Pro-Access DR
Aurora
Laundry Chemical Delivery System

Programming and Setup Guide

The DEMA® Aurora is a complete laundry chemical delivery system for commercial laundry applications. The Pro-Access DR supports programming and setup interface with up to eight Aurora laundry pump stands using a communication network.

Warnings

Installation of DEMA products must meet all applicable electrical codes and regulations established by national, city, county, parish, provincial or other agencies. It is possible that electrical codes and regulations require that a certified electrical contractor or engineer perform the electrical installation. For questions, contact a certified electrician.

All installations must conform to local plumbing codes and use approved backflow prevention devices. A pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other state that requires the use of a pressure indicating tee.

ALWAYS WEAR PROTECTIVE CLOTHING AND EYEWEAR WHEN WORKING WITH CHEMICAL PRODUCTS.

Installation

⚠️ **WARNING: INSTALLATION OF DEMA PRODUCTS MUST MEET ALL APPLICABLE ELECTRICAL CODES AND REGULATIONS ESTABLISHED BY NATIONAL, CITY, COUNTY, PARISH, PROVINCIAL OR OTHER AGENCIES. IT IS POSSIBLE THAT ELECTRICAL CODES AND REGULATIONS REQUIRE THAT A CERTIFIED ELECTRICAL CONTRACTOR OR ENGINEER PERFORM THE ELECTRICAL INSTALLATION. FOR QUESTIONS, CONTACT A CERTIFIED ELECTRICIAN.**

1. Determine a suitable location to mount the Pro-Access DR:
   a. Within length of communication cable
   b. Avoid wet areas
   c. Easy access for interfacing the buttons and display
   d. Can be mounted on DIN Rail or independent
2. Mount the mounting bracket on the wall or on the DIN rail.
3. Mount the Pro-Access DR by sliding it onto the mounting bracket. The Pro-Access DR will slide down from the top of the mounting bracket.
4. Connect communication cable to the bottom edge of the Pro-Access DR.
5. Connect the other end of communication cable to the Aurora pump stand control module.
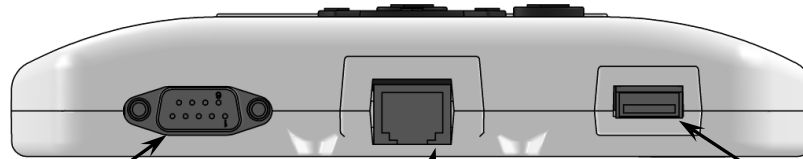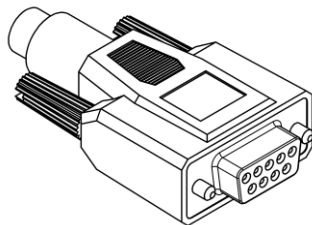

DB-9 Port – Use DB-9 Female Cable to connect to Aurora Pump Stand

Ethernet Port – For future use to connect Aurora to local network or WiFi Router

USB Port – Used to upgrade software for the Aurora Pro-Access DR and Aurora Pump Stand

DB-9 Female Connector

The wiring diagram below illustrates the two different DB-9 cables used for the communication. The DB-9 female is used for Pro-Access DR and linking Aurora pump stands. Up to 8 Aurora pump stands can be linked to the Pro-Access DR. The DB-9 male is used for linking Pro-Connect and Pro-Select to Aurora pump stands.

Pro-Select

Pro-Connect (STU)

