Drive Thru Solution
LANCER INSTALLATION GUIDE

FOR QUALIFIED INSTALLER ONLY. This basic Installation Sheet is an initial release. If a complete Operations Manual (for the unit being installed) is required or needed, please refer to the Lancer web site (lancerworldwide.com) for immediate access, or for your convenience, scan this QR code with a mobile device for immediate access to other Technical Documents and alternative translations (if available) pertaining to this unit. Contact Lancer Customer Service for assistance as required.

ABOUT THIS MANUAL

This booklet is an integral and essential part of the product and should be handed over to the operator after the installation and preserved for any further consultation that may be necessary. Please read carefully the guidelines and warnings contained herein as they are intended to provide the user with essential information for the continued safe use and maintenance of the product. In addition, it provides *GUIDANCE ONLY* to the user on the correct services and site location of the unit.

BEFORE GETTING STARTED

Each unit is tested under operating conditions and is thoroughly inspected before shipment. At the time of shipment, the carrier accepts responsibility for the unit. Upon receiving the unit, carefully inspect the carton for visible damage. If damage exists, have the carrier note the damage on the freight bill and file a claim with carrier. Responsibility for damage to the dispenser lies with the carrier.

The installation and relocation, if necessary, of this product must be carried out by qualified personnel with up-to-date safety and hygiene knowledge and practical experience, in accordance with current regulations.

IMPORTANT SAFETY INSTRUCTIONS

⚠ Intended Use

The dispenser is for indoor use only. This unit is not a toy. Children shall not play with the appliance. Children should be supervised not to play with appliance. It should not be used by children or infirm persons without supervision. This appliance is not intended for use by persons (including children under 8 years of age) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be performed by children without supervision. The min/max ambient operating temperature for the dispenser is 40°F to 90°F (4°C to 32°C). Do not operate unit below minimum ambient operation conditions. Should freezing occur, cease operation of the unit and contact authorized service technician. Service, cleaning and sanitizing should be accomplished only by trained personnel. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

⚠ Automatic Agitation

Units are equipped with an automatic agitation system and will activate unexpectedly. Do not place hands or foreign objects in the ice bin. Unplug the dispenser during servicing, cleaning, and sanitizing. To avoid personal injury, do not attempt to lift the dispenser without assistance. For heavier dispensers, use a mechanical lift.

⚠ Electrical Warning

Check the dispenser name plate label, located behind the splash plate, for the correct electrical requirements of unit. Do not plug into a wall electrical outlet unless the current shown on the serial number plate agrees with local current available. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords with this unit. Do not 'gang' together with other electrical devices on the same outlet. The keyswitch does not disable the line voltage to the transformer primary. Always disconnect electrical power to the unit to prevent personal injury before attempting any internal maintenance. The resettable breaker switch should not be used as a substitute for unplugging the dispenser from the power source to service the unit. Only qualified personnel should service internal components of electrical control housing. Make sure that all water lines are tight and units are dry before making any electrical connections!

⚠ Carbon Dioxide (CO_2)

- **WARNING:** Carbon Dioxide (CO2) is a colorless, noncombustible gas with a light pungent odor. High percentages of CO_2 may displace oxygen in the blood.

- **WARNING:** Prolonged exposure to CO_2 can be harmful. Personnel exposed to high concentrations of CO_2 gas will experience tremors which are followed by a loss of consciousness and suffocation.

- **WARNING:** If a CO_2 gas leak is suspected, immediately ventilate the contaminated area before attempting to repair the leak.

- **WARNING:** Strict attention must be observed in the prevention of CO_2 gas leaks in the entire CO_2 and soft drink system.

⚠ Water Notice

Provide an adequate potable water supply. Water pipe connections and fixtures directly connected to a potable water supply must be sized, installed, and maintained according to federal, state, and local laws. The water supply line must be at least a 3/8 inches (9.525 mm) pipe with a minimum of 75 psi (0.516 MPa) line pressure, but not exceeding a maximum of 125 psi (0.862 MPa). Water pressure exceeding 125 psi (0.862 MPa) must be reduced to 125 psi (0.862 MPa) with a pressure regulator. Use a filter in the water line to avoid equipment damage and beverage off-taste. Check the water filter periodically, as required by local conditions. The water supply must be protected by means of an air gap, a backflow prevention device or another approved method to comply with NSF standards. A leaking inlet water check valve will allow carbonated water to flow back through the pump when it is shut off and contaminate the water supply. Ensure the backflow prevention device complies with ASSE and local standards. It is the responsibility of the installer to ensure compliance.

SPECIFICATIONS & FEATURES

DIMENSIONS

Width: 30.0 inches (762 mm)
Depth: 31.1 inches (790 mm)
Height: 39.33 inches (999 mm)

WEIGHT

Shipping: 290 lbs (132 kg)
Operating (w/ Ice): 570 lbs (259 kg)
Ice Capacity: 280 lbs (127 kg)

ELECTRICAL

115 VAC / 60 Hz / 5.0 Amps

CARBONATED WATER SUPPLY

Min Flowing Pressure: 25 psi (0.172 MPa)
Max Static Pressure: 50 psi (0.345 MPa)

PLAIN WATER SUPPLY

Min Flowing Pressure: 75 psi (0.517 MPa)

CARBON DIOXIDE (CO_2) SUPPLY

Min Pressure: 70 psi (0.483 MPa)

Max Pressure: 80 psi (0.552 MPa)

FITTINGS

Carbonator Inlet: 3/8 inch barb
Plain Water Inlet: 3/8 inch barb
Brand Syrup Inlets: 3/8 inch barb
Ambient Flavor Inlets: 3/8 inch barb
CO_2 Inlet: 3/8 inch barb

This unit emits a sound pressure level below 70 dB

READ THIS MANUAL

This manual was developed by the Lancer Worldwide as a reference for the owner/operator and installer of this dispenser. Please read this guide before installation and operation of this dispenser. If service is required please call your Lancer Service Agent or Lancer Customer Service. Always have your model and serial number available when you call.

Your Service Agent: _____

Service Agent Telephone Number: _____

Serial Number: _____

Model Number: _____

INSTALLATION

Unpack the Dispenser

1. Set shipping carton upright on the floor then cut package banding straps and remove.

2. Open top of carton and remove interior packaging.

3. Lift carton up and off of the unit.

4. Remove plywood shipping base from unit by moving unit so that one side is off the counter top or table allowing access to screws on the bottom of the plywood shipping base.

> **NOTE**
>
> **If unit is to be transported, it is advisable to leave the unit secured to the plywood shipping base.**

5. Remove accessory kit and loose parts from ice compartment.

6. Clean ice chute using cleaning instruction on page 20.

> **NOTE**
>
> **Inspect unit for concealed damage. If evident, notify delivering carrier and file a claim against the same.**

Selecting/Preparing Counter Location

1. Select a level, well ventilated location that is in close proximity to a properly grounded electrical outlet, within five (5) feet (1.5 m) of a drain, a water supply that meets the requirements shown in the Specifications section found on page 2, and away from direct sunlight or overhead lighting.

2. Sufficient clearance must be provided, if an ice maker is not installed, to allow filling ice compartment from a five gallon bucket (a minimum of 16 inches is recommended).

3. The selected location should be able to support the weight of the dispenser, ice and possibly an icemaker being installed after counter cut out is made. Total weight (with icemaker) for this unit could exceed 800 pounds (363.6kg).

> **NOTE**
>
> **Lancer does *NOT* recommend the use of shaved or flake ice in the dispenser.**

4. Unit may be installed directly on counter-top. Once installed directly on the counter, unit must be sealed to the counter-top with an FDA approved sealant.

> **NOTE**
>
> **NSF listed units must be sealed to the counter.**

5. Select a location for the remote pump deck, syrup pumps, CO_2 tank, syrup containers, and water filter (recommended).

6. Cut out required opening for the water, syrup, and CO_2 lines in the designated dispenser location.

Leveling the Dispenser:

In order to facilitate proper dispenser drainage, ensure that the dispenser is level, front to back and side to side. Place a level on the top of the rear edge of the dispenser. The bubble must settle between the level lines. Repeat this procedure for the remaining three sides. Level unit if necessary. For optimum performance place the unit at a 0° tilt. The maximum tilt is 5°.

> **NOTE**
>
> **To ensure that beverage service is accessible to all customers, Lancer recommends that counter height and equipment selection be planned carefully. The 2010 ADA Standards for Accessible Design states that the maximum reach height from the floor should be no more than 48" if touch point is less than 10" from the front of the counter, or a maximum of 46" if the touch point is more than 10" and less than 27" from the front of the counter. For more information about the customer's legal requirements for the accessibility of installed equipment, refer to 2010 ADA Standards for Accessible Design - http://www.ada.gov.**

Installing an Icemaker (if necessary)

> ⚠ **ATTENTION**
>
> **When installing an icemaker on the dispenser, use a bin thermostat to control the ice level (see below). This will prevent damage to the dispensing mechanism. The bracket for mounting a thermostat is located in the ice bin. During the automatic agitation cycle and while dispensing ice, ensure there is adequate space between the top of the ice level and the bottom of the icemaker so the ice can move without obstruction. Contact your icemaker manufacturer for information on a suitable bin thermostat.**

1. Install the icemaker per manufacturer specifications. Points of consideration include drainage, ventilation, and drop zones.

2. An adapter plate is required when installing an icemaker. Contact your Sales Representative or Lancer Customer Service for more information.

3. A bin thermostat is required in order to control the level of ice in the dispenser (Refer to ATTENTION above). Contact your icemaker manufacturer to obtain the correct bin thermostat.

4. Bin thermostat should be a minimum of 2" below the top edge of the dispenser. The preferred location of the bin thermostat is on the left side wall.

