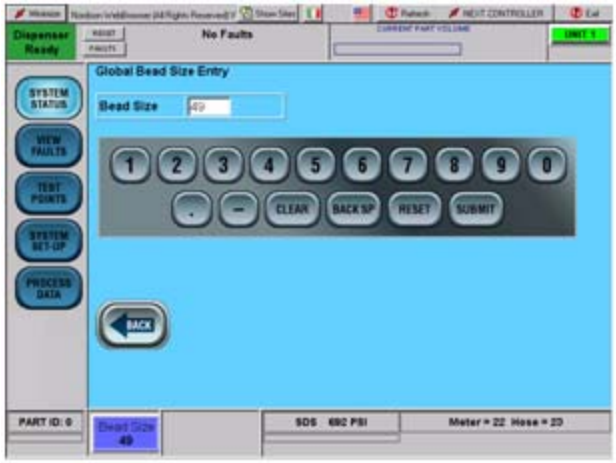
NOTE:

During dispensing, the robot signal indicators illuminate when signals are received from the robot controller. During normal operation, these lights flash on and off in specific sequence. Due to the screen refresh rate of the browser, fast-changing signals may not always light the indicators.

Bead Size Adjustment

Touch **BEAD SIZE** at the bottom of the status screen to access the bead size adjustment screen. Bead size is an arbitrary number between 1 and 99, and can be thought of as the percentage of robot analog voltage sent to the servomotor during dispensing.

Bead size values can be entered either by Part ID (specific part) or Global (applies to all parts)



Bead Size Adjustment Screen.

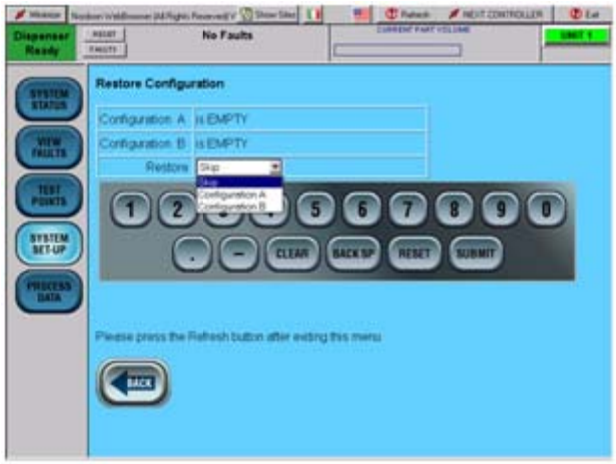
Fault Messages

If a fault is detected during operation, the alarm tower red light turns on and the type of fault is indicated on the operator interface.

Touch **VIEW FAULTS**. A description of the current fault appears along with the corrective action. Note that some faults are self-resetting, meaning that the fault condition must be corrected before the fault will automatically clear. Pressing the fault reset button does not reset self-resetting faults.

Restoring Configuration Settings

Use the drop-down list box to reload either of two previously-stored configurations from battery-backed RAM. This is useful to return to a known good set of parameters when adjusting dispense settings.



Restoring Configuration Screen

Shutdown

Use the following shutdown procedure to remove power from the PS3 controller:

1. Touch **Minimize** (1) at the top of a screen display.
2. Touch **start** (2) on the Windows task bar to access the **Turn off computer** screen.
3. Touch **Turn Off** (3).
4. Turn the controller off and relieve all pressures.

Shutdown Screens

Statistical Process Control Data and Fault Logs

The statistical process control (SPC) data that appears on the Process Data screen is stored on the hard drive of the controller PC. Stored values include:

- Date and Time
- Part ID
- Bead Size Setting
- Volume dispensed

Accessing SPC Data using Log File Manager Utility

The PS3 controller saves part and fault data in comma-delimited format for importing into a spreadsheet. Use the following procedure to export the log files onto a USB memory device:

1. Insert a USB memory stick into the port on side of the cabinet.
2. In the hidden service menu, select **Log File Manager**.
3. Select Run this program from current location option. Click OK.
4. Click on the **Yes** button.
5. Select the desired file to be exported by touching the file name in the list box.
6. Select the destination drive and folder, then press **Export Selected Log File(s)** button.
7. Exit the program.

SPC Error and System Status Codes

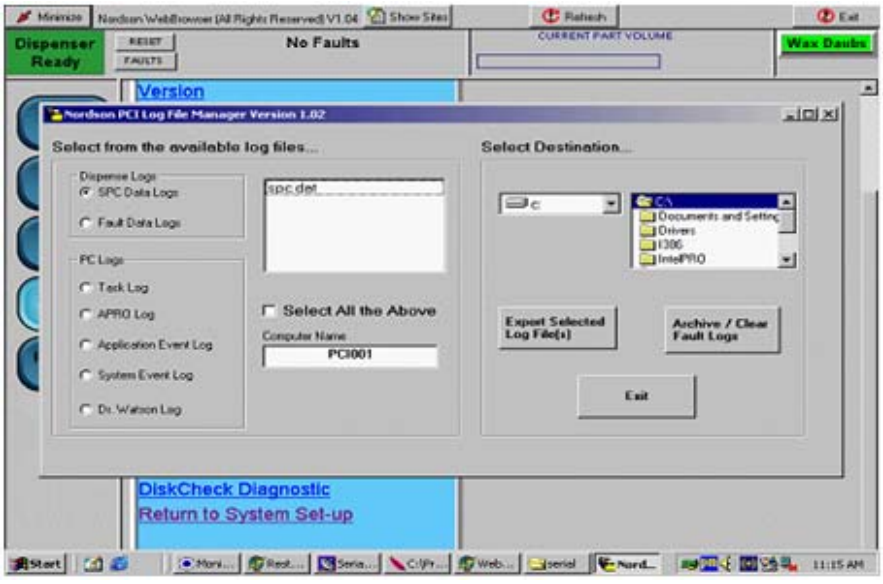
The PS3 controller collects the following SPC Error Codes and SPC System Status Codes. Refer to Tables 2 and 3 for the Error and System Status codes.

Table 2 SPC Error Codes

Code	Description
1	High dispensed volume
2	Low dispensed volume
4096	Robot signals out of sequence
8192	Gun or controller failure
16384	Auxiliary device failure either temperature conditioning unit or pumps

Table 3 SPC System Status Codes

Code	Description
128	New configuration file or defaults have been loaded
256	SPC data has been downloaded
512	Dispenser Ready went from low to high prior to dispense cycle
1024	Dispenser Ready was low but robot attempted to run a part
32768	Part cycle ran in Simulation Mode



Accessing SPC Data Screen

Troubleshooting

This section contains troubleshooting procedures. These procedures cover only the most common problems that you may encounter. If you cannot solve the problem with the information given here, contact your local Nordson representative for help.

WARNING

Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

NOTE:

Refer to the *Optional Controller Configurations* section at the end of this manual for additional data that is applicable to this controller configuration.

Problem	Possible Cause	Corrective Action
1. Meter does not dispense	Major fault	Access the VIEW FAULTS screen to determine cause of fault condition.
	Controller in Manual Mode	Set PS3 controller to the AUTO mode.
	No air to meter solenoids	Check supply air to the gun and refill meter solenoids. Make sure that the regulator is set to at least 70 psi.
	Robot signals not in proper sequence	See the IO timing chart for proper robot IO sequence.
2. Meter does not refill	Low unloader pressure	Confirm that pump has been pressurized. Check the air pressure to the bulk unloaders. Make sure that there is enough air pressure to refill the meter cylinders.
	No air to meter solenoids	Check supply air to the gun and refill meter solenoids. Make sure that the regulator is set to at least 70 psi.
	Clogged refill valve(s)	Remove the refill valve and either clean or replace the refill valve cartridge.
	Refill proximity switch not within limits.	Make sure that the gap between the refill proximity switch and the piston target disk does not exceed 0.030 in. and that the alignment is correct. Adjust the proximity switch if necessary.
3. Bead deposition "wiggles"	Nozzle too high above work piece	Modify robot path to lower the nozzle.
	Material speed through nozzle too low	Increase the bead size setting or robot analog voltage. Refer to *Startup* in the *Operation* section.
	Nozzle not large enough	Install a larger nozzle. Contact your Nordson Corporation representative for part numbers.
4. Unexpected bead size change	Nozzle partially blocked	Remove nozzle; clean or replace.
	Material exceeded shelf life	Use fresh material.

Notes

Repair

Repairs consist of replacing the operator interface panel and the PCAs.

WARNING

- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage.

Ordering Parts

Parts are application specific. Refer to the system documentation that shipped with the controller to order parts.

Operator Interface Panel

Perform following procedure to replace the operator interface.

NOTE:

Do not apply sealing compounds to the operator interface. The operator interface has a sealing gasket that forms a compression-type seal.

1. Turn off and lock out external electrical power to the controller.
2. See Figure 2. Open the enclosure door (1).
3. Disconnect the cables (3) from the operator interface (4).
4. Remove the mounting clips (2) securing the operator interface to the enclosure door. Remove the operator interface from the enclosure door.
5. Make sure that the sealing gasket on the operator interface is properly positioned.
6. Install the new operator interface into the enclosure door (1).
7. Install the mounting clips (2). Using the torque sequence shown, tighten the mounting clips to 10 in.-lb (1.1 N·m). To prevent flexing the touch screen, do not overtighten the clips.
8. Connect the cables to the operator interface, being careful to install the serial cable and Ethernet cables to the correct ports.
9. Close the enclosure door (1).

PCA Replacement

WARNING

This unit contains electrostatic sensitive devices (ESD). Always wear a grounding wrist strap to prevent damage to ESD parts.

1. Turn off and lock out external electrical power to the controller.
2. See Figure 2. Open the enclosure door (1).
3. Disconnect the electrical connectors from the PCA (5).
4. Remove the mounting screws from the PCA.
5. Install the new PCA. Do not over tighten the screws.
6. Re-install the electrical connectors.
7. Close the enclosure door.