DB-9 Male Cable

Aurora Pump Stand

Pro-Access DR

DB-9 Female Cable
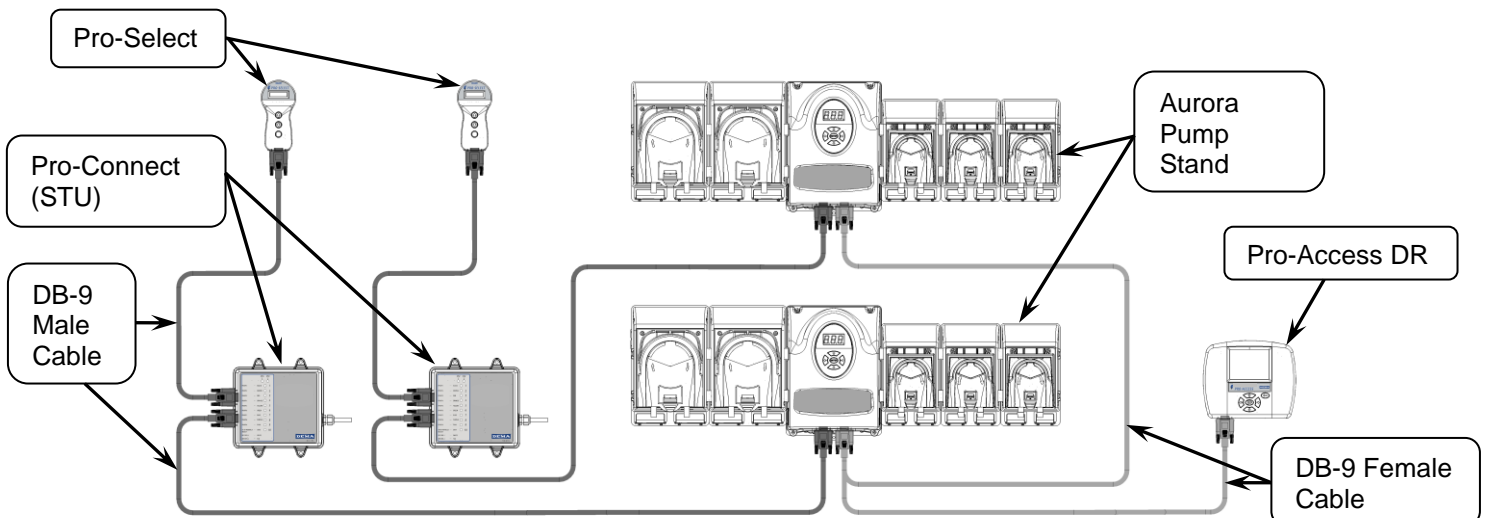
Programming & Setup

The Aurora can be programmed on board using the Pro-Access DR or with a Smart Phone/Device using the DEMA Aurora App.

Bluetooth Technology and Aurora App
The Aurora can be programmed using the Aurora App. Simply connect to the Pro-Access DR via Bluetooth. The connection is made by searching for Auroras within the App. The App has been developed to support IOS, Android operating system and Windows 10 (PC). Download the App at:
- IOS – I Tunes
- Android – Google Store

Programming with Pro-Access DR
The Pro-Access DR has six buttons and the graphical LCD display that allows easy programming. The button arrangement consist of an enter button, navigational and selection arrow buttons and a return/back button.
- Enter button – Use this to enter the various programming screens and to save value or setting changes
- Navigational arrow buttons – Use these to navigate through the programming screens and selecting values or setting opportunities
- Return/Back button – Use this to return to previous screens
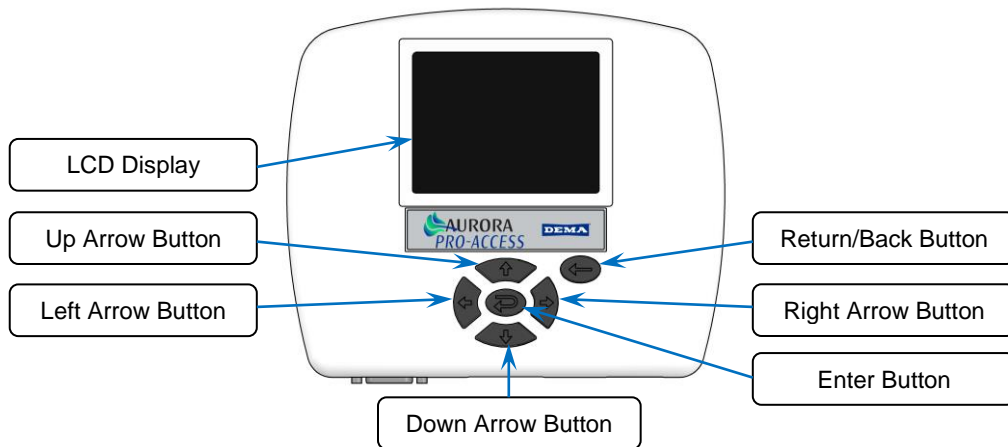
Note: Data Management programming and setup is only available using the Aurora App