Attach Bin Stat Bracket As Shown   *Recommended Bin Stat Attachment*

5. Ensure the icemaker is installed properly to allow for removal of the Merchandiser.

6. Ensure manual fill is accessible.

7. Clean and maintain icemaker per manufacturer's instructions.

Dispenser Installation

NOTE

The installation, and relocation if necessary, must be carried out by qualified personnel with up-to-date knowledge and practical experience, in accordance with current regulations.

1. To remove the merchandiser, lift the merchandiser straight up to detach from the top of the ice bin and remove from the unit.

A. Merchandiser
B. Splash Plate
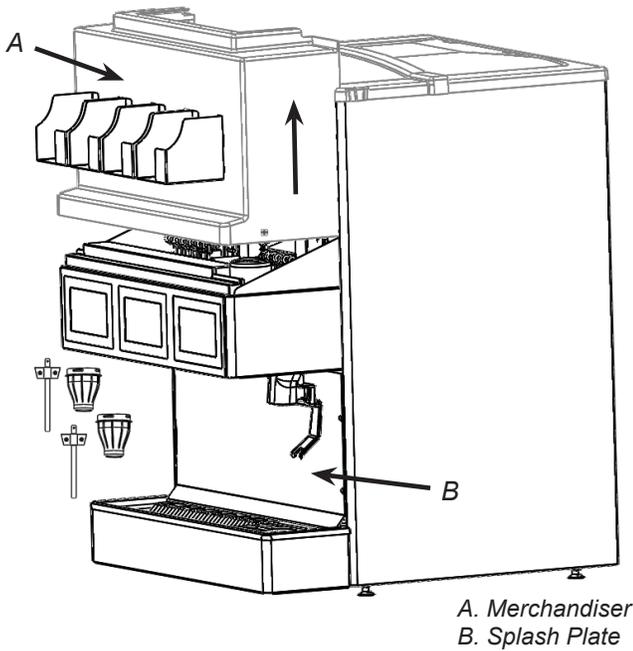
2. To remove the splash plate, first remove ice chute lever, nozzles, and drip tray. Then remove splash plate.

3. Route appropriate tubing from the water source to the water inlet at the remote pump deck.

4. If necessary, install water booster (Lancer PN MC-163172) between water supply and the remote pump deck.

5. Using tubing cutters, cut the water line and install U-fitting then route appropriate tubing from the U-fitting to the plain water inlet at the unit.

A. Line to Water Source
B. U-Fitting
C. Line to Remote Pump Deck
D. Line to Plain Water Inlet
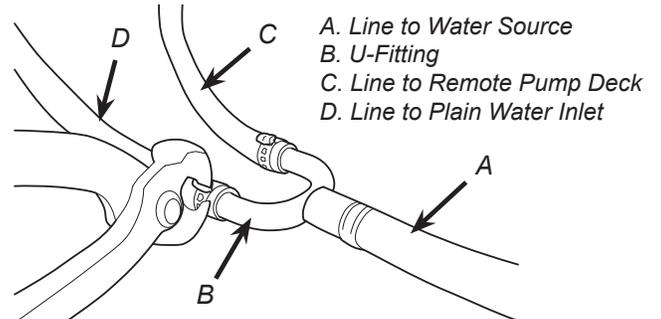
6. Route appropriate tubing from the syrup pump location to the syrup inlets and connect tubing to all syrup inlets.

A. Oetiker Pliers
B. Tubing
C. Syrup/Water Inlet
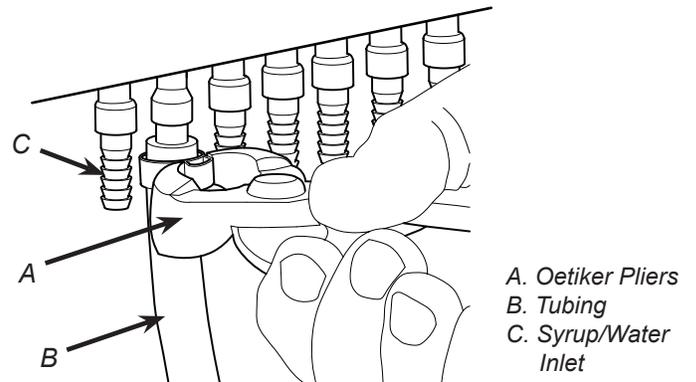
7. Route appropriate tubing from the remote pump deck outlet to the carbonated water inlet at unit.

A. Remote Pump Deck
B. Pump Inlet
C. Pump Outlet
D. Line to Carb Inlet
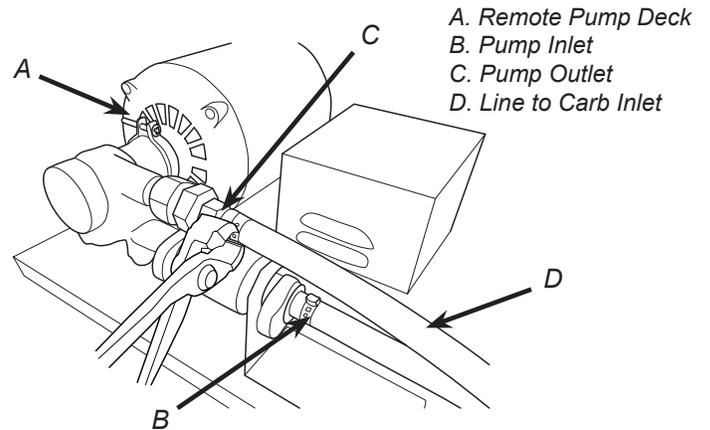
8. Install a shut-off valve in the water line feeding the remote pump deck as well as the water line feeding the plain water inlet.

NOTE

See Plumbing Diagrams on the front of the unit or on page 22 for reference.

9. Route appropriate tubing from the CO_2 source location to the CO_2 inlet on the unit and connect tubing to inlet.
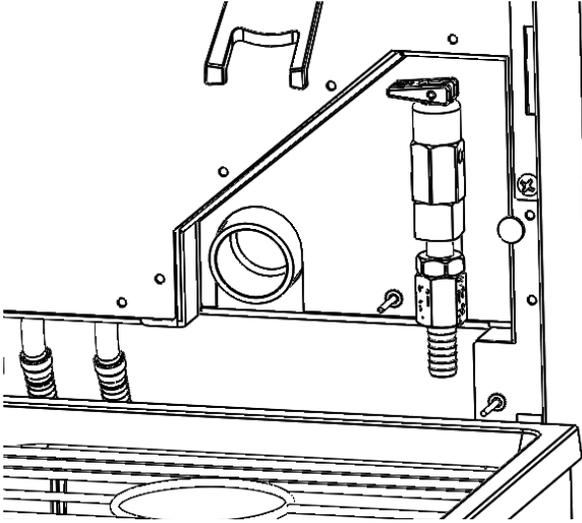

10. Route the power supply cord to a grounded electrical outlet of the proper voltage and amperage rating.

⚠ **WARNING**

DO NOT PLUG UNIT INTO GROUNDED ELECTRICAL OUTLET AT THIS TIME. **Make sure that all water lines are tight and unit is dry before making any electrical connections**

11. Route drain hose from designated open type drain to fitting on Drip Tray and connect hose to fitting. (if applicable)

A. Drain Fitting
B. Drain Line
C. Drip Tray
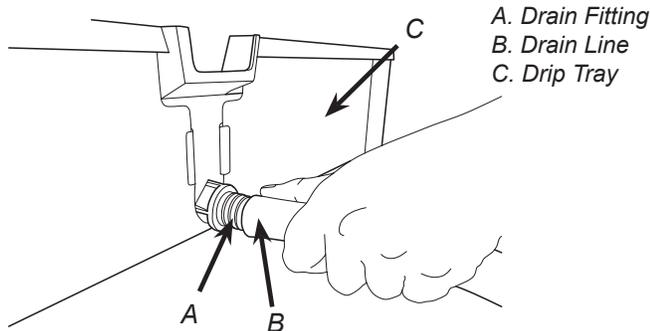
⚠ **CAUTION**

Drain line must be insulated with a closed cell insulation. Insulation must cover the entire length of the drain hose, including fittings. The drain should be installed in such a manner that water does not collect in sags or other low points, as condensation will form.

⚠ **ATTENTION**

Pouring hot water into drain may cause the Drain Tube to collapse. Allow only luke warm or cold water to enter Drain Tube. Pouring coffee tea and similar substances into drain may cause the Drain Tube to become clogged with coffee or tea grounds, or other solid particles.

Condensation Fan Installation

12. Attach fan bracket to fan assembly using screws provided.
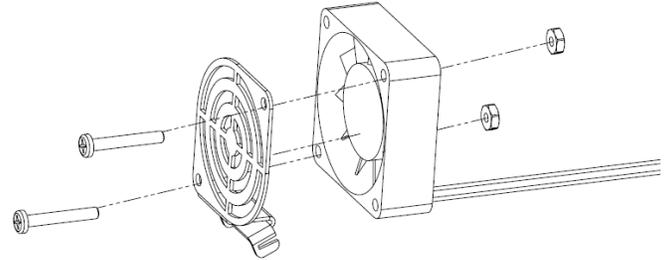
13. Install condensation fan on the underside of the unit by (1) pushing fan bracket into slots in the right wall, then (2) sliding down to engage.
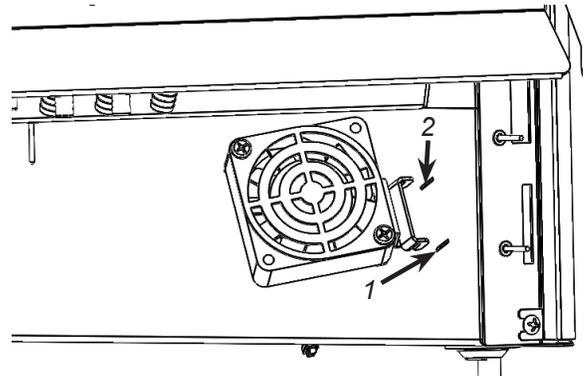
14. Connect the unit's red and black power harness to fan connector.