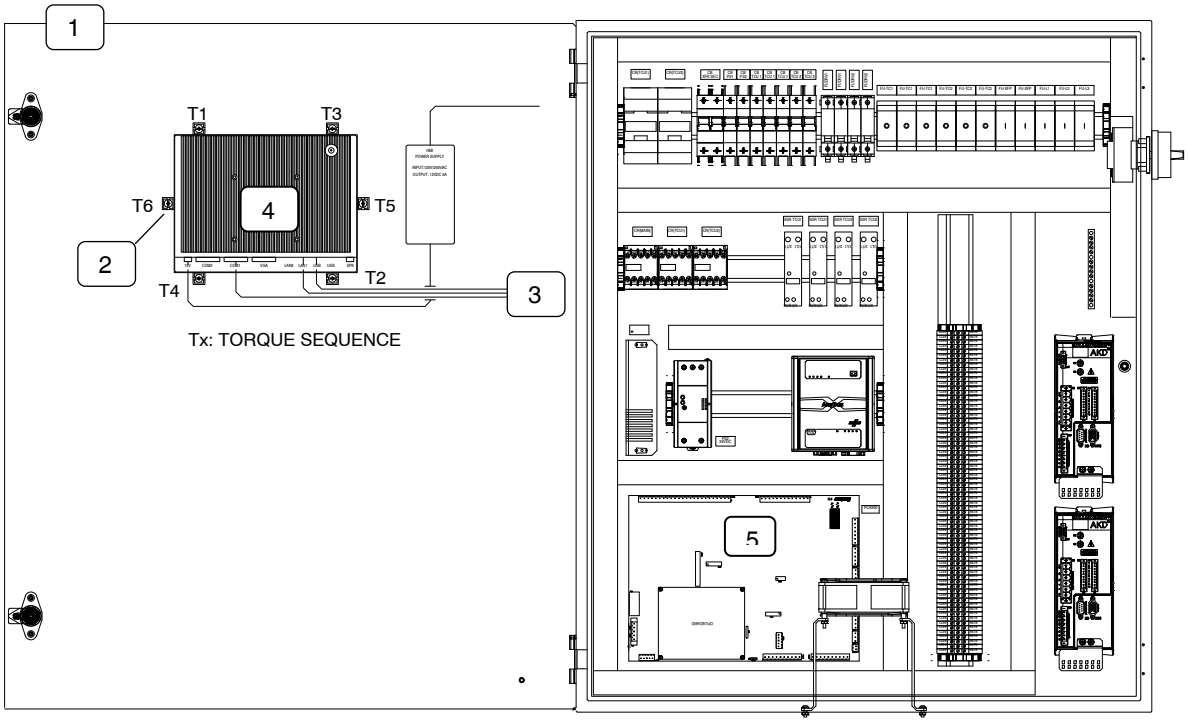


Figure 2 Operator Interface and PCA Replacement

Restoring PS3 Controller Programs

WARNING

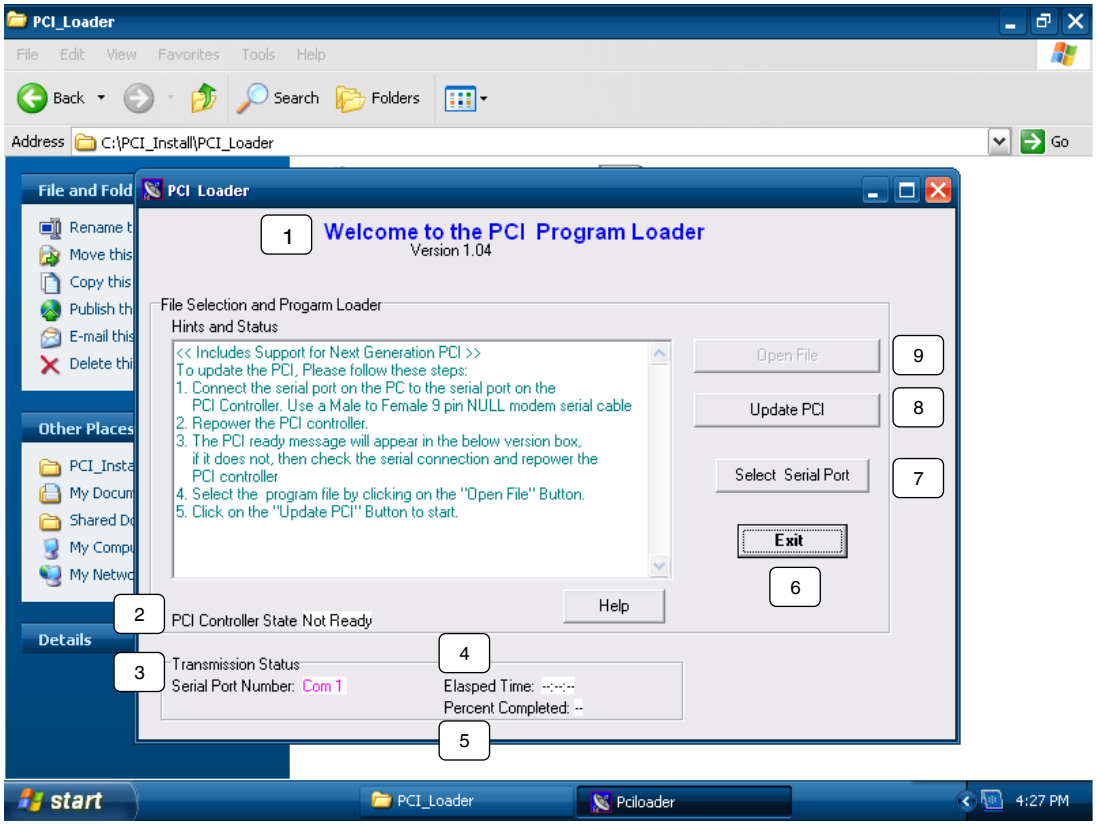
Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

NOTE:

The PCI board is the proprietary I/O controller for the PS3 system.

Use this procedure to restore the PS3 controller program and parameter configuration.

1. Open the enclosure door.
2. Connect a mouse and keyboard to the HMI.
3. Close all running programs.
4. Using Windows Explorer, access the *C:\PCI_ Install\PCI_Loader* folder.
5. Double-click on the *PCI Loader.exe* file to run the PCI Program Loader utility
6. Cycle power to the PS3 controller circuit board. Refer to the PS3 controller schematic for details.
7. When power is restored to the board, the message in the **PCI Controller State** field changes from Not Ready to Controller Ready.
8. Click on **Open File** (9) and select the desired *srec* file. Click on **Update PCI** (8).
9. The time and file loading progress appears in the Elapsed Time (4) and the File Progress (5) fields.
10. When the process is done, the board will reboot indicated by flashing of the 1- output LED on the board. Click on **EXIT** (6) to exit Loader utility.
11. Disconnect the keyboard and mouse from the HMI.
12. Close the enclosure door and cycle power to the PS3 controller.



PCI Program Loader Screen

Saving and Loading PS3 Controller Configurations

WARNING

- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage.

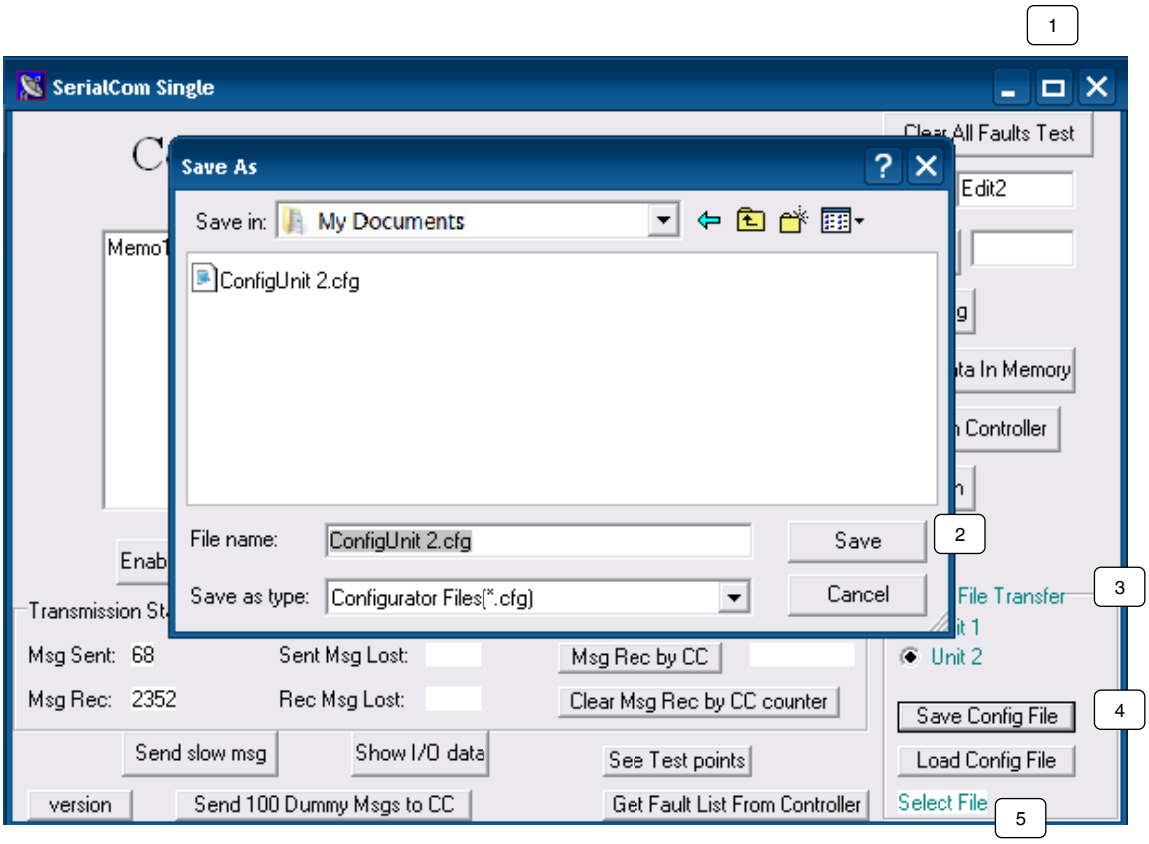
NOTE:

Loading a configuration file from a USB flash drive does not require a keyboard. Proceed to the *Loading Configurations* procedure.

Connect a USB-type keyboard to the HMI or use the onscreen keyboard to enter a file name and save configuration data onto a floppy disk or the hard drive.

Saving Configurations

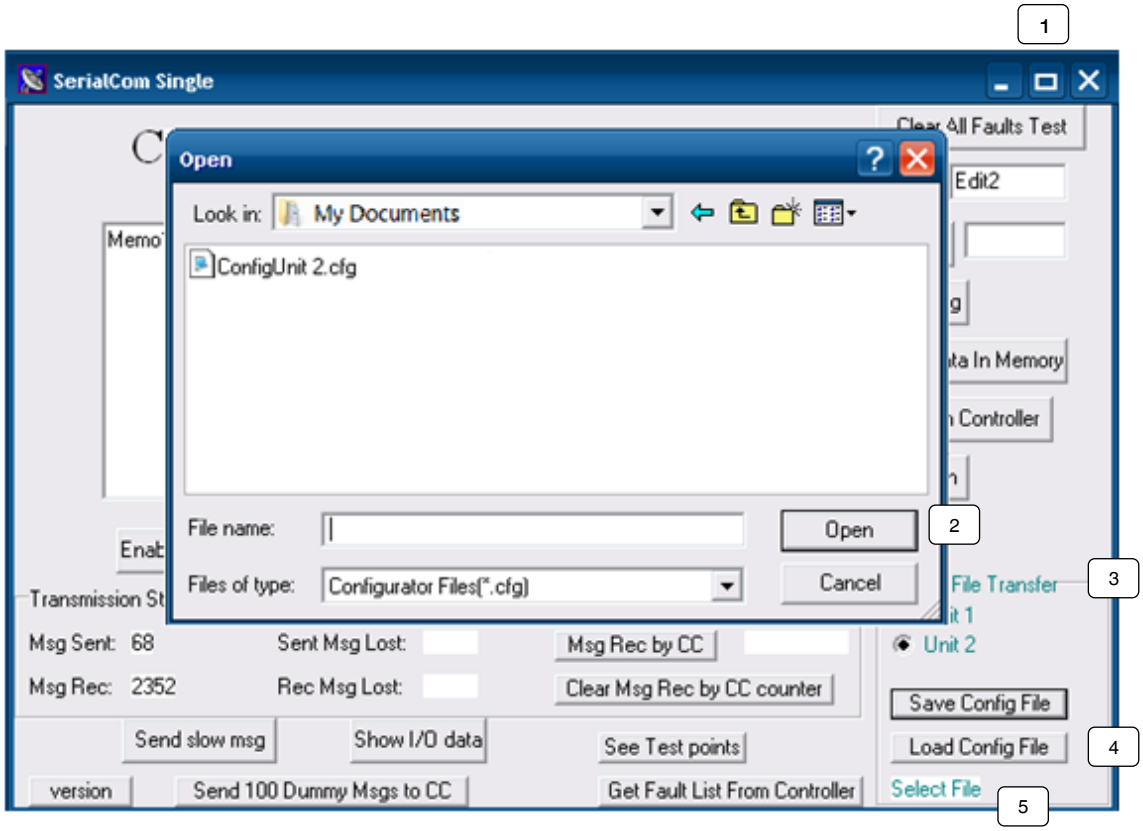
1. Touch **Minimize** on the **System Status** screen to minimize the browser screen.
2. Maximize the **SerialCom** window.
3. Touch either Unit 1 or Unit 2 in the **Config File Transfer** field (3) to save data from the applicable controller board.
4. Touch **Save Config File** (4). Using the keyboard, enter the name of the file to save in the file-name field. Touch **Save** (2).
5. When **OK-File Saved** appears in the field (5), minimize the **SerialCom** window (1).
6. Touch **Maximize** on the **System Status** screen to maximize the browser screen.
7. Close the enclosure door.