Idle Screen – Status of any Aurora pump stands that are connected to the Pro-Access DR. This includes current formula and any active chemical pumps or flush. Each Pro-Access DR will support up to 8 Aurora pump stands.
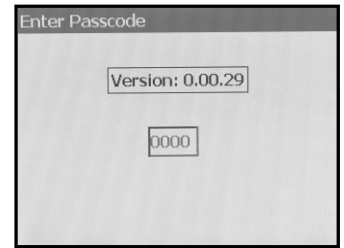
Press Enter to access programming.
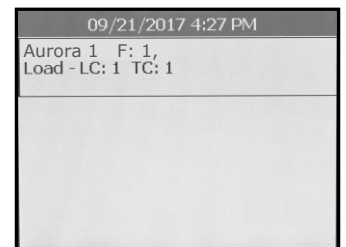
Language Screen – Select desired language and press Enter.
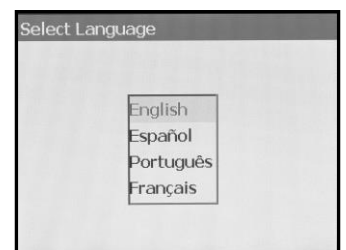
**Passcode Screen** – Enter the passcode and press Enter.

Select Pump Stand Screen – The various Aurora pump stands will be listed on the left side. Highlight the desired pump stand and press Enter. Pro-Access DR Configuration, Find Pump Stands, and Resort and Clear the list can be accessed by highlighting and pressing Enter.
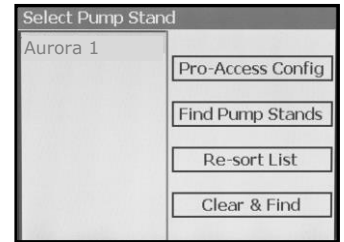
Aurora Pump Stand – Allows full programming and setup for the Aurora Pump Stand. The menu includes:

- Formula Programming
- Pump Stand Configuration
- Pump Calibration
- Prime Pump
- Set Sequence (Drain mode)
- Flex Trigger assignment
- Trigger Assignment

- Flush Pump Assignment
- Copy Configuration
- Clear Load Counts
- Test Formulas
- Set Factory Default
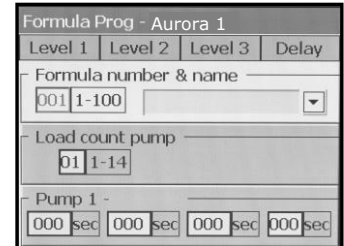
Formula Programming – Program and setup for each formula. Assign formula number and formula name, load count pump. Program chemical pump delivery amounts for each pump. The pump run times can be in seconds, ounces or milliliters. Each pump can be programmed with 3 different amounts per formula (levels). Additionally, each pump can be programmed with a delay.
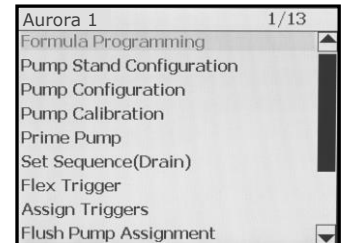
Pump Stand Configuration – Program and setup for the following:

- Operation Mode
- Flush Time
- Units/Capacity
- Name/Install Date
- Default Formula

- Bleach Pump
- Trigger Time
- Auto Formula Select
- AFS Calibration
- Swap STUs
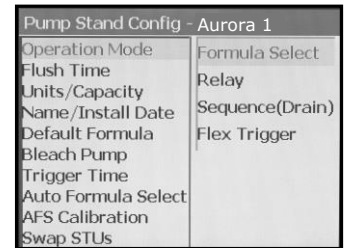
Operation Mode – 4 Different operation modes are available.
Formula Select – Various formulas are setup and each chemical pump is triggered for chemical. Pump run times are programmed at Aurora based time or volume.
Relay – All pumps run "one to one" with the chemical supply trigger from the laundry machine. Pump run times are programmed at laundry machine based on time.
Sequence (Drain) – All pumps run from Trigger Signal 1 and/or 2. The electrical signal to drain valve on the machine that is active for each fill is used to call for chemicals. Simply program which pumps to run for each laundry machine fill during the wash cycle.
Flex Trigger – Each pump can be programmed to run with each trigger. This includes running a pump two different times from two different triggers.
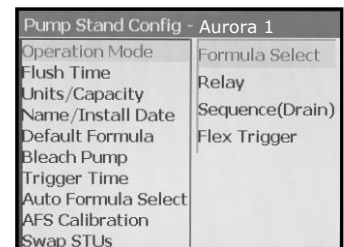
Flush Time – Program the flush valve run times. Two flushes are available. If a value above zero is entered the flush is automatically active and will flush when a pump runs. The flush will continue to run for the amount of time that has been programmed. If a value above zero is entered for flush 2, then a prompt to assign pumps to each flush will occur.
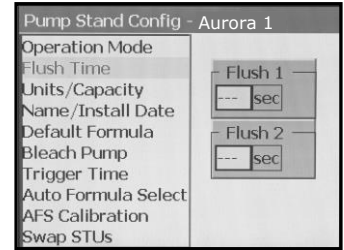