15. Reattach Drip Tray and Cup Rest to unit.

NOTE

When installing the drip tray, make sure both of the cold plate drain hoses are lined up to the openings in the drip tray. Make sure the end of the hose rests at least a half of an inch over the edge of the opening to ensure proper drainage of the cold plate.

Cup Lid Holder Installation

16. Attach provided cup lid holders to front of merchandiser by inserting into predrilled holes and securing with provided nuts.
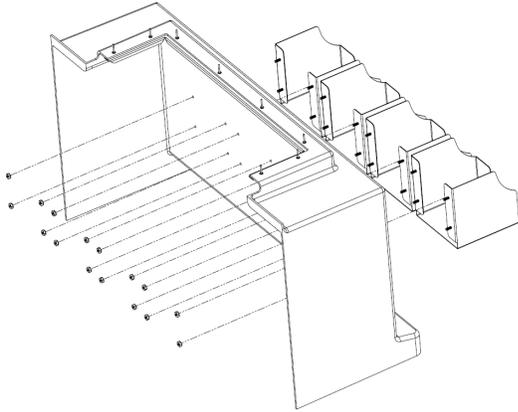

17. Reattach Merchandiser to unit.

Installing CO_2 Supply

1. Connect high pressure CO_2 regulator assembly to CO_2 cylinder or bulk system.

⚠ **ATTENTION**

**Before installing regulator, ensure that a seal (washer or o-ring) is present in regulator attachment nut.**

A. CO_2 Regulator
B. Outlet
C. Wrench
D. CO_2 Supply

- Thread regulator nut on to tank, then tighten nut with wrench
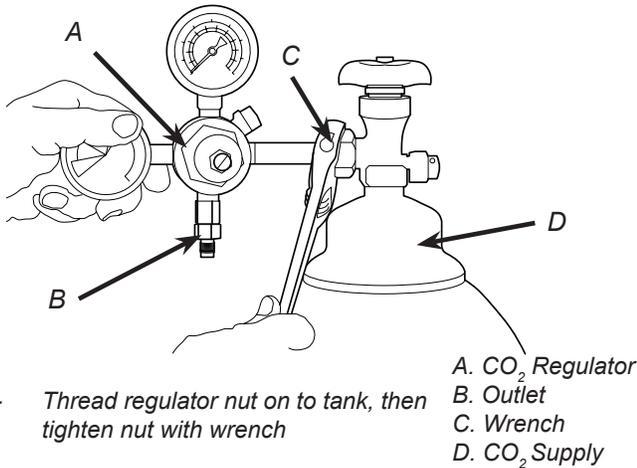
2. Connect a 1/4" nut, 3/8" stem and seal to CO_2 regulator outlet.

A. CO_2 Regulator
B. Wrench
C. 3/8" nut, Stem
D. CO_2 Supply
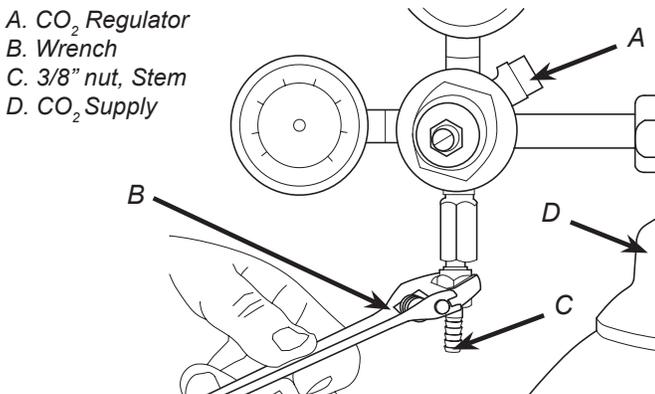
3. Route appropriate tubing from the low pressure CO_2 regulator manifold location to the 1/4" nut, 3/8" stem on the high pressure CO_2 regulator attached to source and connect tubing.

4. Connect tubing routed from the CO_2 inlet at the unit to one of the low pressure CO_2 regulator manifold outlets.

5. Connect tubing routed from the tee at the syrup pumps to the second low pressure regulator.

A. Line to Dispenser
B. Line to Syrup Pumps
C. Line to CO_2 Regulator
D. CO_2 Regulator Manifold
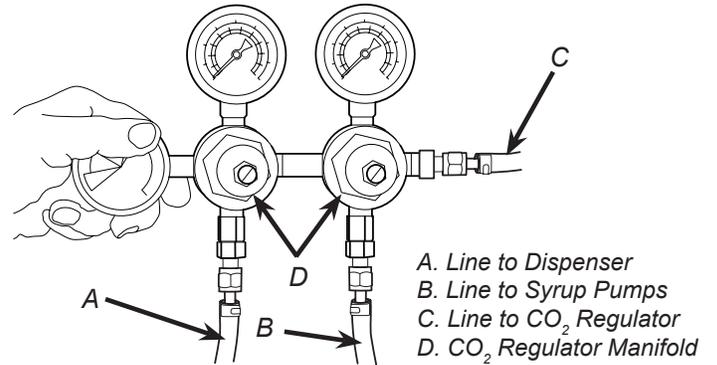
⚠ **ATTENTION**

A dedicated CO_2 regulator is required to supply the CO_2 inlet at the unit as well as to all syrup pumps.

6. Using a wrench, loosen lock nut on the regulator adjustment screw of the high pressure CO_2 regulator connected to the source, then using a screwdriver back out lock nut screw all the way.

⚠ **WARNING**

DO NOT TURN ON CO_2 SUPPLY AT THIS TIME

A. CO_2 Regulator
B. Screwdriver
C. Regulator Adjustment Screw
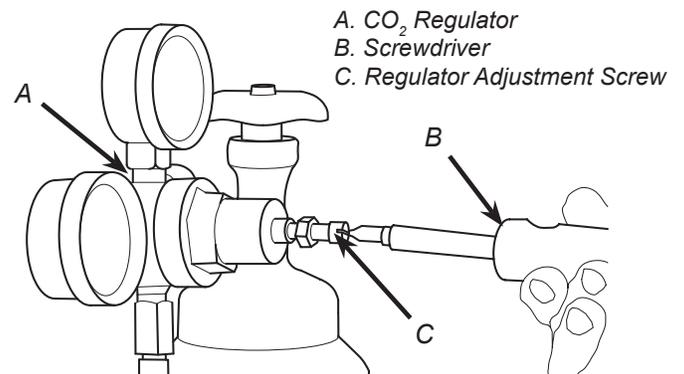
7. Repeat Step 6 for both low pressure CO_2 regulators on the regulator manifold routed to the unit and the syrup pumps.

Dispenser Setup

1. Turn on water source.

2. Open the pressure relief valve located on the front of the unit, by flipping up on the valve cap lever. Hold open until water flows from the relief valve then close (flip down) the relief valve.
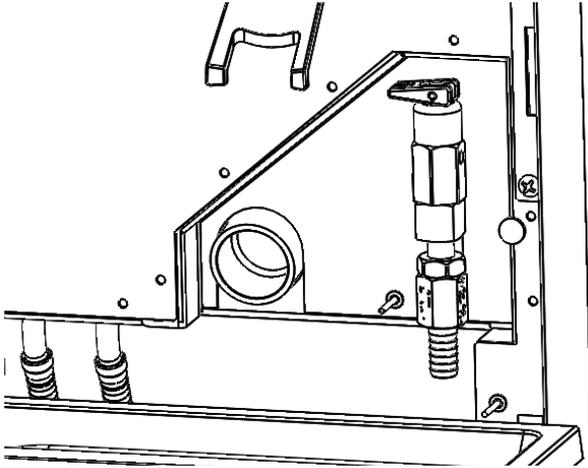

3. Verify all Bag-In-Box contains syrup and check all connections for leaks.

4. Place enough ice in the ice bin to fill approximately 1/2 of the bin before plugging in the unit.

5. Connect unit power cord to grounded electrical outlet.

⚠ WARNING

The dispenser must be properly electrically grounded to avoid serious injury or fatal electrical shock. The power cord has a three-prong grounded plug. If a three-hole grounded electrical outlet is not available, use an approved method to ground the unit. Follow all local electrical codes when making connections. Each dispenser must have a separate electrical circuit. Do not use extension cords. Do not connect multiple electrical devices on the same outlet.

6. Turn on the power to the dispenser by pressing the on/off toggle button on the right side of the unit electrical box.

A. Dispenser Power On/Off
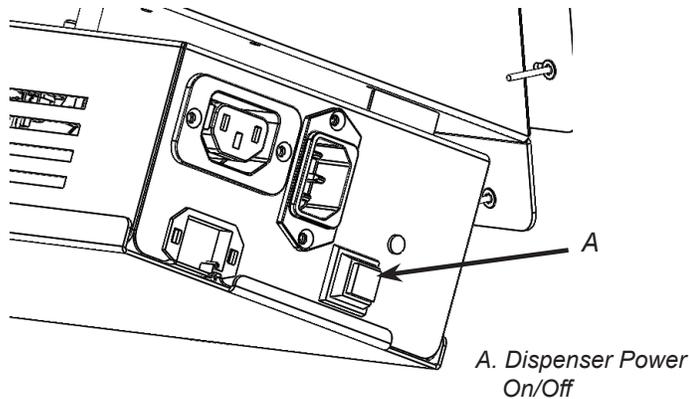
7. Test the ice dispense feature by ensuring that the ice auger runs when ice lever is pressed.

8. If necessary, turn on the left and right screen by pressing the screen on/off toggle buttons on the left side of the unit electrical box.