Saving Configurations Screen

Loading Configurations

1. Touch **Minimize** on the **System Status** screen to minimize the browser screen.
2. Maximize the **SerialCom** window (1).
3. Touch either Unit 1 or Unit 2 in the **Config File Transfer** field (3) to load data to the applicable controller board.
4. Touch Load Config File (4).
5. Select the desired file to load and touch **Open** (2).
6. Wait for the PCI control board to update. When **Transfer Complete** appears in the field (5), minimize the **SerialCom** window (1).
7. Touch **Maximize** on the **System Status** screen to maximize the browser screen.
8. Close the enclosure door.



Loading Configurations Screen

Notes

Optional Controller Configurations

NOTE: Contact a Nordson representative regarding this data if necessary.

The PS3 controller can be configured for use with the following components:

- Temperature Control
- Pro-Meter S-Series Dispenser
- CP Gun
- Robot Interface/Communication DeviceNet

Refer to the following sections for additional data that is applicable to your controller configuration.

Temperature Control Unit Addendum

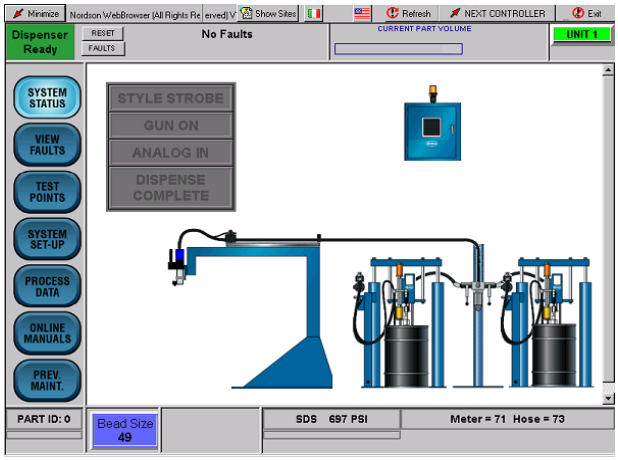
Section

Installation

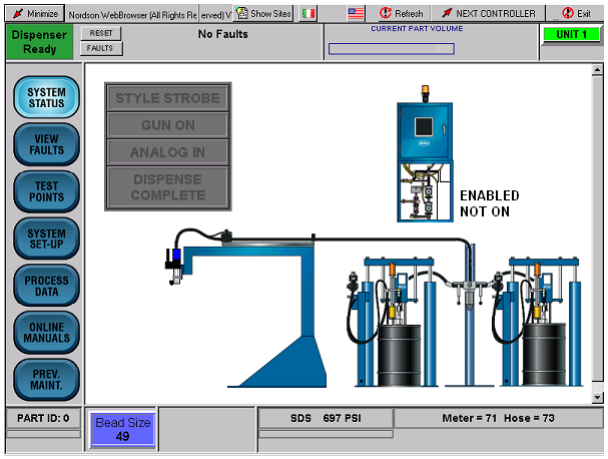
Enable Temperature Control

The temperature control must be enabled before the PS3 controller can operate it. Perform the following to enable the temperature control:

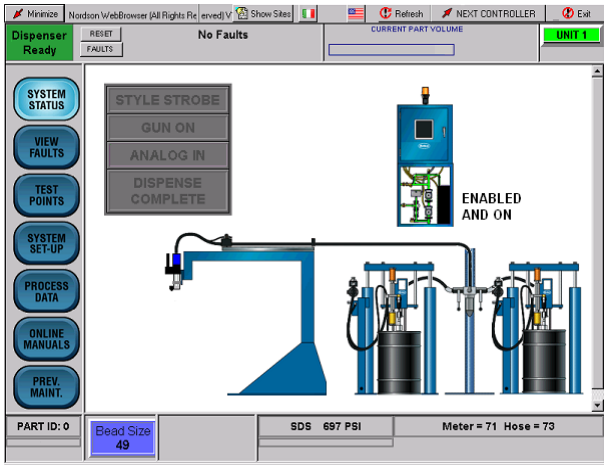
1. Touch **SYSTEM SETUP**.
2. Touch the Nordson logo to access the hidden service menu.
3. Enter the password in the password field.
   Contact your local Nordson representative if necessary to obtain the password.
4. Touch **FAULT SETUP**.
5. Set the **TEMPERATURE** option to **ENABLED**. Touch **SUBMIT** to save the changes.



Temperature Control Disabled Screen



Temperature Control Enabled But Not On Screen



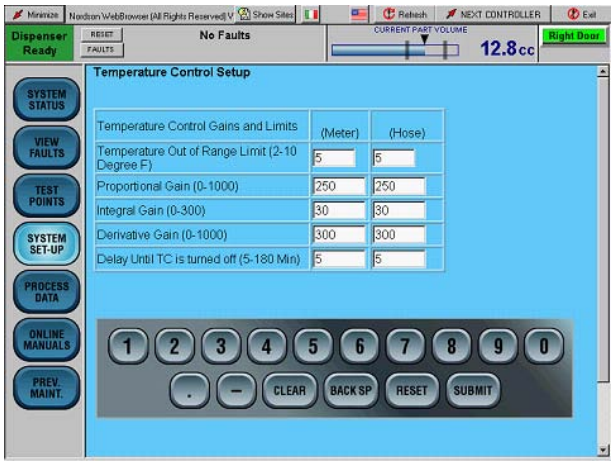
Temperature Control Enabled And On Screen

Temperature Control Setup

Use the Temperature Control Setup screen to adjust the temperature control loop gains and out of range limits for each control zone. A delay parameter can be set to turn off the temperature control after the pump stand depressurizes. To prevent material curing, this feature automatically stops the system from heating the hose and the meter.

Perform the following:

1. From the **FAULT SETUP** screen, touch **TEMPERATURE**. The Temperature Control Setup Screen appears.
2. Adjust the desired parameters using the keypad. Touch **SUBMIT** to save the changes.

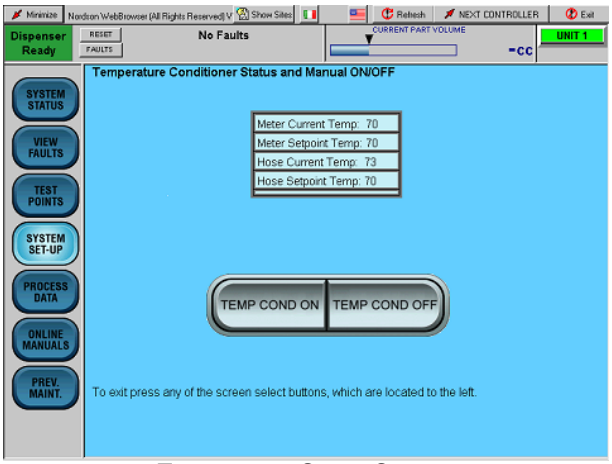


Temperature Control Setup Screen

Turn on the Temperature Control Contactor

1. From the main screen, touch either the temperature conditioning unit icon or **SYSTEM SET-UP**.
2. Touch **TEMPERATURE STATUS**.

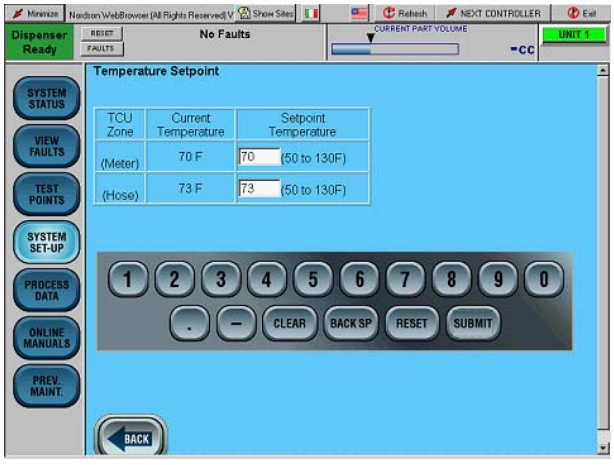
   Touch **TEMP COND ON** to turn on the heating zones. Touch **TEMP COND OFF** to turn off the heating zones.



Temperature Status Screen

Set the Temperature Setpoints

1. From the **SYSTEM SETUP** screen, touch **TEMPERATURE SETPOINTS**.
2. Select the desired parameter.
3. Use the keypad to change the value. Touch **SUBMIT** to save the changes.

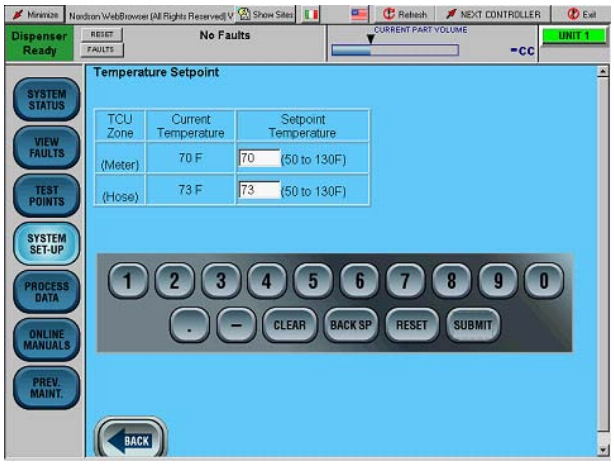


Temperature Setpoints Screen

System Setup

Temperature Setpoint

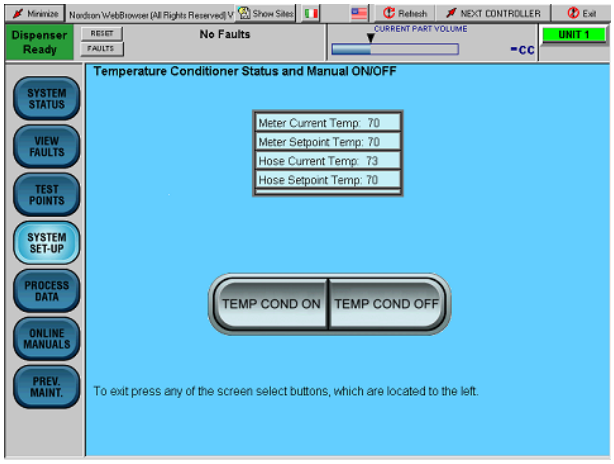
The **Temperature Setpoint** screen displays the current and setpoint temperatures for each TCU zone. Use the keypad to change a TCU zone temperature.



Temperature Control Discrete Interface Screen

Temperature Conditioner Status and Manual ON/OFF

The **Temperature Status** screen displays each TCU zone temperature. Touching **TEMP COND ON** enables the TCU. Touching **TEMP COND OFF** disables the TCU.



Integrated Temperature Control Screen

Pro-Meter S-Series Dispenser Addendum

Section

Installation

Configure the Robot Controller Analog Signal

See Figure 1. Configure your robot controller to vary the analog (or tool speed) signal from 0 to 10 Vdc over the full range of robot speed.

1. Determine the highest and lowest robot speeds to be used in production.
2. Configure the robot controller to output an analog signal of +10 Vdc when the robot is moving at, or slightly above maximum speed.
3. Configure the robot controller to output the analog signal of 0 Vdc when the robot is stationary.

NOTE:

Figure 1 presents an example of the approximate relationship between robot speed and analog voltage as a guide for the operator. A robot speed of 80% corresponds to 8 Vdc. A robot speed of 40% corresponds to 4 Vdc.