Units/Capacity – Program the desired unit for chemical amounts. The choices are seconds, ounces and milliliters. If ounces are milliliters are selected, pump calibration will be required for each pump. Additionally, the machine capacity can be entered. The machine capacity is used for reporting needs where calculations concerning pounds or kilograms are desired.
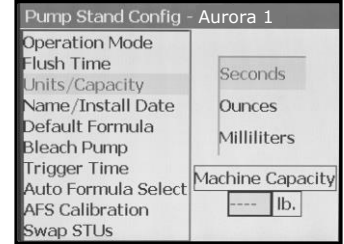

Name/Install Date – Program the name of the pump stand and the date that it was installed.
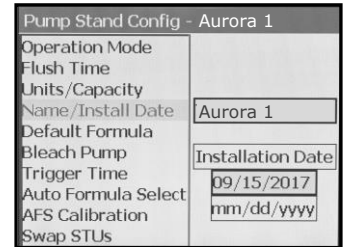

Default Formula – The Default Formula is a formula that is prompted every time the load count pump is triggered. This will leave the Aurora setting at the desired Default Formula at the end of each wash cycle. The Default Formula is often set up as a color safe formula in the even the end user forgets to change the formula when starting the next wash cycle. At least one formula must have pump run values to be able to setup the Default Formula. If there is not at least one formula setup, then the message "No Active Formulas" will be displayed.
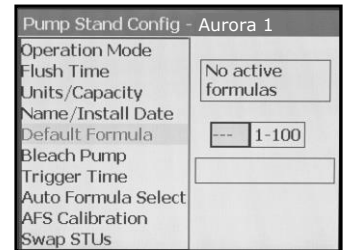
Bleach Pump – Assign any of the pumps to be the bleach pump. The bleach pump will not simultaneously with any other pump. If the bleach pump is triggered simultaneously with other pumps, either the bleach pump or the other pump will run first, once completed, the other pump will run.
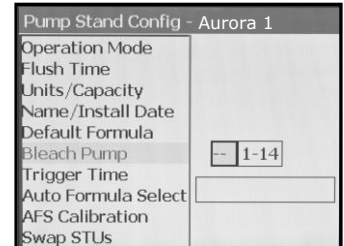
Trigger Time – This is the amount of time that the chemical supply trigger signal is active to validate and run a pump. The default setting is 5 seconds. It can be set from 1 – 90 seconds.
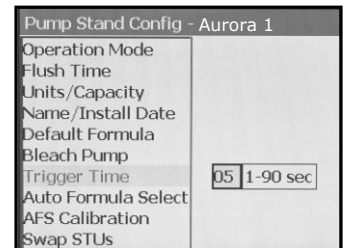
Auto Formula Select – This allows the formulas to be selected based on a trigger signal that is received from the laundry machine. The following list outlines the setup of this feature: The 10th trigger input (gray wire) on the Aurora Connect is used for this purpose. A trigger source that can be programmed at the laundry machine will be required. The timing of this trigger source is what determines which formula is selected by the Pump Driver Module (84.439.1). To determine the amount of signal time for any formula simply calculate as follows:
- Multiply the formula number by 2 then subtract 1
- Example: Formula 7 needs a trigger signal equal to 13 seconds. (7 X 2 = 14 then 14-1 = 13). A 13 second trigger signal to STU input number 8 (gray and white/tan wires) will change the Aurora to formula 7.

When Auto Formula Select is set to off, input 10 (gray wire) is available as a trigger input. (See I-1227)

AFS Calibration – The AFS can be calibrated to select the correct formulas when the timing of the trigger signal from the machine chooses the incorrect formula. Immediately after the AFS trigger signal, simply enter the expected formula number and the actual formula that was selected. The system will then calculate and make an adjustment in how it reads the AFS trigger signal. The correction will adjust other formulas both lower and higher proportionally.