9. Once the screens have booted up, the service menu for drink setup must be accessed from one of the *Beverage Dispense* Screens.
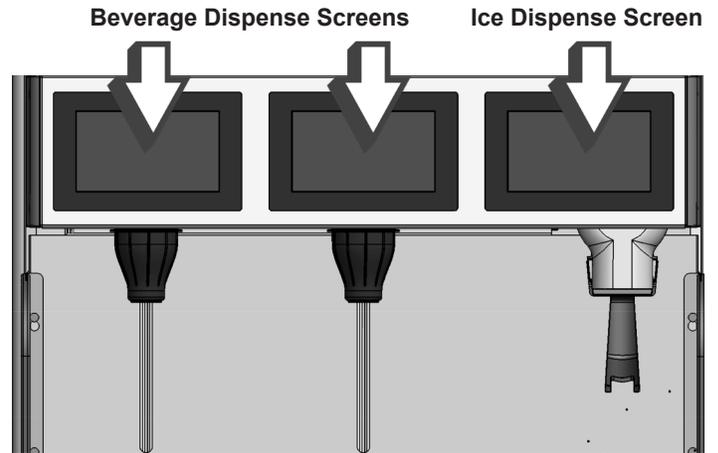
Beverage Dispense Screens   **Ice Dispense Screen**

10. Access the **Service Menu** by following the next two steps.

11. Starting on empty space, slide your finger along the screen from the right side to the left side, then hold your finger to the screen for a minimum of four (4) seconds(see image below).
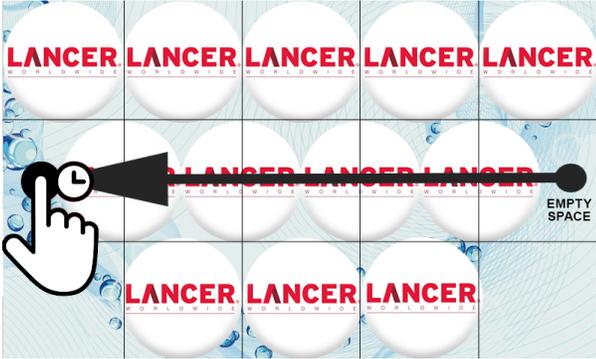
12. After you have held your finger for a minimum of four (4) seconds, tap all four corners of the screen in any order.

13. A keypad will appear for 10 seconds, enter the designated pin number to access the service menu.

14. For technician access to service menu, repeat steps 11 - 13 and enter the technician's pin number *(4433).*

15. For manager's access to the service menu, repeat steps 11 - 13 and enter the manager's pin number *(6655)*.

16. For access to only the Sold Out Menu, repeat steps 11 - 13 and enter the Sold Out pin *(963.)*.

17. From the service menu tap the *Maintenance* button.
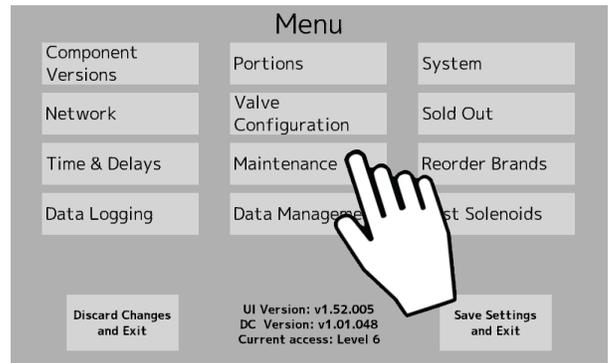
18. If necessary tap the *Purge* tab on the far left side of the screen.

19. Tap the Scroll bar down button to view water modules and tap the *Purge* buttons for both the plain water and the carbonated water modules.
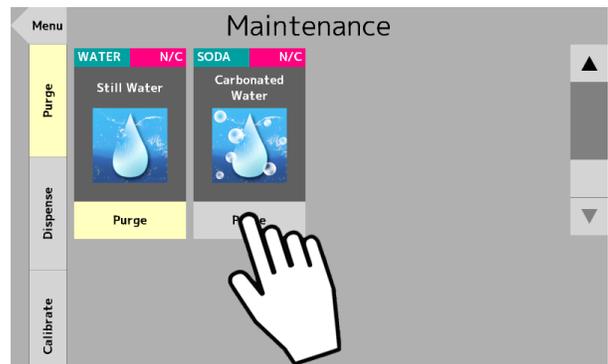
20. Once a steady flow of water is achieved, tap the *Purge* button again to deactivate the modules.

21. Repeat steps 11 - 20 for the second screen.

22. Make sure the pump deck is turned OFF before turning on CO_2.

23. Turn on CO_2 at the source then, using a screwdriver, adjust the high pressure regulator at the source to 110 psi (0.758 MPa) then tighten locknut with wrench.

A. Regulator Adjustment Screw
B. Adjust to 110 psi (0.758 MPa)
C. Wrench
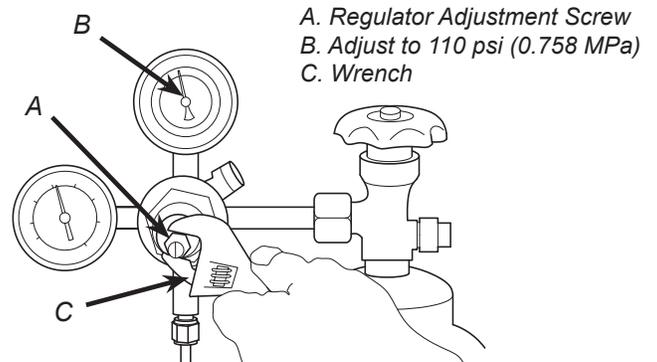
24. Adjust both of the low pressure regulators on the regulator manifold to 75 psi (0.517 MPa) then tighten locknut with wrench.

25. Activate each soda module on both screens until gas-out.

26. Plug in the remote carbonator pump deck, if not already done so, and turn the switch to the ON position.

27. Activate each soda module on both screens until the carbonator pump comes on. Release the button, allow carbonator to fill and stop. Repeat this process until a steady flow of carbonated water is achieved.

> **NOTE**
>
> **The pump deck has a 3 minute timeout feature. If the timeout occurs, turn the deck OFF then ON by flipping the switch on the control box.**

> **NOTE**
>
> **To check for CO_2 leaks, close the valve on the CO_2 cylinder and observe if the pressure to the system drops with the cylinder valve closed for five minutes. Open the cylinder valve after check.**

28. Activate each valve to purge air from the syrup lines.

## Adding New Brand/Flavor Modules

1. In order to use a brand or flavor module, the module must first be configured.

2. From the Service menu, tap the *Valve Configuration* button.
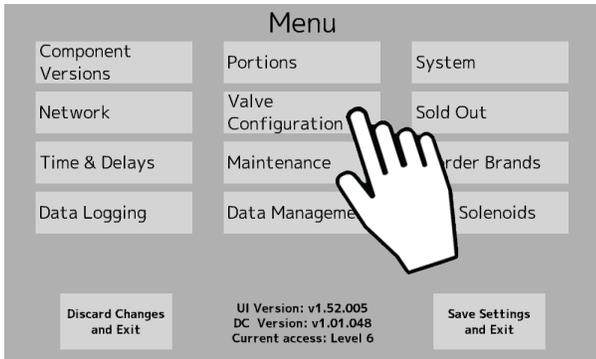
3. From the Valve Configuration menu, tap the *Configure* tab on the far left side of the screen.

4. Tap the *Configure* button under any brand or flavor module to open its Configuration Page.
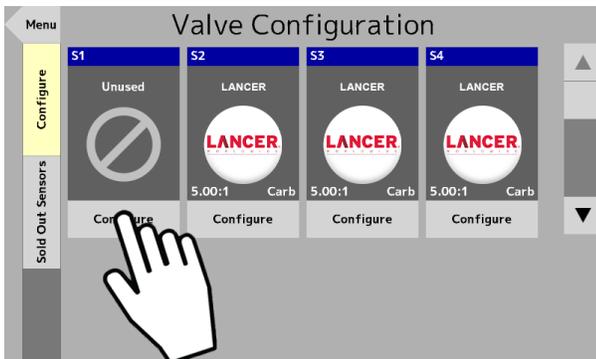
5. Select a brand group by tapping the 'Change Group' tab and then selecting a brand group. The list of available brands will change to reflect what's in the group you selected, and you can use the scrollbar to view the entire list. Tapping on a brand icon will select it for the valve being configured.
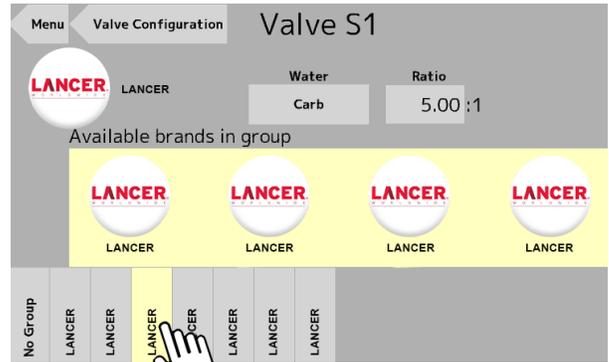

> **NOTE**
>
> **Each brand has a default water type and ratio already set when they are selected. The water type and ratio can be adjusted if necessary. Adjust the ratio by tapping the number and entering the new value on the keypad.**

6. Once a brand/flavor has been selected for a corresponding module, tap the *Valve Configuration* button to return to the Valve Configuration Screen.

7. Repeat Steps 4 and 5 for any of the other brand or flavor modules.

8. Tap the Menu button to return to the Service menu.
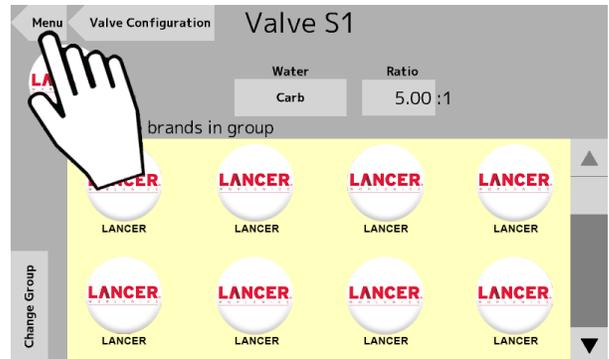
9. From the Service Menu, tap the Maintenance button.