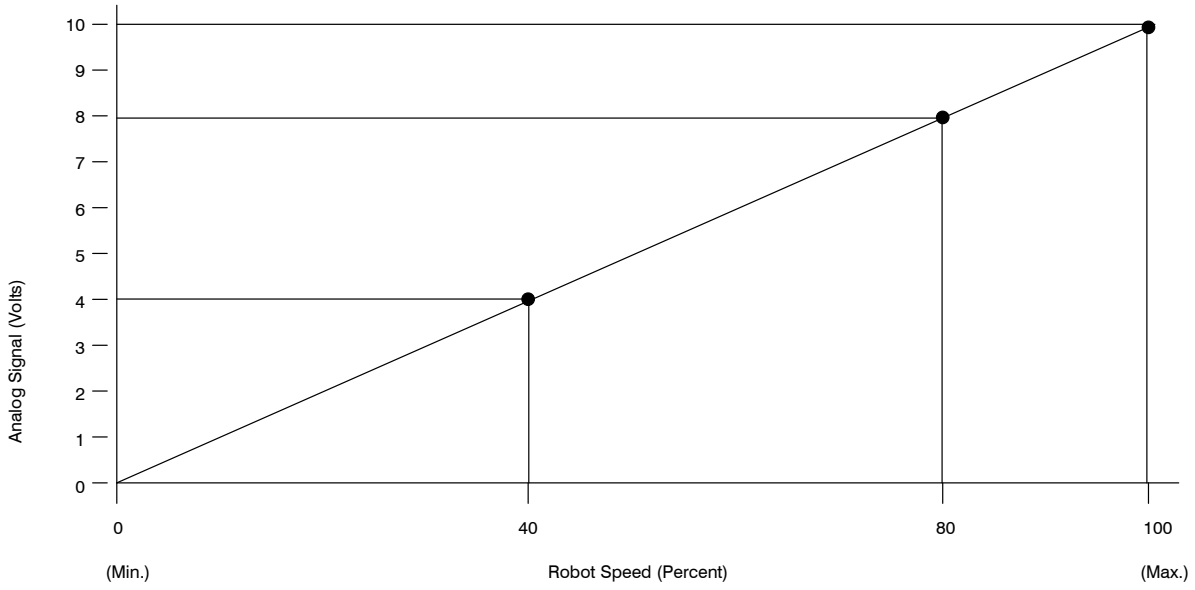


Figure 1 Relationship between Analog Signal and Robot Speed

Set Timing Sequence

There are two signal sequence configurations; RS4 and Non-RS4. Review the applicable paragraph for the desired signal sequence.

RS4 Signal Sequence

Refer to Table 1 and see Figure 2 for a description of an RS4 signal sequence.

Non-RS4 Signal Sequence

Refer to Table 2 and see Figure 3 for a description of a Non-RS4 signal sequence.

Prepressure Setpoints

To optimize the start of the dispensed bead, the Prepressure Setpoint parameter is entered in the Setup menu. This menu is hidden in the Service Menu to limit access.

The value entered for prepressure should be close to the dynamic value seen during dispensing of the part.

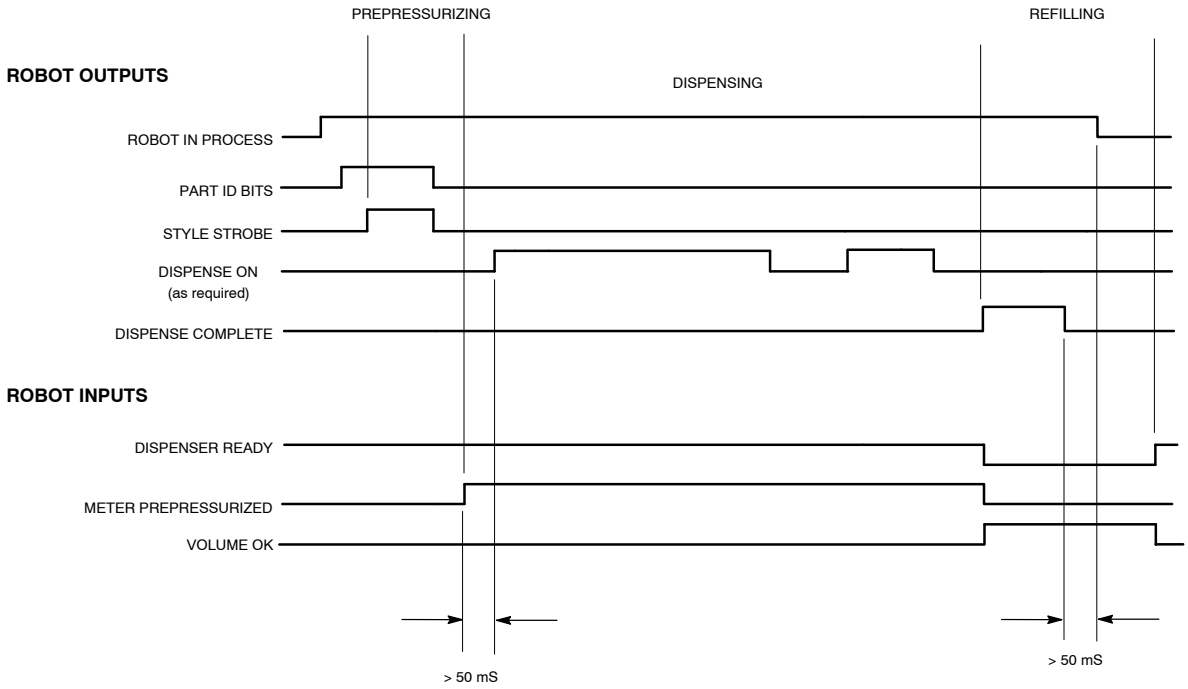
When the style strobe is received, the ball screw will begin moving forward until the prepressure value entered for the current Part ID is reached. At this point, the ball screws will stop and the Meter Prepressurized signal is sent to the robot, indicating that dispensing can begin.

Table 1

Sequence	Description
1	Robot checks for Dispenser Ready input.
2	Robot raises Robot In Process output.
3	Robot raises desired Part ID output bits for part to be dispensed.
4	Robot pulses Style Strobe output. Pulse must be at least 100mS long.
5	Robot waits for Meter Prepressurized input.
6	Part ID bits are dropped at this time.
7	Robot sends analog flow voltage and raises Dispense On output as required to apply desired material bead.
8	At end of part, robot pulses Dispense Complete output. Pulse must be at least 100 mS long.
9	Robot drops Robot In Process output.
10	Robot checks for presence of Volume OK input to verify part volume was within the acceptable limits.

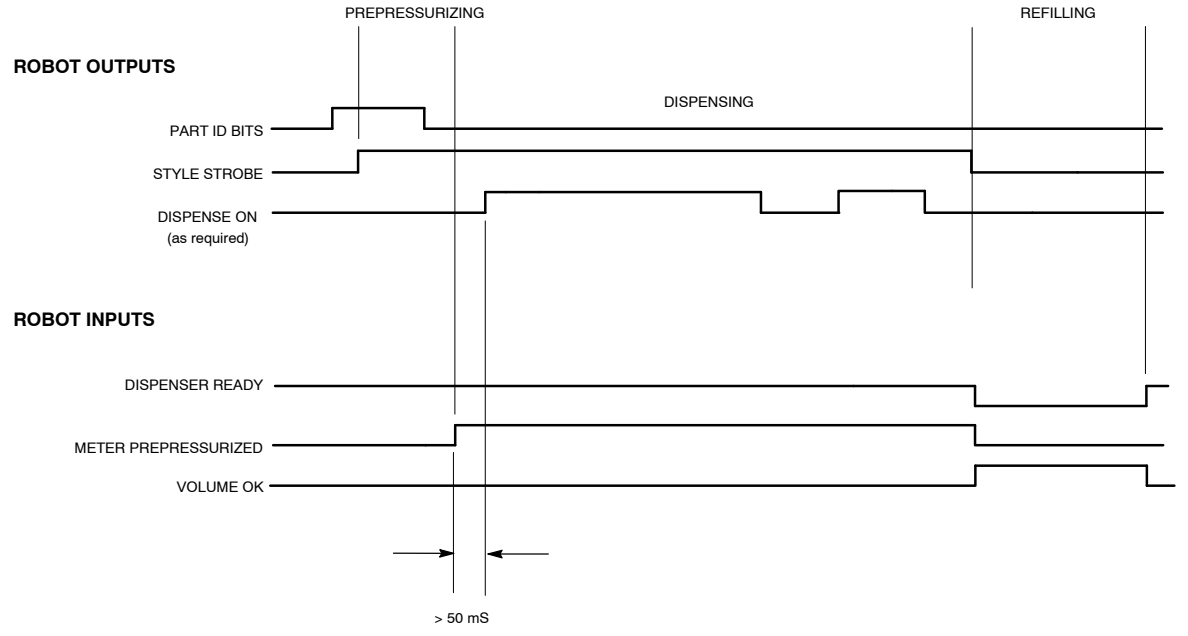
Table 2

Sequence	Description
1	Robot checks for Dispenser Ready input.
2	Robot raises desired Part ID output bits for part to be dispensed.
3	Robot raises Style Strobe output.
4	Robot waits for Meter Prepressurized input.
5	Part ID bits can dropped at this time.
6	Robot sends analog flow voltage and raises Dispense On output as required to apply desired material bead.
7	At end of part, robot drops Style Strobe output.
8	Robot checks for presence of Volume OK input to verify part volume was within the acceptable limits.



NOTE: ANALOG SIGNAL NOT SHOWN; TIMING IS NOT CRITICAL.

Figure 2 RS 4 Signal Timing Chart



NON-RS4 STYLE SIGNAL TIMING CHART
NOTE: ANALOG SIGNAL NOT SHOWN; TIMING IS NOT CRITICAL.

Figure 3 Non-RS 4 Signal Timing Chart

Fill the Material Circuit

WARNING

Make sure that that all material hose connections are tight before pressurizing the system.

1. Load a material drum into the bulk unloader(s).

NOTE:

- Operation of this system only requires enough material pressure to move the piston back during meter refilling.
- Use low air motor pressure to avoid rapid stroking as air is bled through the system.

2. Adjust the pump air motor pressure to 20-30 psi.
3. Pressurize the pump stand by touching either the changeover stand icon between the two unloaders or **SYSTEM SETUP**.
4. Touch **PUMP STAND** to access the pump control screen.
5. Touch **PRESSURIZE**.
6. Touch **SYSTEM SETUP**.
7. Touch the Nordson logo to access the hidden service menu.
8. Enter the password in the password field. Contact your local Nordson representative if necessary to obtain the password.
9. Touch **SDS MAINTENANCE**.
10. Touch **MANUAL** to enable control of the dispense system from this screen.
11. Place a container below the dispense gun to catch material.
12. Touch the links in the **VALVE CONTROL** box to open the dispense gun and refill the solenoid valves.

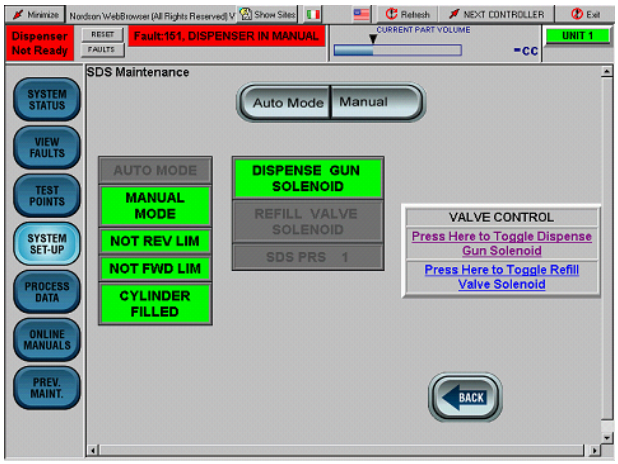
NOTE:

Close the refill valve first to prevent trapping pressure in the meter.

13. When a steady stream of material starts to flow from dispense gun, close the valves by touching the links.

NOTE:

The system automatically closes both valves when the **Auto Mode** button is touched.

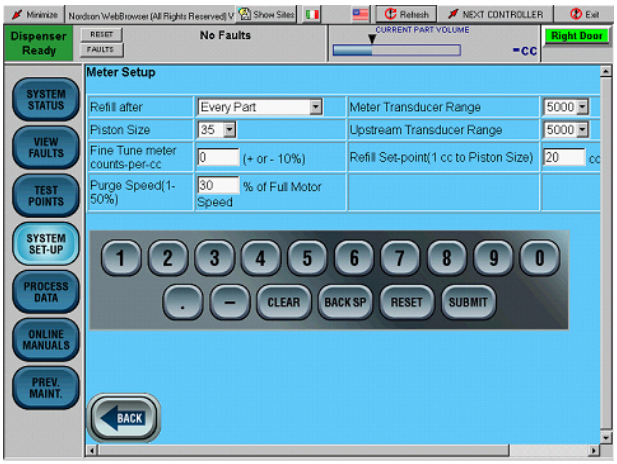


SDS Maintenance Screen

Meter Setup

Perform the following to setup the meter to be used with the PS3 controller.