Swap STUs – The Aurora can accommodate 2 Pro-Connect DR's to support a greater number of pumps. The Pro-Connects are automatically assigned STU 1 and STU 2. The assignment can be found by looking at the front of the Pro-Connect DR front face and the assignment is shown at the top. The Swap STUs function will flip the assignment.

Pump Configuration – Program a chemical name for each pump. Additionally, the speed of the pump can be adjusted from 25-100% of the rated speed of the pump motors. Typically Aurora pump stands are equipped with 105RPM pump motors (max speed).

Pump Calibration – Calibrate pumps for ounces or milliliters programming. The Aurora will accurately calculate pump calibration rates automatically. With the desired pump number highlighted press Enter and the pump will begin to pump. Simply catch the media coming out of the pump with a graduated cylinder and allow to run long enough to catch at least 8 ounces or 250mL. Then press Enter to stop pump and a prompt will come up to enter the amount that was caught. Enter the amount and the Aurora will calculate the pump rate. Note: Pump rates can be entered manually by highlighting the oz/min or ml/min column and pressing Enter.

Prime Pump – Select the desired pump and press Enter. Press Enter again to stop pump.

Sequence (Drain) – Program the Aurora to deliver multiple chemicals at various points through a wash cycle from a single trigger source. Often the drain valve is used to provide the trigger. During each fill of the laundry machine the drain valve is energized with an electrical signal. The Aurora can be programmed to deliver chemical at any of the fills (energized drain valve) during the wash cycle. Simply choose the formula, the S1-14 on the left side are the sequence events (fills on the machine). The 1-14 above are the pumps. Highlight the ovals and press Enter on desired sequence/pump ovals. Note: Use the "F" at the end of the pump numbers to program the final event (final fill of the wash cycle). This will reset the events so that the next wash cycle will start with sequence event 1.

Flex Trigger – Program the Aurora to deliver any chemical with any trigger signal. Select the desired formula. The 1-14 above are the pumps, the T1-20 are the trigger signal inputs. Highlight and press Enter on the ovals for the desired chemical deliveries.

Assign Triggers – The Aurora by default is setup to use trigger signal 1 to operate pump 1. This is true for all triggers and respective pumps. Assign Triggers will allow each pump to be assigned to a different trigger. Example: Pump 2 could be assigned to operate from trigger 1 along with pump 1.

Pump	Product	Trigger	
1		01	1-20
2		02	1-20
3		03	1-20
4		04	1-20
5	——	05	1-20
6	——	06	1-20
7	——	07	1-20

Assign Triggers - Aurora 1

Flush Pump Assignment – When using more than one flush valve, pumps need to be assigned to operate with either Flush 1 or Flush 2. The Flush Pump Assignment will program in the assigned flush.

Pump	Product	Flush
1		1
2		1
3	Flush 2 not enabled	
4		1
5	——	1
6	——	1
7	——	1

Flush Pump Assign - Aurora 1

Copy Configuration – The Pro-Access DR can be connected to a network of 8 Aurora pump stands. This function allows the system to copy programming from one Aurora pump stand to another.

Copy Configuration - Aurora 1
From (source) -> To (destination)
Aurora 1 / Aurora 1

Clear Load Counts – This function will clear the load counts on all Aurora pump stands.

Clear Load Counts - Aurora 1
Yes (clear)
No (exit)
(All dispenser load counts to be cleared)

Test Formulas – Test the output of any pump in any formula on any Aurora pump stand. This is used to confirm the desired amount of chemical is being delivered to the laundry machine.

Test Formulas - Aurora 1
Formula 001 1-100
Pump 01 1-14
No active formulas
Start Test

Set Factory Defaults – This will reset the Aurora to factory settings. Warning – it will clear out and delete all programming.

Set Factory Default - Aurora 1
Yes (restore)
No (exit)

Pro-Access Configuration – This allows configuration of the Pro-Access DR module. The following is included:

- Set Time and Date
- System Dates
- Bluetooth Firmware Update
- Bluetooth Configuration
- Set Passcodes
- User Code – Access Selection
- Squeeze Tube Change
- Machine Capacity Units
- Set Account Name
- Home Screen Configuration
- Maintenance Notes
- Save Data Log
- Pro-Access DR Firmware Update
- Pump Stand Firmware Update
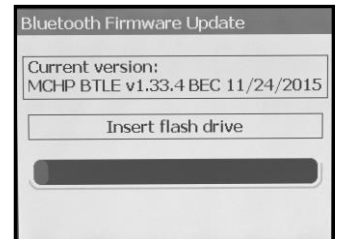- Reset Pro-Access DR
- Default Name/Dates/Notes/Log
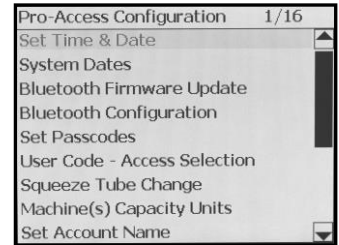
Set Time and Date – Program clock format 12 or 24 hour, set the time for clock, set the date mm/dd/yyyy.
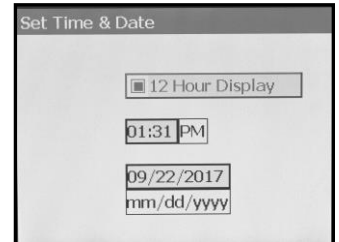
System Dates – The date that the system was installed can be entered. The Manufacturing Date and In Service Date are driven automatically. The manufacturing date is the date the system was manufactured at DEMA Engineering Company. The In Service Date is the date the system was first used in normal application.
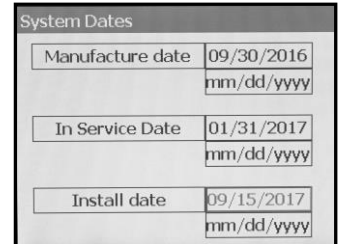
Bluetooth Firmware Update – On occasion DEMA will release and update for the software that controls the Bluetooth function. The Bluetooth Firmware Update will allow a user to transfer an update from a USB flash drive to the Pro-Access DR.
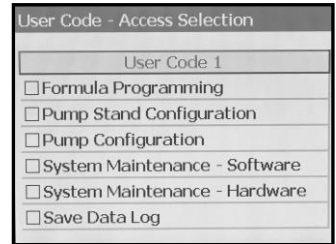
Bluetooth Configuration – Change the name of the Pro-Access DR Bluetooth name can be set. Additionally, the Bluetooth function can be enabled or disabled.
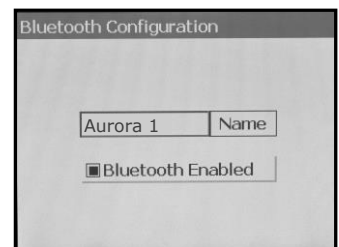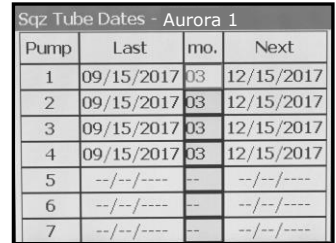

Set Passcodes – Change the main passcode for programming and setup access. Additional User Codes can be setup as well. User Codes can have limited or defined access (see User Code)
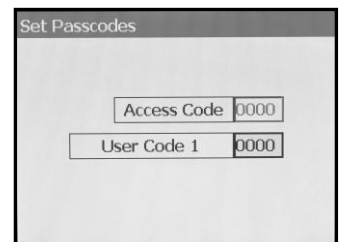
User Code – User Codes allow for limited or defined access. Each User Code can have its own defined access.
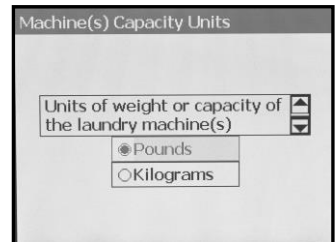
Squeeze Tube Change – Record the date of a squeeze tube change. Additionally, schedule a future date to change the squeeze tubes by entering how many months until the next change. The Pro-Access DR will show past due schedule changes on the display as you enter programming.
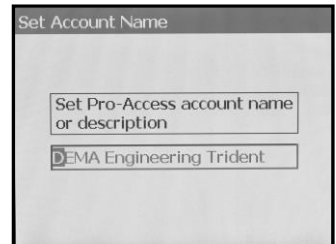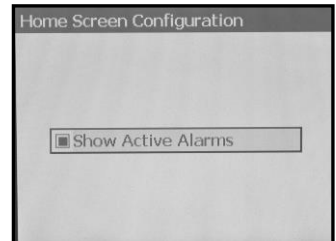
Machine Capacity Units – Set the laundry machine capacity units (lbs. or kilograms).
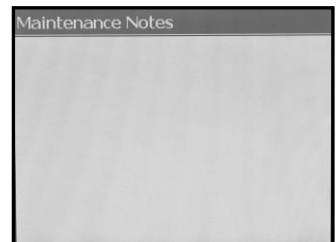
Set Account Name – Customize the name of the account or application site.
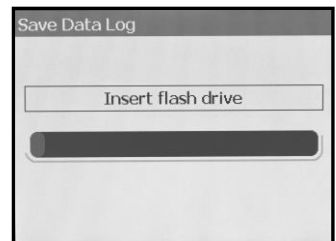
Home Screen Configuration – The Pro-Access DR will show active alarm conditions when enabled.