10. Tap the Purge tab on the far left side of the screen.

11. Purge any new brand or flavor module until there is a steady flow of syrup. (See previous page)
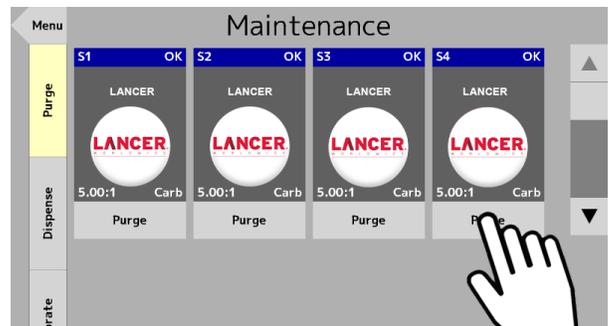

12. Tap the Menu button to return to the Service Menu.

13. Repeat steps 1 - 12 for the second screen.

CALIBRATION & MAINTENANCE

Calibrating Plain/Carbonated Water Modules

1. Access the Service menu and tap the *System* button.

Menu

Component Versions	Portions	System
Network	Valve Configuration	Sold Out
Time & Delays	Maintenance	Reorder B...
Data Logging	Data Management	Test Solenoids

Discard Changes and Exit

UI Version: v1.52.005
DC Version: v1.01.048
Current access: Level 6

Save Settings and Exit
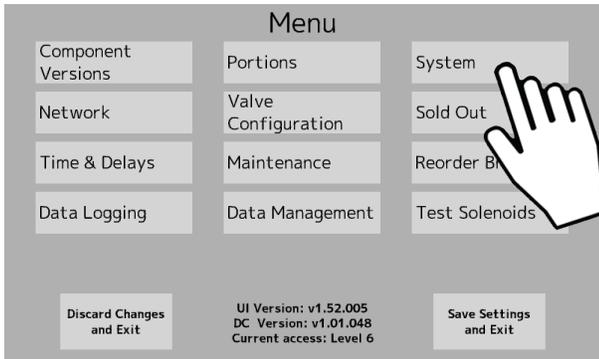
2. From the System menu, tap the *ml* button below the "Volume Unit" heading.

System

Menu

Enable Water Dispenses

Disabled | Enabled

Volume unit

ml | oz fl US

Time forma...

24 ho... | ...ur

Soldout Sens...

Internal | USB
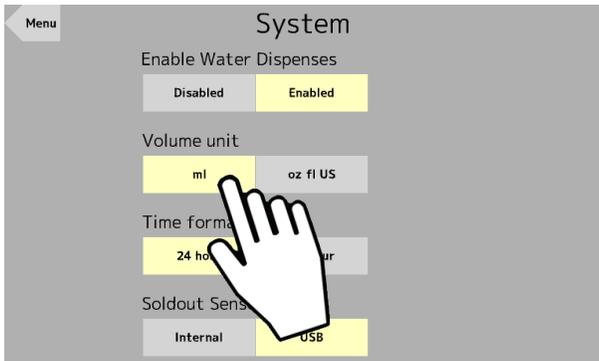
3. Tap the Menu button to return to the Service menu.

4. From the Service menu, tap the *Maintenance* button.

5. Tap the *Calibrate* tab on the far left side of the screen and tap the *Calibrate* button for the plain water module.

Maintenance

Menu

Purge | Dispense | Calibrate

WATER N/C	SODA N/C
Still Water	Carbonated Water
Calibrate	Calibrate
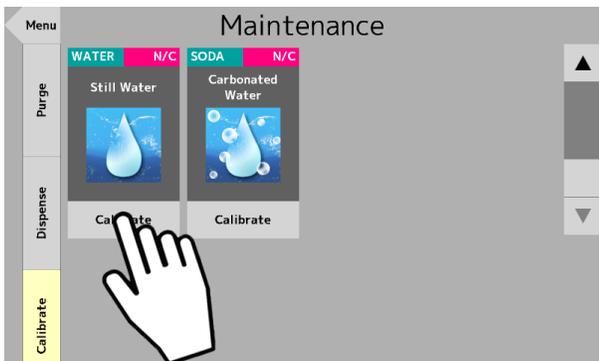
6. Using the keypad, enter a water flow rate value of 73.93 ml/sec. (This is roughly 2.5 fl oz/sec, which is normal for 3.0 fl oz/sec finished drink)

7. Set the Timer to the ON position and select milliliters (ml) as the desired unit of measurement.

Flow Rate

Please specify water flow rate

73.93 ml/s

A7	A6	A5		A4	A3	A2	A1
S14	S11	S9		S8	S6	S3	S2	S1
S12	S10		PW	PW	S7	S5	S4	CW

Timer

Off | | s
On | 200.0 | ml

Start Purge | Stop
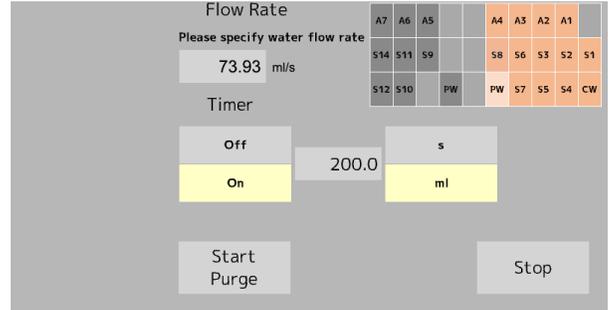
8. Using the keypad, enter 200 ml to be dispensed. The provided graduated cylinder or ratio cup will be used to calibrate the plain water module.

> **NOTE**
>
> **The larger the volume dispensed, the more accurate the results.**

9. With a graduated cylinder or ratio cup placed in a position below the nozzle, tap the *Start Purge* button. The unit will dispense the volume designated in the previous step.
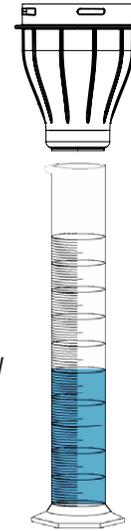
Fill to 200 ml

Graduated Cylinder

10. Examine the dispensed volume in the graduated cylinder. If the dispensed volume does not match the value entered on the screen in step 8, use a screwdriver to adjust the plain water flow control.

Increase   Decrease

A. Flow Control
B. Valve Retainer
C. Solenoid
D. Valve Body
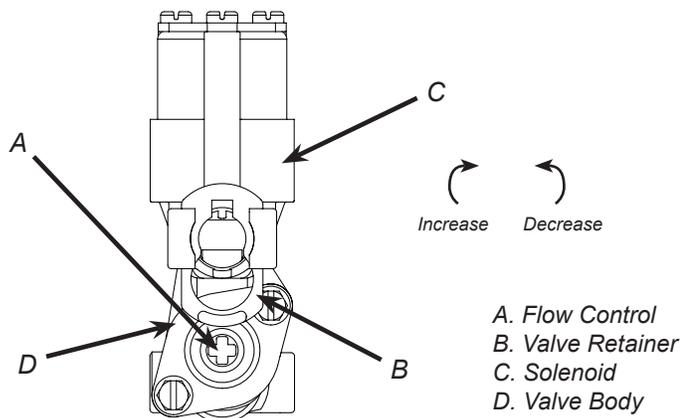
11. See Plumbing Diagram on front of machine or page 22 for reference.

12. Repeat steps 9 and 10 until the designated volume is achieved.

13. Repeat steps 7 - 11 for the carbonated water module.

14. Repeat steps 1 -12 for the second screen.

Calibrating Brand Syrup Modules - Using a Graduated Cylinder

> **NOTE**
>
> **Ensure there is ice on the cold plate and the lines are cold before attempting to set the flow rates on the valves. The drink temperature should be no higher than 40°F (4.4°C) when flow rates are set.**

> **NOTE**
>
> **The water flow rate was set to 73.93 ml/sec, which makes the final syrup flow rate 14.79 ml/s. The finished drink flow rate dispensed will be 88.72 ml/s.**

1. From the Service menu, tap the *Maintenance* button.

2. Tap the *Calibrate* tab on the far left side of the screen and tap the *Calibrate* button for the first brand syrup module.

3. Set the Timer to the ON position and select milliliters (ml) as the desired unit of measurement.

4. Using the keypad, enter in an amount of 50 ml as the preset dispensing amount.

5. With the graduated cylinder placed in a position below the nozzle, tap the *Start Purge* button. The unit will dispense the designated syrup amount.

6. Examine the dispensed volume in the graduated cylinder. If the dispensed volume does not match the value of 50 ml, use a screwdriver to adjust the brand syrup flow control. (See Plumbing Diagram on page 22 for reference).


Increase   Decrease

A. Flow Control
B. Valve Retainer
C. Solenoid
D. Valve Body
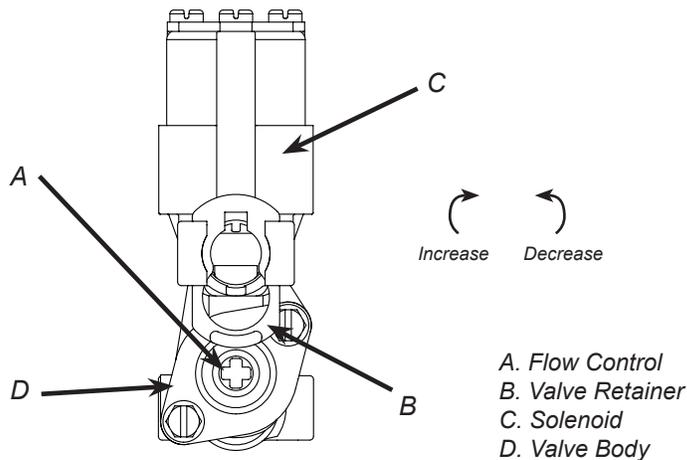
7. Repeat steps 5 and 6 until the designated volume of 50 ml is achieved.