1. Touch **SYSTEM SETUP**.
2. Touch the Nordson logo to access the hidden service menu.
3. Enter the password in the password field. Contact your local Nordson representative if necessary to obtain the password.
4. Touch **METER SETUP**. The Meter Fault Setup screen appears.



Meter Fault Setup Screen

Refill After Setpoint Reached

To allow more efficient use of the meter when dispensing small volumes, the controller can be set to only refill after a setpoint is reached.

1. Touch the drop down box in the **Refill after** field.
2. Set the box to After setpoint is reached.
3. Touch **SUBMIT** to save changes.

The meter will only be refilled after the value entered in the **Refill Setpoint** field is accumulated.

Piston Size

This value must be set to match the meter being controlled to ensure accurate volume reporting.

Fine Tune Meter Counts

This field allows the encoder input to be precisely adjusted in volume-critical applications. Use an accurate scale to weigh dispensed shots of material and compare the dispensed volume using specific gravity with the reported volume.

Purge Speed

This value should be reduced as necessary to prevent over pressurizing the meter during manual or robot purges when high-viscosity materials are dispensed.

Transducer Ranges

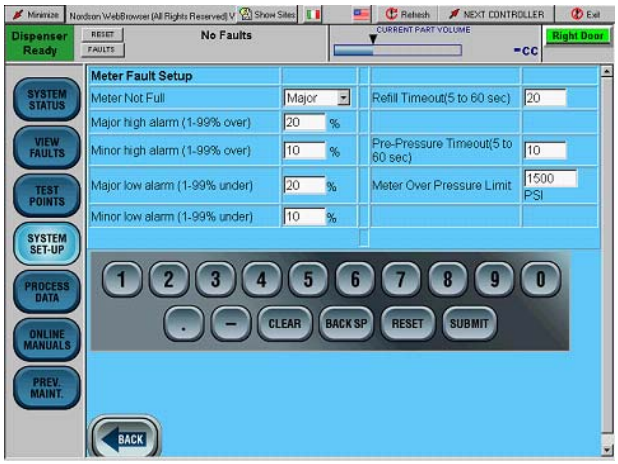
These fields must be set to match the range of the transducer used to ensure accurate pressure reporting.

NOTE:
The SDS systems do not typically use an upstream transducer.

Meter Fault Setup

Perform the following to setup the meter that is being used with the PS3 controller.

1. Touch **SYSTEM SETUP**.
2. Touch the Nordson logo to access the hidden service menu.
3. Enter the password in the password field. Contact your local Nordson representative if necessary to obtain the password.
4. Touch **METER FAULTS**. The Meter Fault Setup screen appears.



Meter Fault Setup Screen

Major / Minor High Alarms

The values entered in these fields define the percentage of target volume that can be dispensed above the target value before a major fault (dispenser ready forced low) or a minor fault (dispenser ready not affected) occurs.

Major / Minor Low Alarms

The values entered in these fields define the percentage of the target volume that can be dispensed below the target value before a major fault (dispenser ready forced low) or a minor fault (dispenser ready not affected) occurs

Refill Timeout

This value sets the time for the meter to be refilled after a part cycle before a major fault is set. This fault automatically resets when the piston target disk reaches the refill proximity switch.

Pre-Pressure Timeout

This value sets the time for the meter to reach the pre-pressure setpoint at the start of the part cycle before a major fault is set.

Meter Overpressure Limit

This value sets the pressure limit to stop the servomotor and post a major fault.

System Setup

Manual Operation

Use this screen to manually operate the meter. The system must be placed in **MANUAL** mode before the various buttons will function.

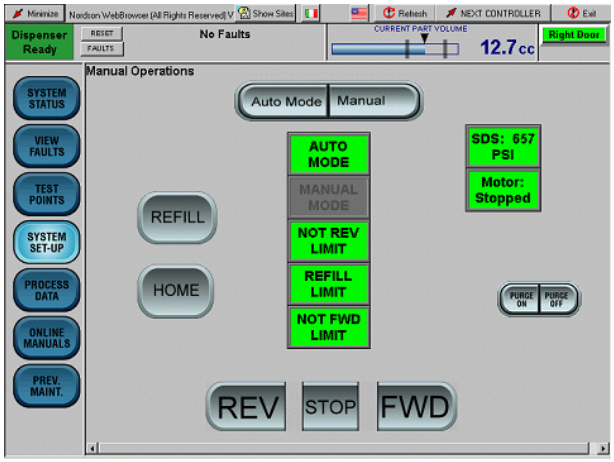
NOTE:
Depending on the application software, it may be necessary to raise the input **Over Purge Bucket** to execute manual and automatic purging.

To purge the meter, place the controller in **MANUAL MODE** and touch **PURGE ON**. The meter will start to dispense at a settable rate until **PURGE OFF** button is touched or until the meter dispenses its entire volume.

If desired, touch **FWD** or **REV** to jog the motor at 5 percent speed.

NOTE:
The dispense gun will open whenever **FWD** is touched to avoid over pressurizing the system.

Touching either **REFILL** or **AUTO MODE** causes the meter to refill. Touching **HOME** causes the ballscrew to move to its park position without refilling the cylinder.



Manual Operation Screen

Troubleshooting

Problem	Possible Cause	Corrective Action
1. Meter does not dispense	Major fault	Access the VIEW FAULTS screen to determine cause of fault condition.
	Controller in Manual Mode	Set PCI controller to the AUTO mode.
	No air to meter solenoids	Check supply air to the gun and refill meter solenoids. Make sure that the regulator is set to at least 70 psi.
	Robot signals not in proper sequence	See the IO timing charts (Figures 3 and 4) for proper robot IO sequence.
Problem	**Possible Cause**	**Corrective Action**
2. Meter does not refill	Low unloader pressure	Check the air pressure to the bulk unloaders. Make sure that there is enough air pressure to refill the meter cylinders.
	No air to meter solenoids	Check supply air to the gun and refill meter solenoids. Make sure that the regulator is set to at least 70 psi.
	Clogged refill valve(s)	Remove the refill valve and either clean or replace the refill valve cartridge.
	Refill proximity switch not within limits.	Make sure that the gap between the refill proximity switch and the piston target disk does not exceed 0.030 in. and that the alignment is correct. Adjust the proximity switch if necessary.
Problem	**Possible Cause**	**Corrective Action**
3. Bead deposition "wiggles"	Nozzle too high above work piece	Lower the nozzle. Refer to the robot controller manual.
	Material speed through nozzle too low	Increase the bead size. Refer to *Startup* in the *Operation* section.
	Nozzle not large enough	Install a larger nozzle. Contact your Nordson Corporation representative for part numbers.
4. Unexpected bead-size change	Nozzle partially blocked	Remove nozzle; clean or replace.
	Material exceeded shelf life	Use fresh material.

Notes

CP Gun Addendum

Section

Installation

Configure the Robot Controller

Use the following data to configure the robot controller analog signals.

Analog #1

See Figure 1. Configure your robot controller to vary the analog #1 (or tool speed) signal from 0 to 10 Vdc over the full range of robot speed.

1. Determine the highest and lowest robot speeds to be used in production.
2. Configure the robot controller to output an analog #1 signal of +10 Vdc when the robot is moving at, or slightly above maximum speed.
3. Configure the robot controller to output the analog #1 signal of 0 Vdc when the robot is stationary.

NOTE:

Figure 1 presents an example of the approximate relationship between robot speed and analog #1 voltage as a guide for the operator. A robot speed of 80% corresponds to 8 Vdc. A robot speed of 40% corresponds to 4 Vdc.

Analog #2

If the air swirl option is used, a second analog signal from the robot passes through the controller to a proportioning air regulator. The proportioning air regulator controls the amount of swirl air flowing to the nozzle.

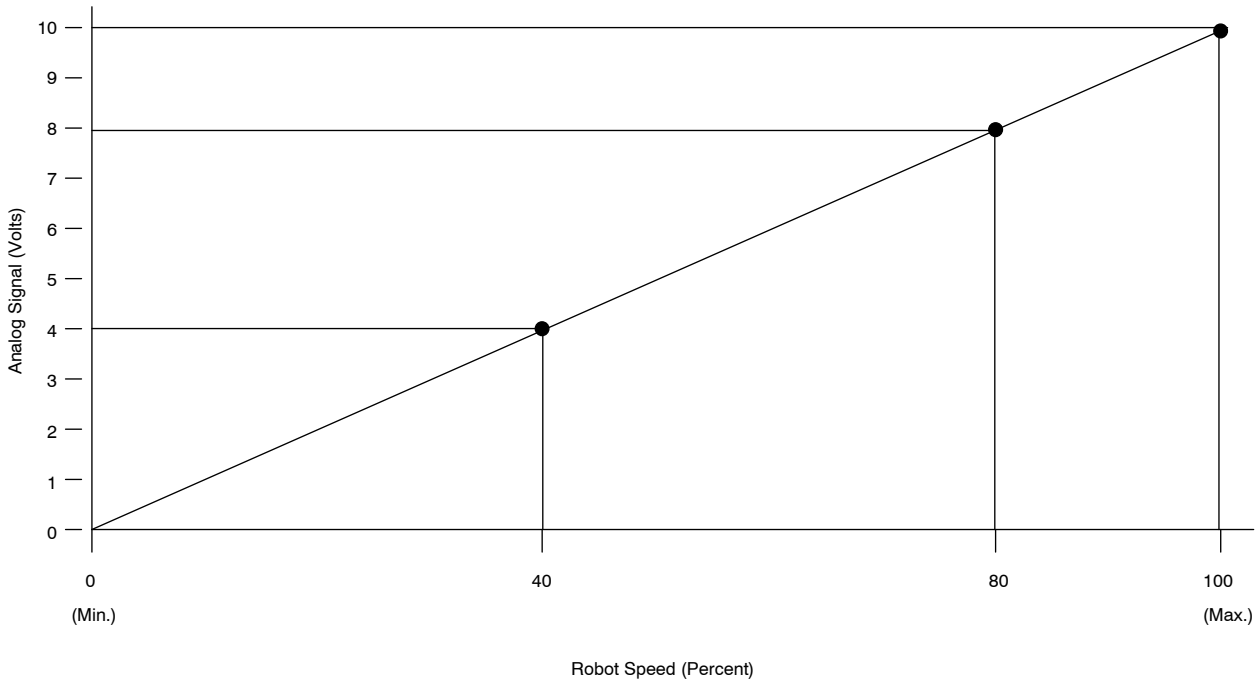


Figure 1 Relationship between Analog Signal #1 and Robot Speed

Set Timing Sequence

There are two signal sequence configurations; RS4 and Non-RS4. Review the applicable paragraph for the desired signal sequence.

RS4 Signal Sequence

Refer to Table 1 and see Figure 2 for a description of an RS4 signal sequence.