Maintenance Notes – Read any notes that have been entered in the past. Notes can be added using the Aurora App.

Save Data Log – Insert a USB Flash drive into the USB port and save collected data to flash drive. The data can be viewed and used in a spreadsheet program.

Pro-Access DR Software Update – Use this feature to update the software on the Pro-Access DR. DEMA will occasionally release new software that addresses field concerns or for new features. The software update can be downloaded and saved to a USB flash drive. The USB flash drive with the update is inserted into the Pro-Access DR USB port. Use the feature to load update.
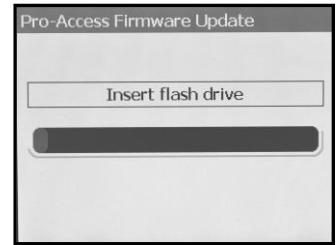
Pump Stand Firmware Update – Use this feature to update the software on the Aurora Pump Stand. DEMA will occasionally release new software that addresses field concerns or for new features. The software update can be downloaded and saved to a USB flash drive. The USB flash drive with the update is inserted into the Pro-Access DR USB port. Use the feature to load update. The software will be loaded through the communication system to the Aurora Pump Stand. When multiple pumps stands are connected to the communication network, individual pump stands or all pump stands can be updated.
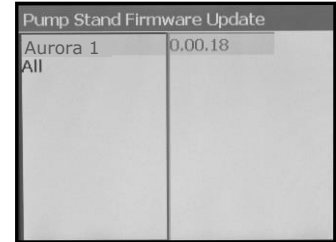
Reset Pro-Access DR – This will reset the Pro-Access DR (not the Aurora Pump stands) to factory defaults. This includes clearing Aurora Pump Stand list, data management and reporting configurations, passcodes and user codes.
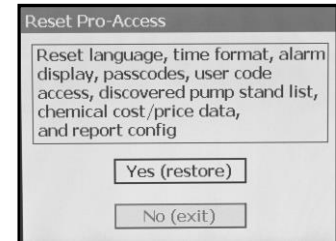

Default Name/Dates/Notes/Log – This will clear notes and dates that have been entered into the Pro-Access DR. This will not clear configurations, data management and other settings in Pro-Access DR and will not clear the Aurora pump stand.
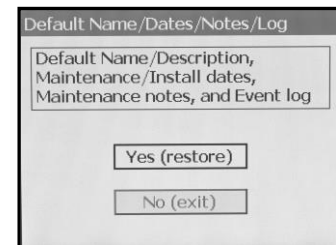
Find Pump Stands – This will search to see if any new pumps stands have been added to the communication network.

Re-sort List – This feature allows the order of the pump stand list to be modified.

Clear & Find – This feature allows the Pro-Access DR to clear the list of pump stands and find any that are connected to the Pro-Access DR.
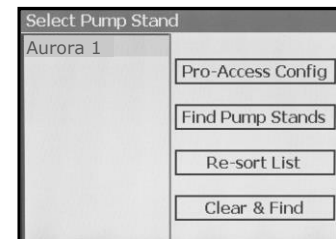
Replacement Parts and Reference Information

Aurora Pro-Access DR Parts and Cables	
DEMA Part Number	Description
86.100.9	Pro-Access DR Kit (includes the 84.441.1 Mounting Bracket, does not include cable)
84.441.1	Pro-Access DR Mounting Bracket
86.100.6.1	DB9 Female x Female Cable – 8ft
86.100.6.2	DB9 Female x Female Cable – 25ft

Warranty

Merchandise Returns

No Merchandise will be Returned for Credit Without DEMA'S Written Permission. Returned Merchandise Authorization Number is Required in Advance of Return.

Product Warranty

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products that have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "O"-rings, diaphragms, PVC tubing, and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty is void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number must be granted in advance of returned units for repair or replacement (See "Merchandise Returns" above).