8. Repeat steps 2 - 6 for the remaining brand syrup modules.

9. Repeat steps 1 - 6 for the second screen.

# Calibrating Brand Syrup Modules - Using a Syrup Separator

1. Remove the outer nozzle by twisting counterclockwise and pulling downward.
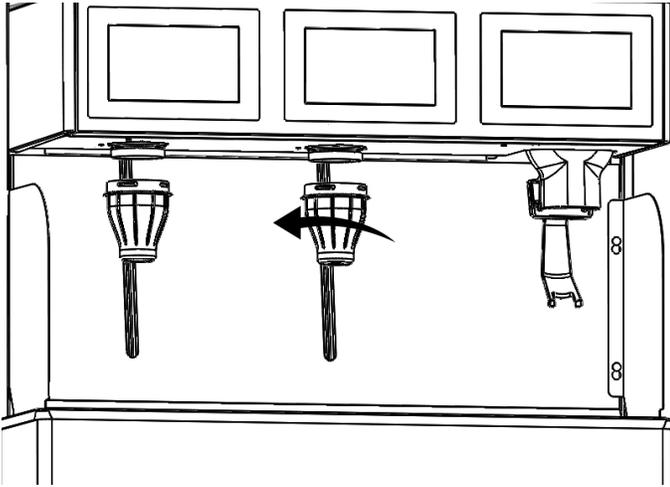
2. Insert syrup separator into outer nozzle.
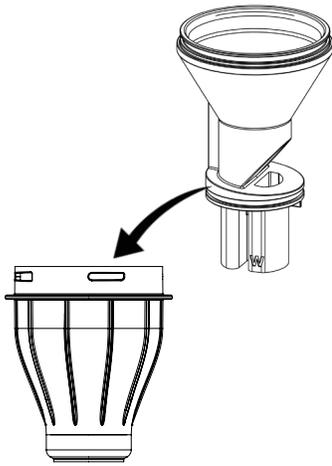
3. Reattach outer nozzle by pushing up and twisting clockwise until snug.

4. Enter the brand calibration screen from the previous section (steps 1-2).

5. Set the Timer to the ON position and select seconds (s) as the desired unit of measurement.
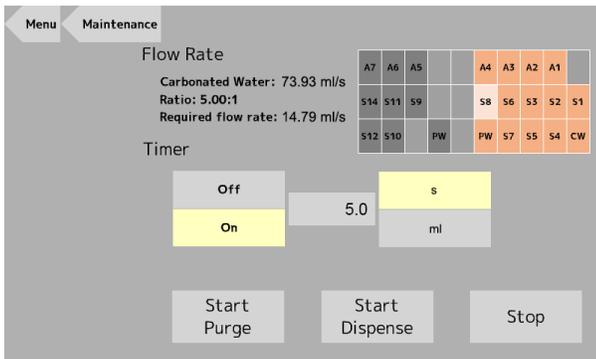
6. Using the keypad, enter the amount of seconds instructed by the ratio cup as the preset dispensing time.

7. Hold the ratio cup under the separator and turn it for the best visibility, then push the "Start Dispense" button.

Water side

Brix Cup
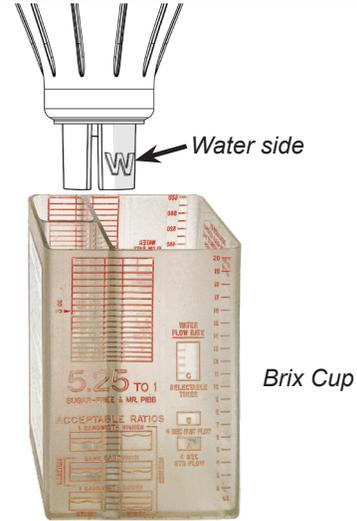
8. Examine the dispensed volume in the graduated cylinder. If the dispensed volumes are not level as instructed by the ratio cup, use a screwdriver to adjust the syrup flow control. (See Plumbing Diagram on page 22 for reference).

Increase   *Decrease*

A. Flow Control
B. Valve Retainer
C. Solenoid
D. Valve Body
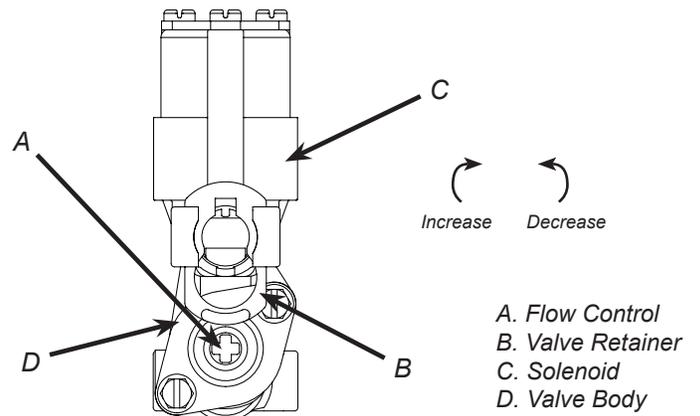
9. Repeat steps 4 - 8 for the remaining syrup modules.

10. Repeat steps 1 - 8 for the second screen.

Portion Control Programming

Ice Dispense Time

1. From the Ice Dispense Screen(Right Screen) enter the Service Menu by using the gesture outlined on page 12.
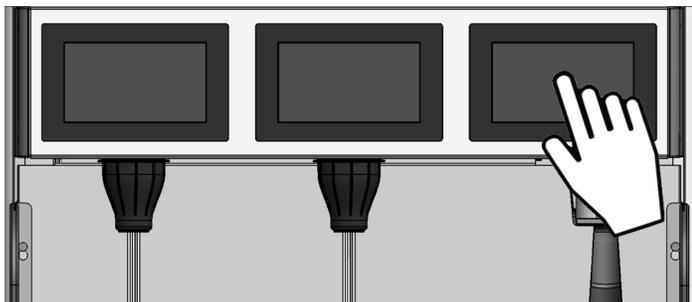
2. From the Service Menu, tap the *Time & Delays* button.
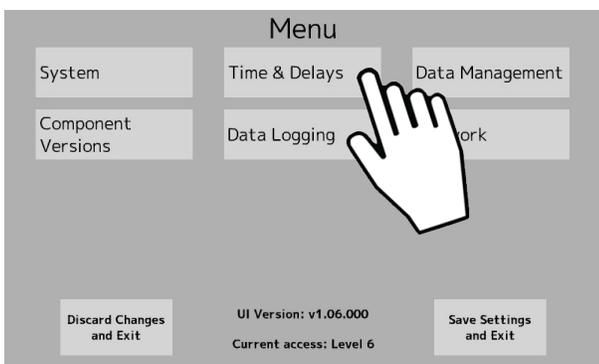
3. Increase or Decrease each cup size dispense time by selecting then entering the dispense time in milliseconds.


NOTE

The test buttons will dispense ice.

4. Test Ice dispense ammount by pressing the *Test* button. Ice modifiers can be tested with *Test(+)* and *Test(-)* buttons.

5. Select and adjust the Ice Time Modifiers to increase or decrease every ice dispense time by percentage points.
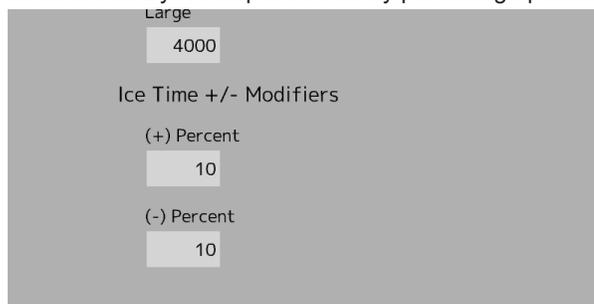
**NOTE**

These modifiers allow more or less ice to be dispensed by selecting the "+" or "-" button on the Ice Dispense Screen.

6. Tap the *Menu* button to return to the Service Menu.

7. Tap *Save Settings and Exit* button to keep settings.

Beverage Portion Control

1. From the service menu, tap the *Portions* button.
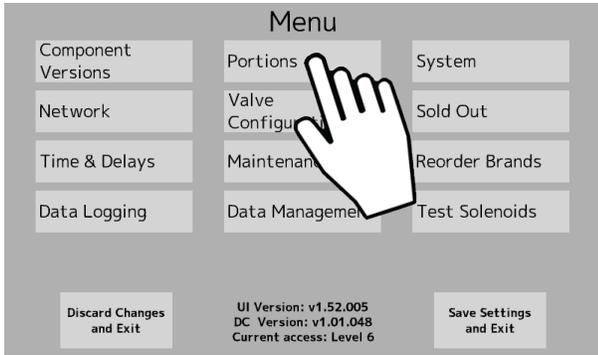
Teach

1. From the Portions menu, select brand and size to be set.
2. Select *Pour to Teach,* then pour a drink to record values for Drink Volume, Settle Time, Top-Off Volume.
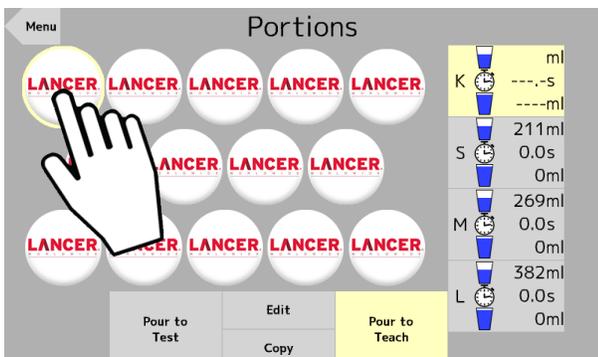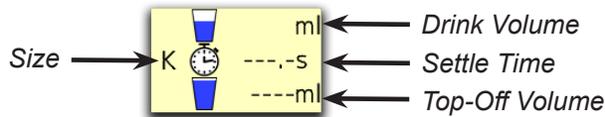

NOTE

The *Pour to Teach* button will dispense product.