Non-RS4 Signal Sequence

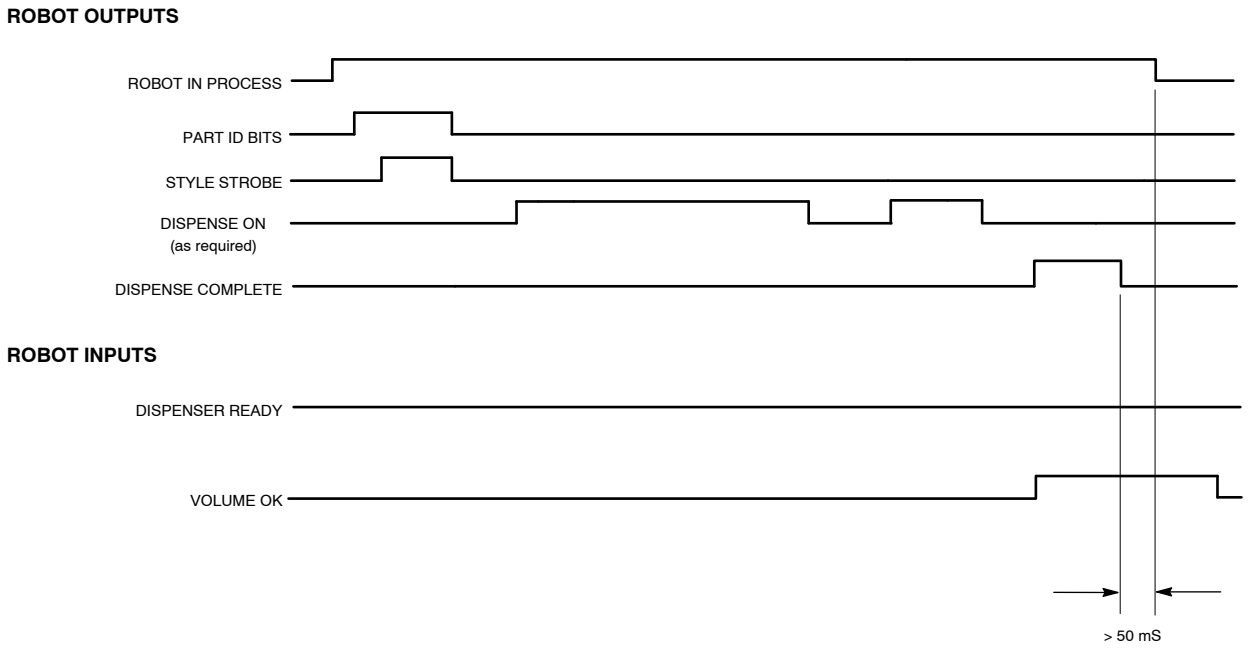
Refer to Table 2 and see Figure 3 for a description of a Non-RS4 signal sequence.

Table 1

Sequence	Description
1	Robot checks for Dispenser Ready input.
2	Robot raises Robot In Process output.
3	Robot raises desired Part ID output bits for part to be dispensed.
4	Robot pulses Style Strobe output. Pulse must be at least 100mS long.
5	Part ID bits are dropped at this time.
6	Robot sends analog flow voltage and raises Dispense On output as required to apply desired material bead.
7	At end of part, robot pulses Dispense Complete output. Pulse must be at least 100 mS long.
8	Robot drops Robot In Process output.
9	Robot checks for presence of Volume OK input to verify part volume was within the acceptable limits.

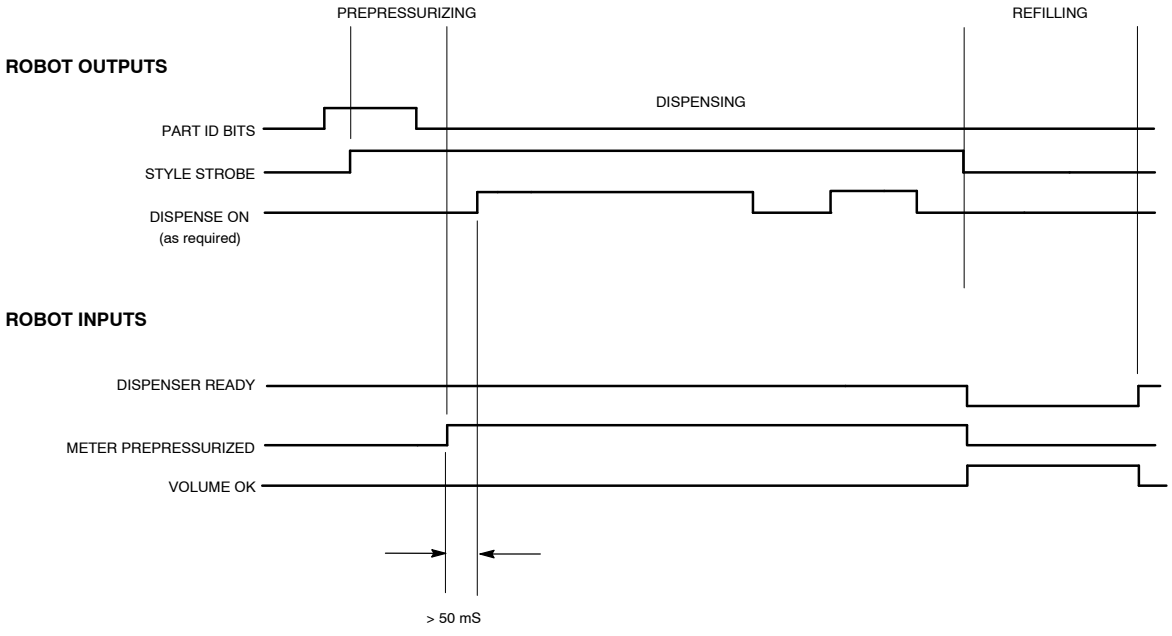
Table 2

Sequence	Description
1	Robot checks for Dispenser Ready input.
2	Robot raises desired Part ID output bits for part to be dispensed.
3	Robot raises Style Strobe output.
4	Part ID bits are dropped at this time.
5	Robot sends analog flow voltage and raises Dispense On output as required to apply desired material bead.
6	At end of part, robot drops Style Strobe output.
7	Robot checks for presence of Volume OK input to verify part volume was within the acceptable limits.



NOTE: ANALOG SIGNAL NOT SHOWN; TIMING IS NOT CRITICAL.

Figure 2 RS 4 Signal Timing Chart



NON-RS4 STYLE SIGNAL TIMING CHART
NOTE: ANALOG SIGNAL NOT SHOWN; TIMING IS NOT CRITICAL.

Figure 3 Non-RS 4 Signal Timing Chart

Operator Interface and Screens

CP Gun Screens

This section describes the CP Gun screens. Refer to the desired section for a description of these screens.

Touch the screen to select one of seven main menus (1):

SYSTEM STATUS	PROCESS DATA
VIEW FAULTS	ONLINE MANUAL
TEST POINTS	PREV. MAINT. (Preventive Maintenance)
SYSTEM SET-UP	

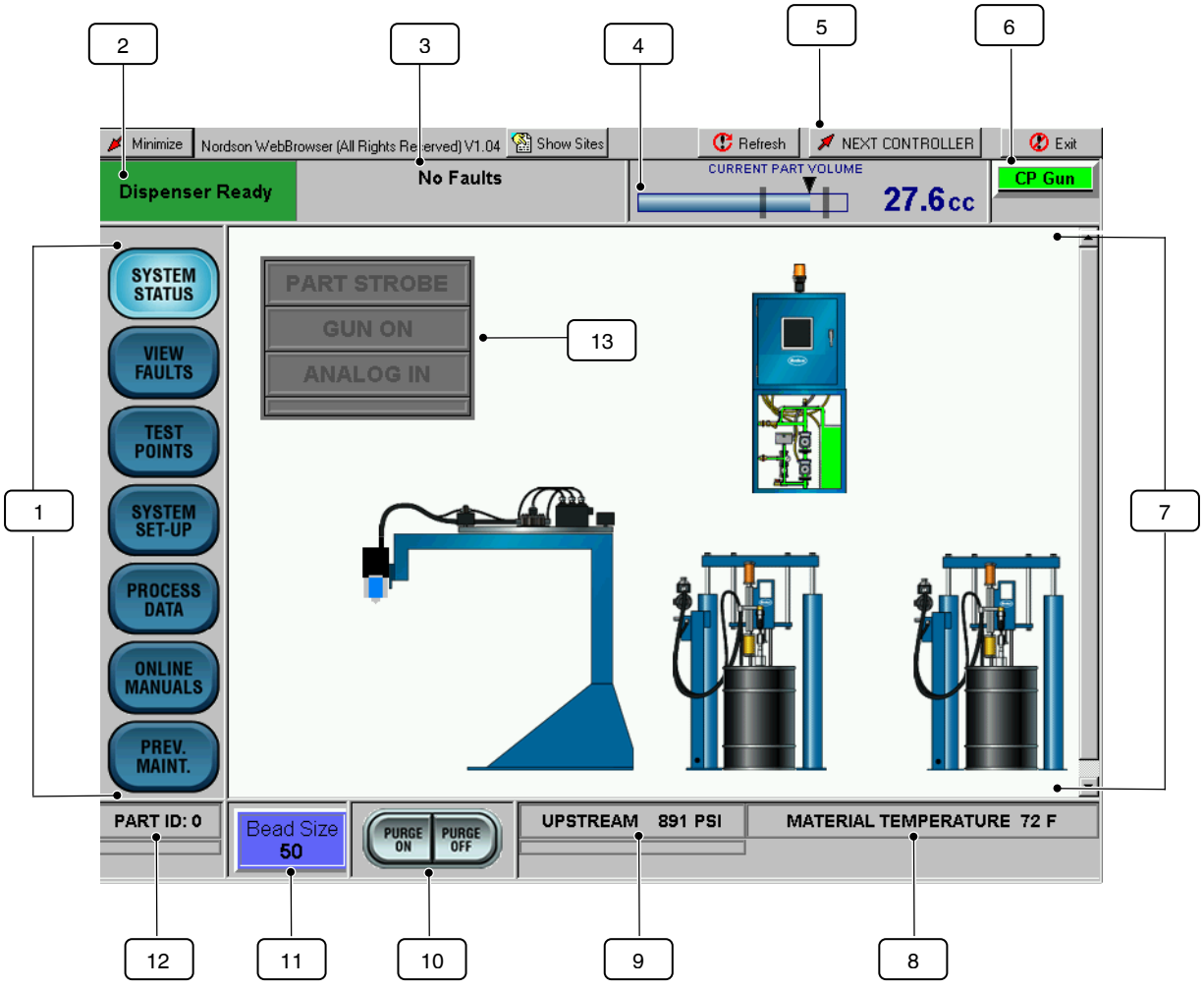
Refer to Table 3 for a description of the operator interface functions.

System Status

The **SYSTEM STATUS** menu is the default screen. It monitors material dispensing characteristics during production.

Touch a system component to view the

- system illustration which flashes when a fault condition occurs. To view the fault, touch the flashing part or touch the **VIEW FAULTS** button.
- status of **STYLE STROBE**, **GUN ON**, **ANALOG IN**, and **DISPENSE COMPLETE** signals.



CP Gun Operator Interface

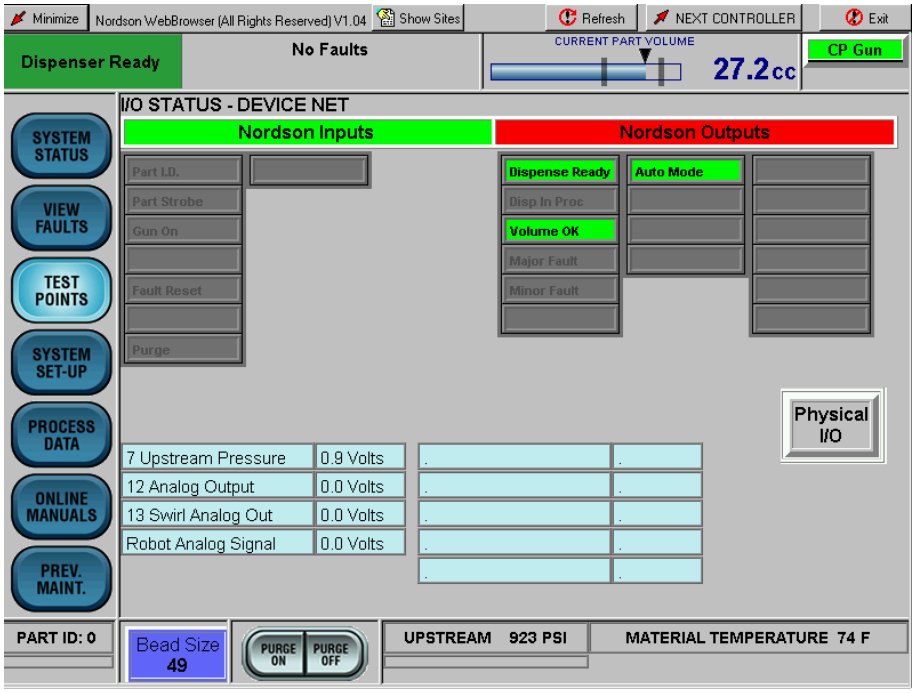
Table 3

Item	Description	Function
1	Menu Buttons	Set and view parameters of the application.
2	Dispenser field	Indicates the status of the dispenser: Ready or Not Ready.
3	Fault Indicator field	Displays fault messages.
4	**CURRENT PART VOLUME**	Visually indicates the percent of the job which is completed and the actual dispensed volume at the end of the part cycle.
5	**NEXT CONTROLLER**	Toggle between dispensing systems if using a Dual-PCI controller.
6	Label	User-defined label; indicates the current operator interface that is displayed on the screen. The user-defined label can be up to 10 charaters.
7	**SYSTEM STATUS**	Appears as the default screen; displays the system configuration.
8	**MATERIAL TEMP**	Indicates material temperature.
9	**PRESSURE**	Indicates system operating pressures.
10	**PURGE ON PURGE OFF**	Starts and stops the gun purge function.
11	**BEAD SIZE**	Displays bead size. Bead size is an arbitrary number between 1 and 99. Touch BEAD SIZE to increase or decrease bead size.
12	**PART I.D.**	Displays the current part I.D.
13	I/O Indicators	Displays robot signals—Non-RS4 I/O configuration shown. **DISPENSE COMPLETE** appears on RS4 I/O configuration.

Test Points

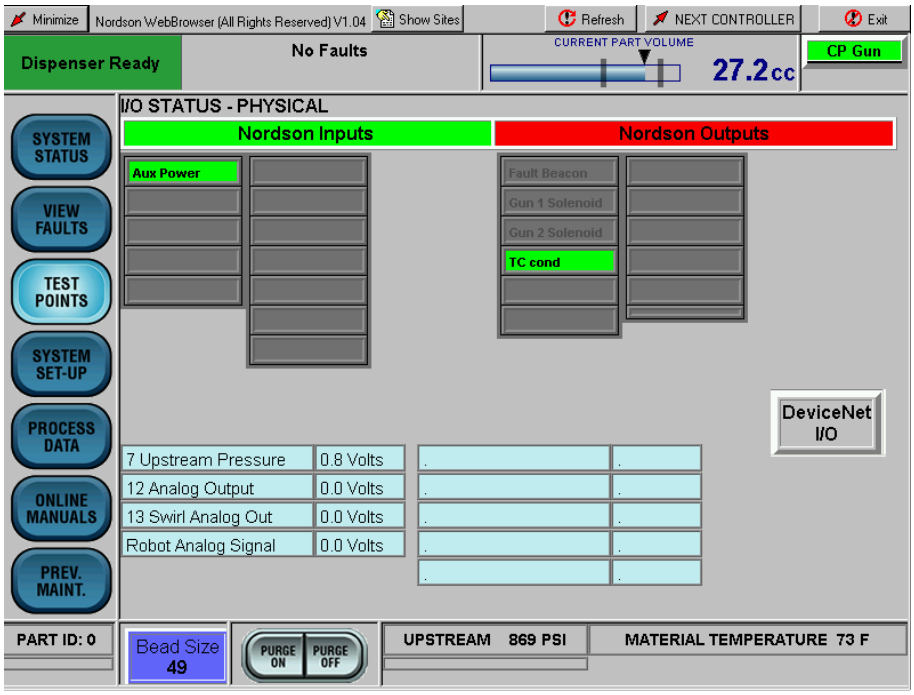
These menus are used to verify that the robot signals are being sent and received by the PCI controller.

Touch either **DeviceNet I/O** or **Physical I/O** to toggle between the screens.



Physical I/O Screen Screen

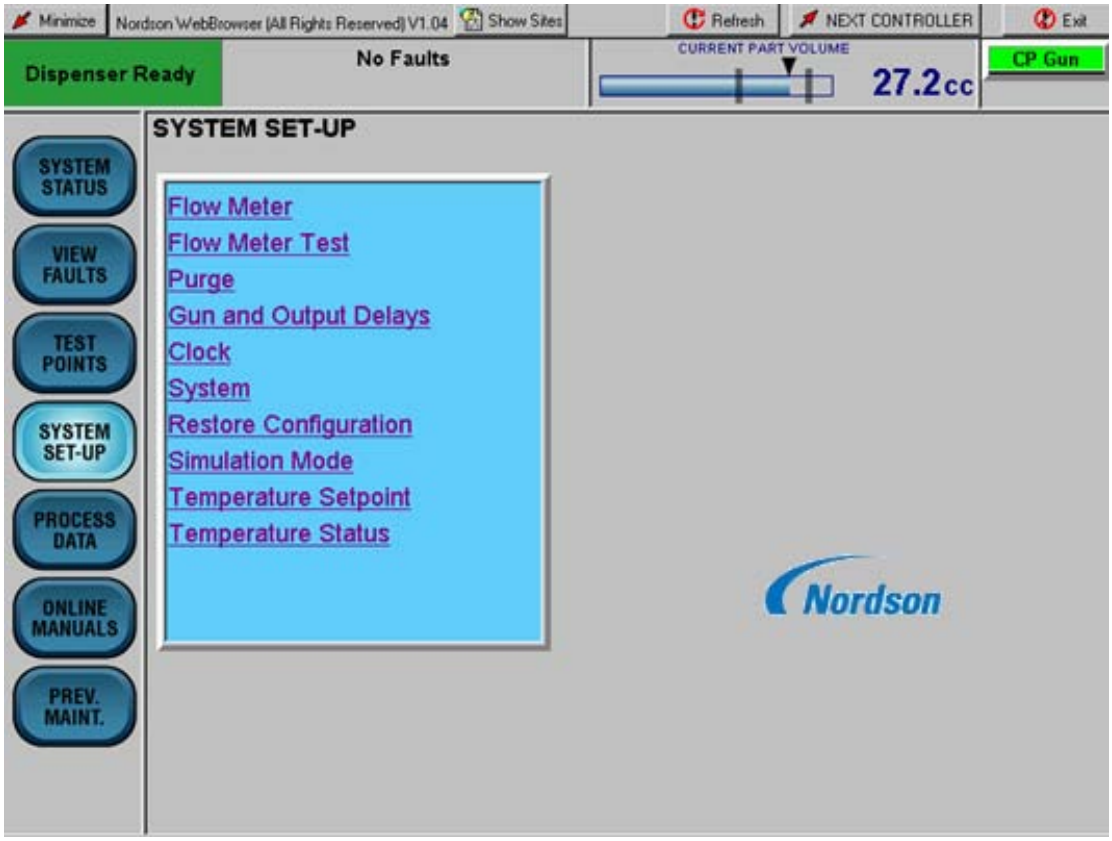
DeviceNet I/O Screen



Test Points Screen

System Set-Up

Use the **SYSTEM SET-UP** screen to configure the system parameters. The following paragraphs provide a description of each system parameter.

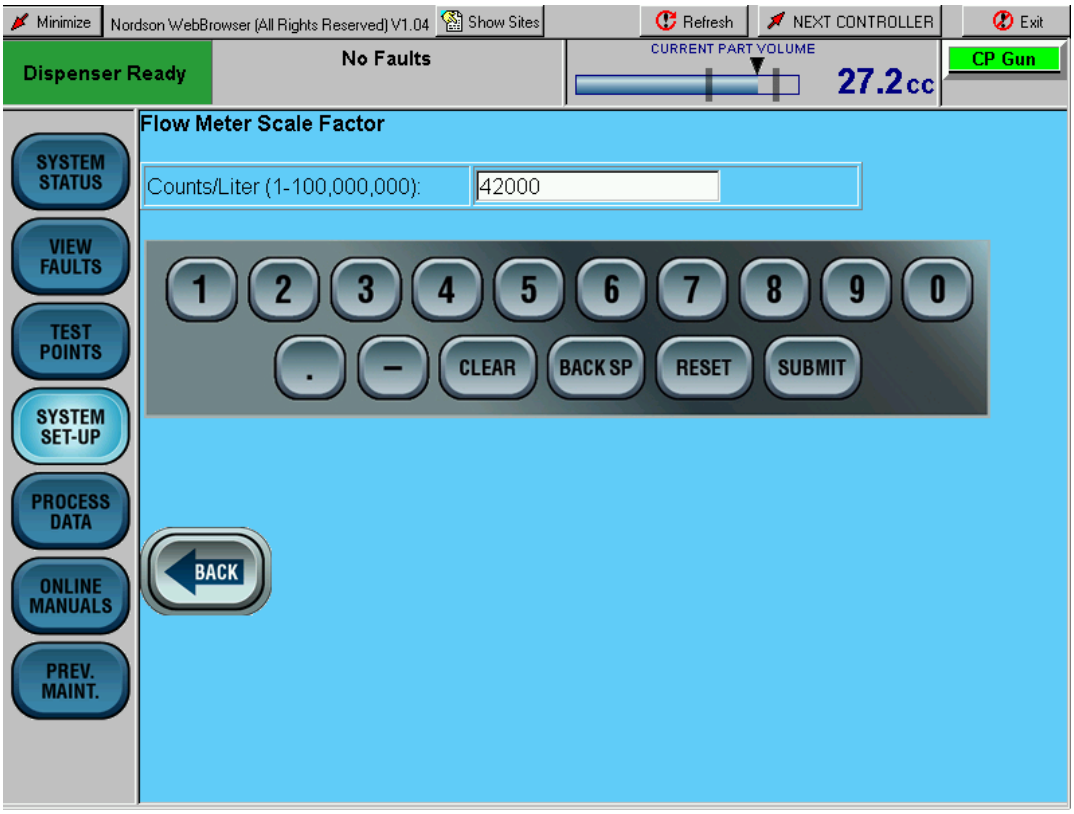


System Set-Up Screen

Flow Meter

Touch the screen keyboard to enter counts/liter from 1-100,000,000.

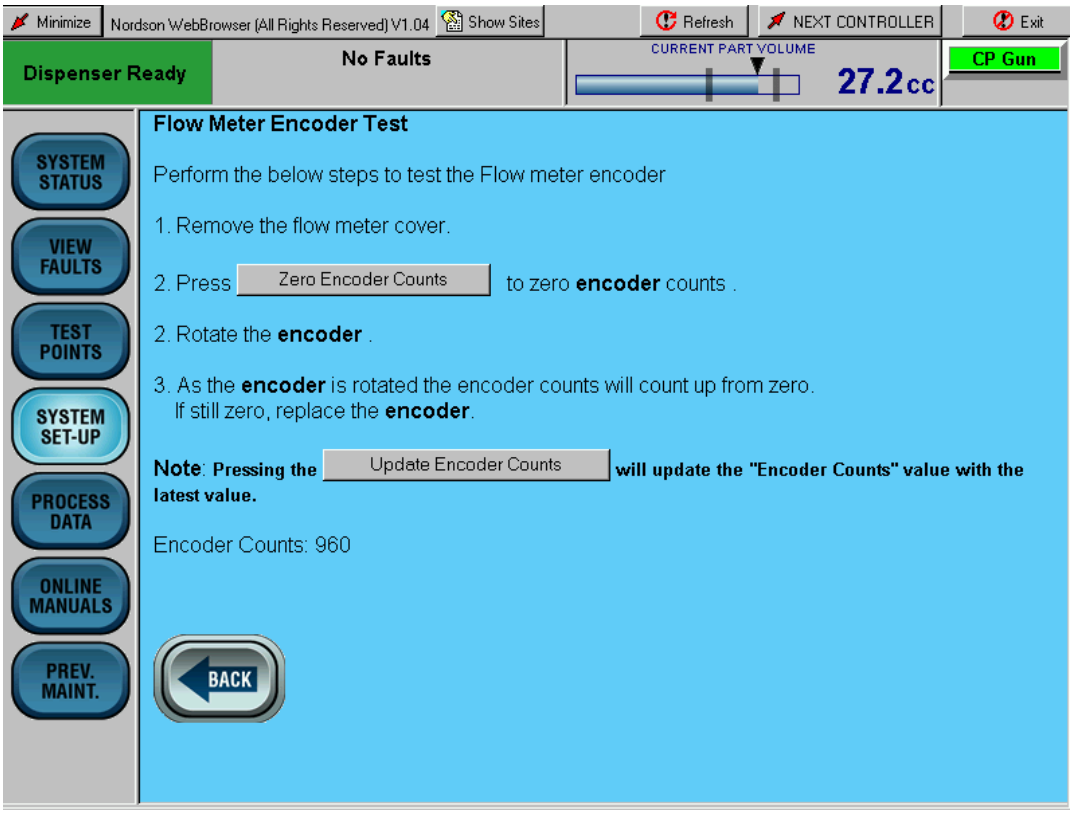
When a new flow meter is installed, enter its flow rate (or K-value) in counts/liter. The K-value is stamped on the side of the flow meter body.