Test

1. From the Portions menu, select *Pour to Test* to pour a drink of the selected brand, cup size and values.
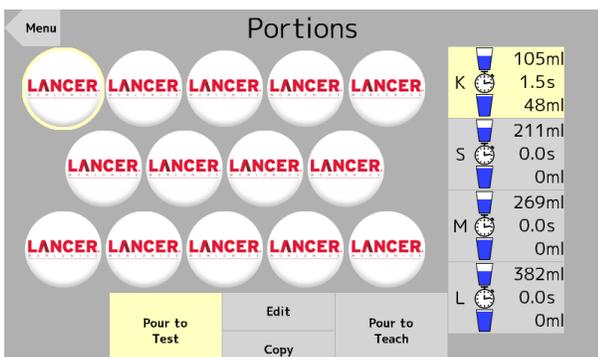
NOTE

The *Pour to Test* button will dispense product.

Edit

1. From the Portions menu, select *Edit* to modify selected brand values.
2. Tap fields to select, then use keypad to manually enter values.
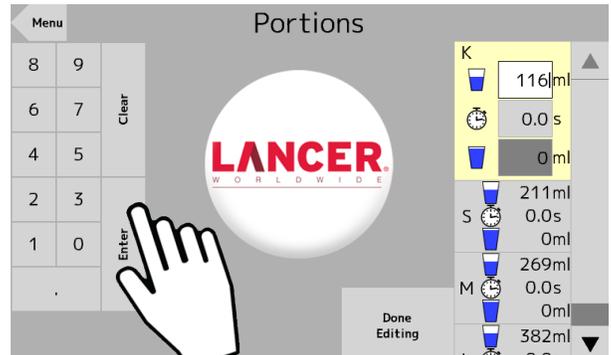
3. Tap "Done Editing" to return to *Portions* menu.

Copy

1. From the Portions menu, select which brand to copy values from.
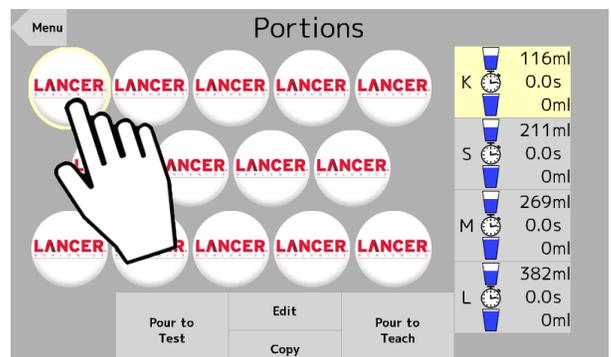
2. Select *Copy* to enter copy mode.
3. Select which brands to copy values to.
4. Select which cup sizes to copy values to.
5. Tap *Accept* to set values to selected brands and sizes.
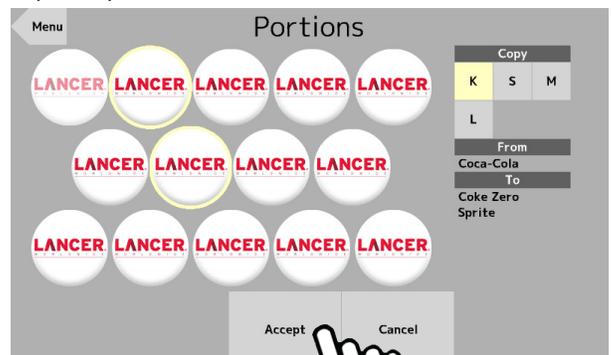
6. Tap the Menu button, then tap "Save Settings and Exit" to save.

FEATURES OF THE DRIVE THRU SOLUTION DISPENSER

System Settings

1. From the Service menu, tap the *System* button.
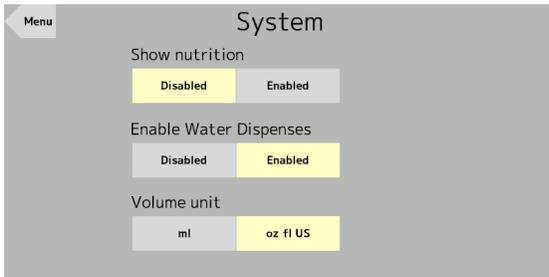
2. Tap the *Enabled* button, below the "Enable Water Dispenses" heading, to have the ability to pour plain/carbonated water from the main screen.

Reorder Brand Buttons

1. From the Service Menu, tap the *Reorder Brands* button.

2. Reorder Brand buttons by tapping one brand then tapping another. This will swap the button positions on the screen.

3. Tap the *Menu* button to return to the Service Menu.

4. Tap *Save Settings and Exit* button to keep settings.
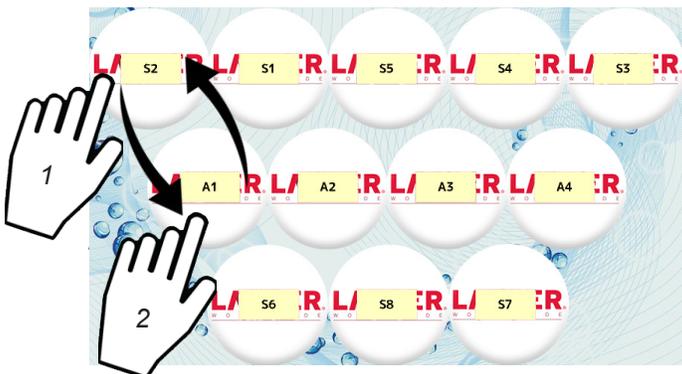
Time & Delay Features

1. From the Service Menu, tap the *Time & Delays* button to access the Time & Delays Menu.

2. Enable or Disable any of the three (3) time & delay functions by tapping underneath their designated function names: *Brand Timeout, Screen Saver,* and *Sleep*.

> **NOTE**
>
> **Brand Timeout - the amount of time for a selected brand on the Pour Screen to be deselected after inactivity**
>
> **Screen Saver - the amount of time for the screen saver to be initiated after inactivity**
>
> **Sleep - the amount of time for the unit to enter Sleep Mode after inactivity.**
>
> **Dispense Timeout - the amount of time a valve will pour before automatic shutoff.**

3. Adjust the *Frequency* and *Units of Time* by selecting their corresponding fields.
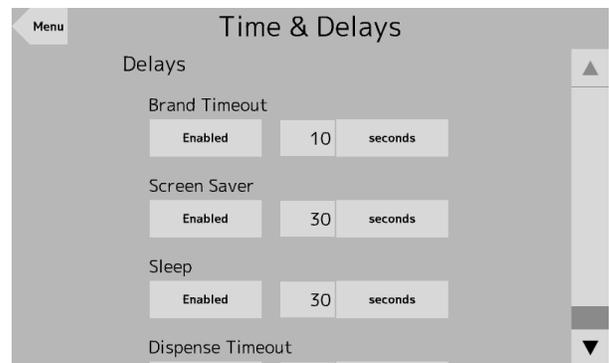
Screen Sleep

1. To prevent the dispense screen from sleeping, tap the field below "Sleep" and change to "Disabled".
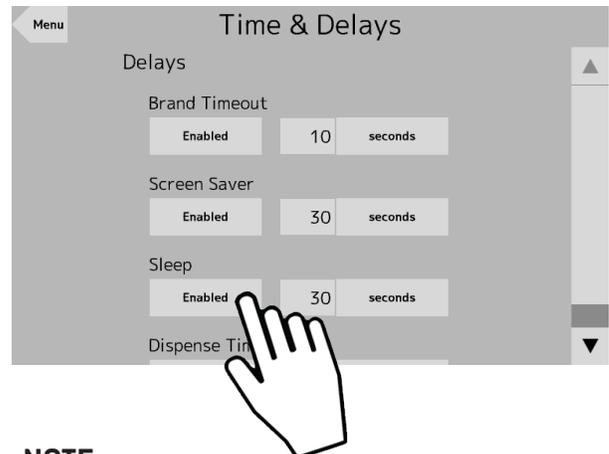
> **NOTE**
>
> **To ensure interface features funtion correctly, set unit to correct local time.**

Sold Out Features

1. From the Service Menu, tap the *Sold Out* button.

2. Manually adjust specific brands to read *Ready, Out,* or *Auto*
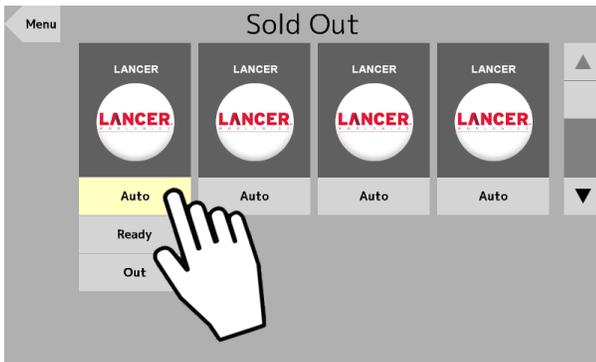
> **NOTE**
>
> **Ready - signifies there is available product and the valve will dispense when activated**
>
> **Out - signifies there is no available product or there is a problem with the specified brand and will dispense when activated.**
>
> **Auto - signifies that the configured Sold Out Sensor controls whether the brand can be dispensed. This feature requires an optional sold out sensor kit, does not come standard, and is available for up to ten (16) brands at one time. The following is a set of instructions on how to set up this feature. If no sold out sensor is assigned then the Auto feature acts the same as the Ready feature.**