Flow Meter Screen

Flow Meter Encoder Test

Follow the directions on the screen to test the flow meter encoder.

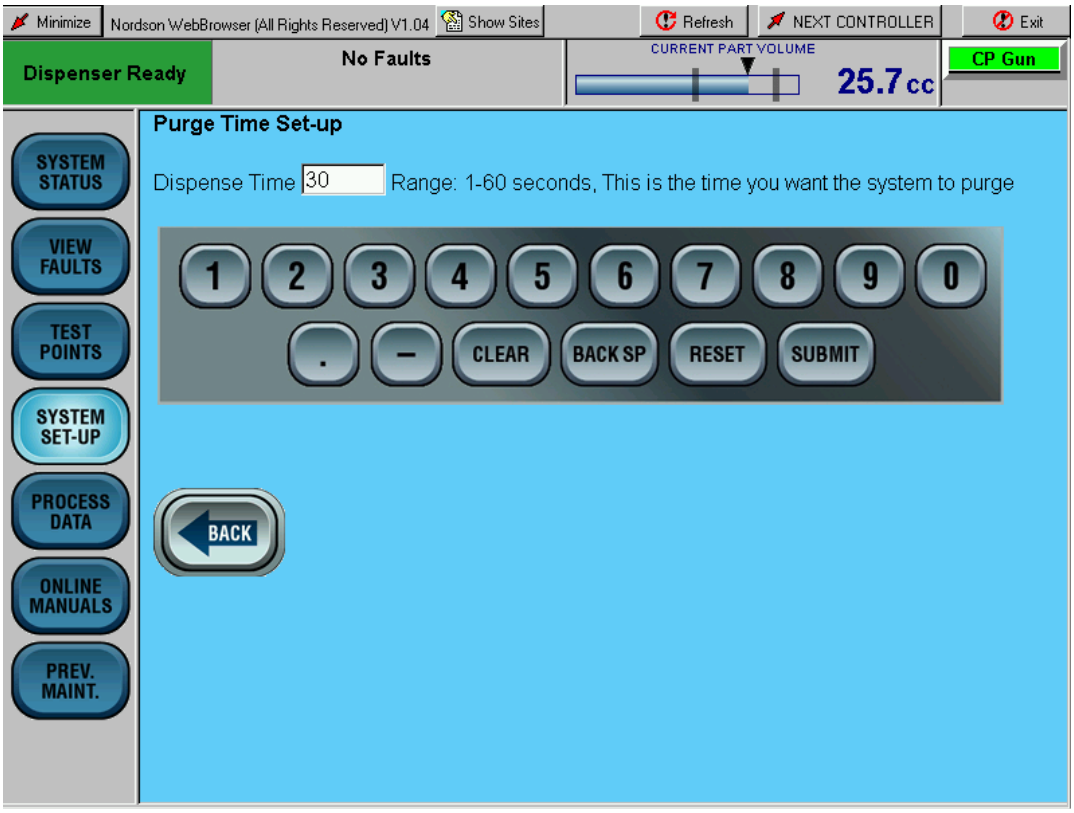


Flow Meter Encoder Test Screen

Purge Function

Purge determines how long the gun stays open each time the **PURGE ON** button is pressed.

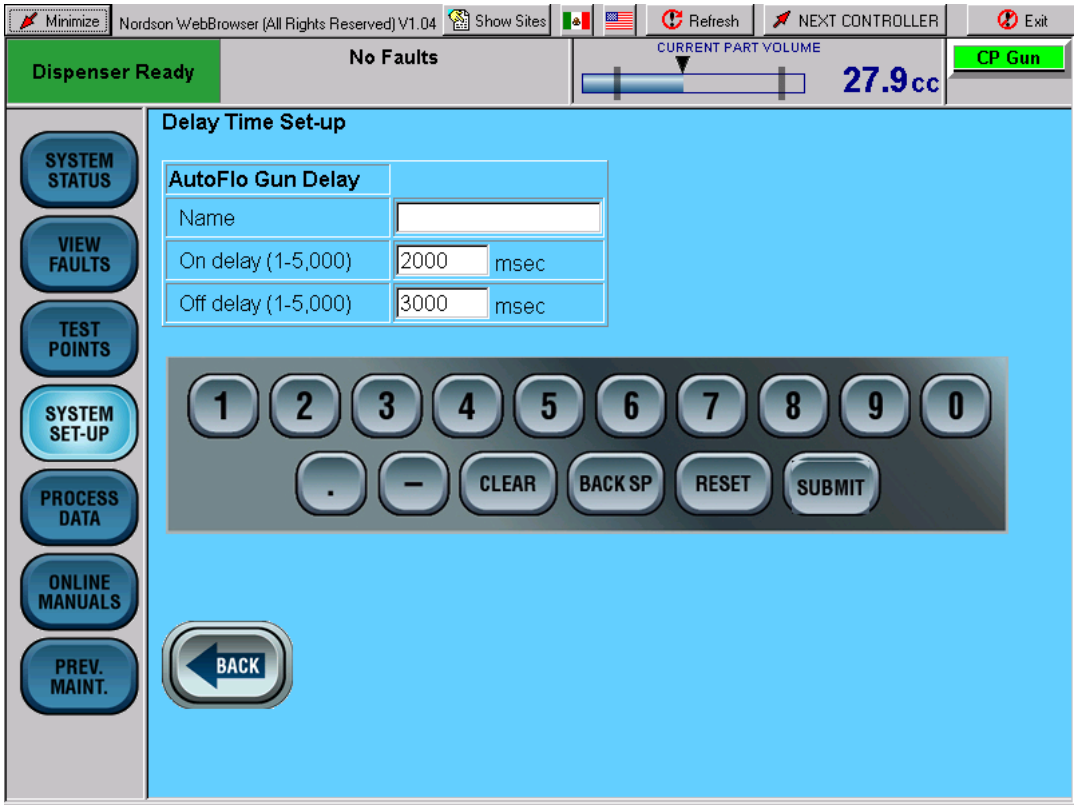
Touch the screen keyboard to enter a **Dispense Time** from 1-60 seconds.



Purge Screen

Gun and Output Delays

To optimize dispense bead start/stop times, Digital Output delays can be used to delay opening and closing the CP Gun Auto-Flo dispense valve.



Gun and Output Delays Screen

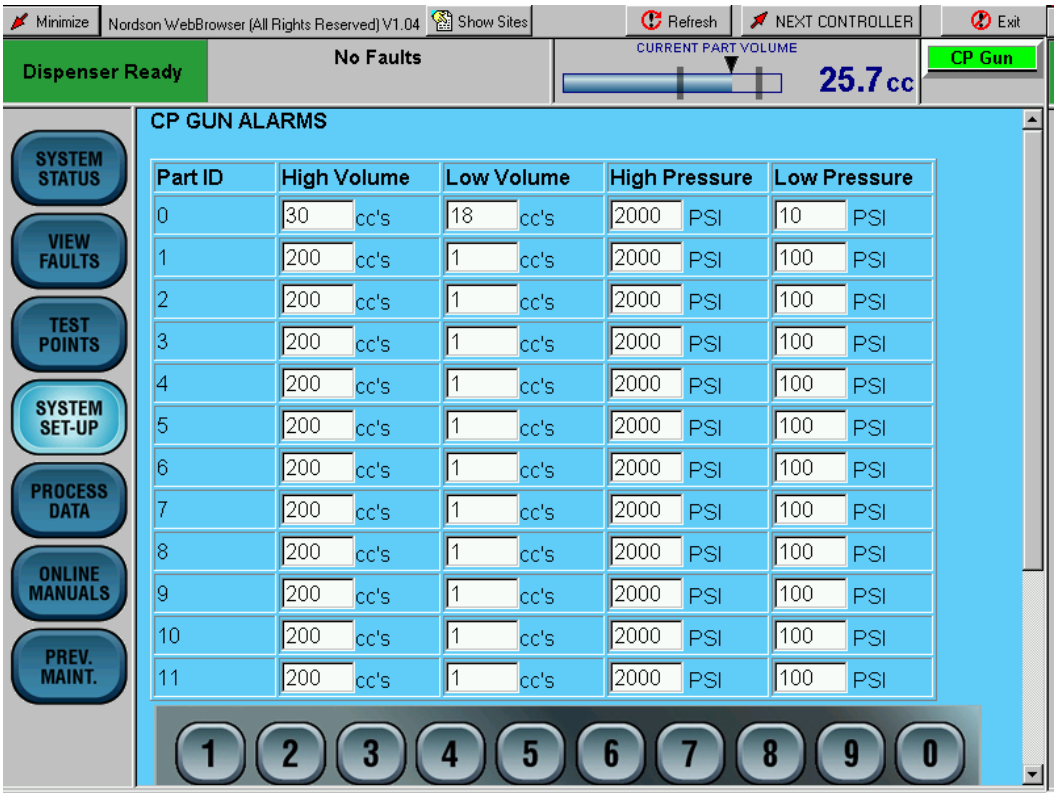
CP Gun Alarm Settings

The Alarm setup screen can only be accessed through the hidden Service Menu.

Alarm trip points for low and high part volume and material pressure are programmable by Part ID.

When the material pressure value falls outside of the programmable limits, a major fault appears on the **VIEW FAULTS** screen along with a Help message.

When dispensed volume is outside the programmable limits, a major fault appears at the end of the part cycle.



CP Gun Alarms Screen

Robot Interface/Communication DeviceNet Addendum

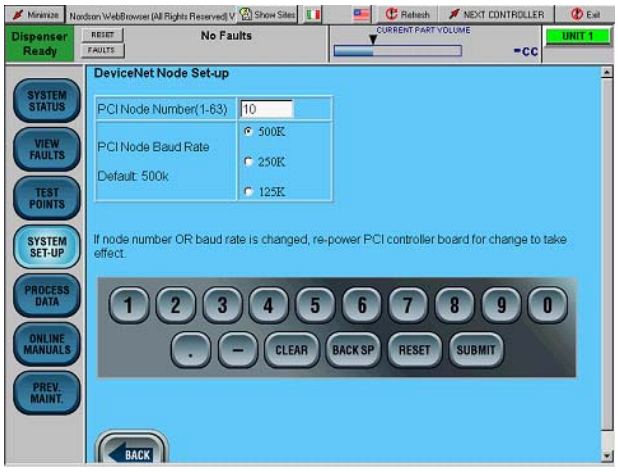
Section

Installation

Configure the Robot Communication

The following paragraphs provide procedures for configuring the robot communication DeviceNet.

1. Touch **SYSTEM SETUP**.
2. Touch the Nordson logo to access the hidden service menu.
3. Enter the password in the password field. Contact your local Nordson representative if necessary to obtain the password.
4. Touch **DEVICENET NODE**. The DeviceNet Node Set-up screen appears.
5. Use the keypad to enter the DeviceNet node address and baud rate. Make sure to set the address and baud rate for both units of a dual controller.
6. Touch **SUBMIT** to save the changes.
7. Cycle power to the controller for the changes to take effect.



DeviceNet Node Set-up Screen