3. From the Service Menu, tap the *Valve Configuration* button.
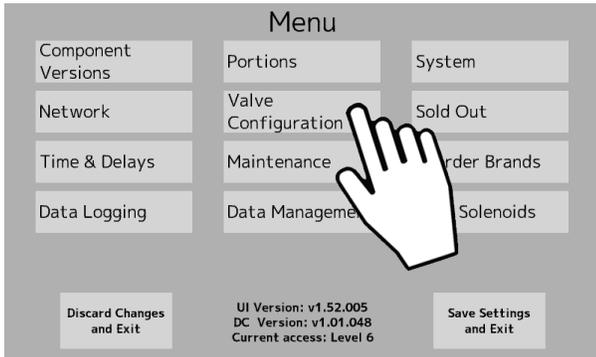
4. From the Valve Configuration menu, select Sold Out Sensors from the side panel, then select the desired valve/brand to add the Auto Sold Out feature to a specific brand.
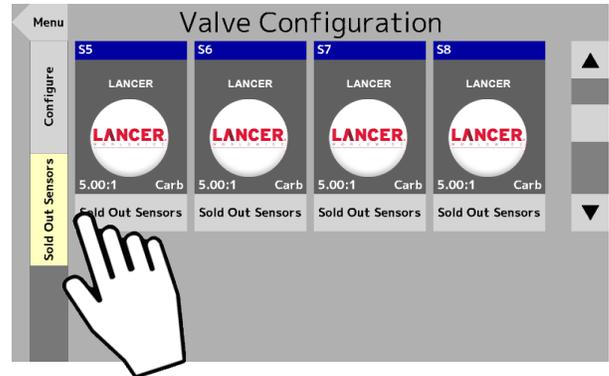
> **NOTE**
>
> **This feature will automatically shut-off the valve for that specific brand when there is no product to be dispensed. This feature only comes into effect when the corresponding brand is changed to "Auto" in the Sold-Out menu.**

5. From the Sold Out Sensor Menu, select an available Sold Out Sensor, then select the right facing arrow to assign to valve.
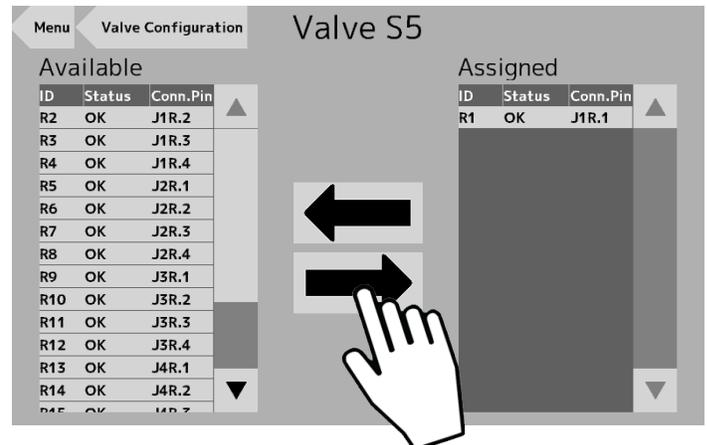
6. Tap the *Menu* button to return to the Service Menu.

7. Tap *Save Settings and Exit* button to keep settings.

Lancer Link Setup

1. Plug an Ethernet cable from wall or router to any open port on the Network Switch, located at the upper left corner on the front of the unit. .

Open Port
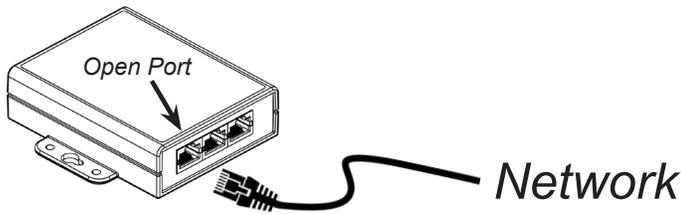
Network

2. From the service menu, select Network Status to change connection type.

Menu

Component Versions	Portions	System
Network	Valve Configuration	Sold Out
Time & Delays	Maintenance	Reorder Brands
Data Logging	Data Management	Test Solenoids

Discard Changes and Exit

UI Version: v1.52.005
DC Version: v1.01.048
Current access: Level 6

Save Settings and Exit
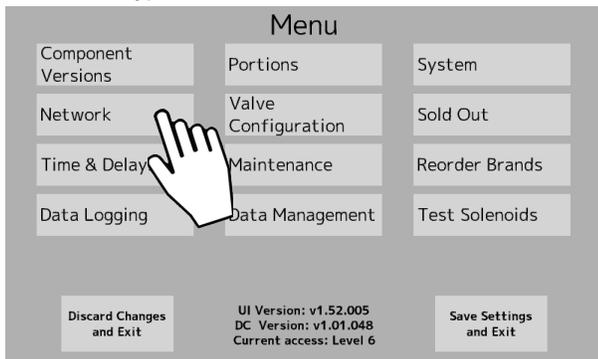
3. From the Network Status menu, change connection type to "Wired" to enable server connection.

"C" shows a connection

Cancel

Network Status

None

Wired* (C)

tion

IP Address
Automatic

IP address   0.0.0.0
Netmask   0.0.0.0
Gateway   0.0.0.0
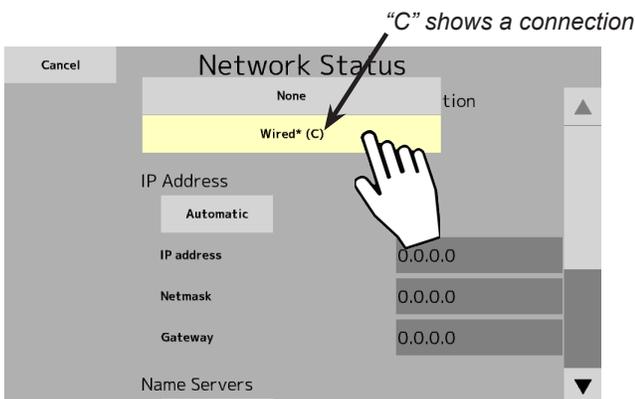
Name Servers

4. Ensure "Automatic" is selected for both "**IP Address"** and "**Name Servers"** configurations.
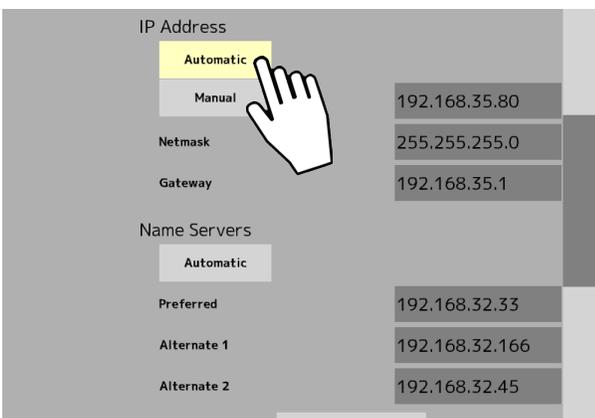
IP Address
Automatic
Manual   192.168.35.80
Netmask   255.255.255.0
Gateway   192.168.35.1

Name Servers
Automatic
Preferred   192.168.32.33
Alternate 1   192.168.32.166
Alternate 2   192.168.32.45

5. Once a connection is made, and fields are populated, scroll down and press "Accept" to confirm and save changes.

Cancel

Network Status

Gateway   192.168.35.1

Name Servers
Automatic

Preferred   192.168.32.33
Alternate 1   192.168.32.166
Alternate 2   192.168.32.45

Accept
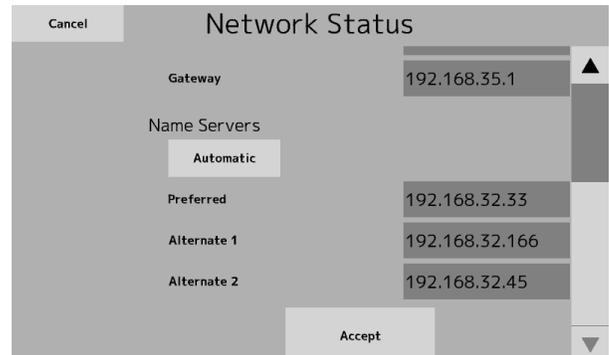
6. Return to the Service Menu and press the *Data Logging* button.

Menu

Component Versions	Portions	System
Network	Valve Configuration	Sold Out
Time & Delays	Maintenance	Reorder Brands
Data Logging	Data Management	Test Solenoids

Discard Changes and Exit

UI Version: v1.52.005
DC Version: v1.01.048
Current access: Level 6

Save Settings and Exit
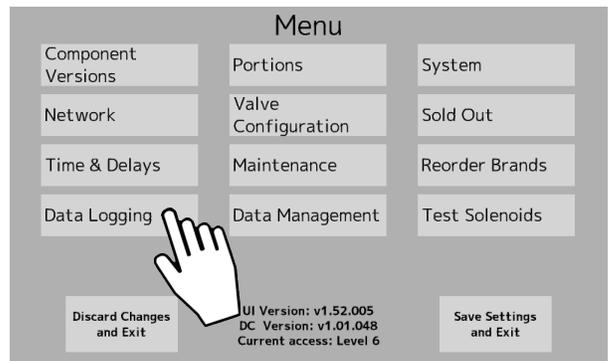
7. From the Data Logging screen, locate the "Dispenser ID", then call Lancer Worldwide Customer Service 1-800-729-1500, to register your account.

Menu

Data Logging
Data logging module 1.04.000
Lancer Link
    Dispenser ID: LL200006026
    Connection settings: Production
    Configuration Server
        Status: Up-to-date
        Last update success: 2021-07-27 10:55:39
        Last update request: 2021-07-27 10:55:39
    Data connection
        Status: Connected
        Last configured: 2021-07-27 10:55:39
        Connected since: 2021-07-27 10:55:41
        Times connected since configuration: 1

8. Save settings and exit service menu.

9. Use "Dispenser ID" to activate unit on the Lancer Link website: **https://prod-lancercorp-portal-app-cu.azurewebsites.net/**

NOTE

Refer to Lancer Link User Guide (PN: 28-3067) for instructions on web based setup.

www.lancerworldwide.com/tools/instruction-sheets/

Update Software

1. Load the *.update* file on to any USB formatted to "FAT32" as shown in the image below.
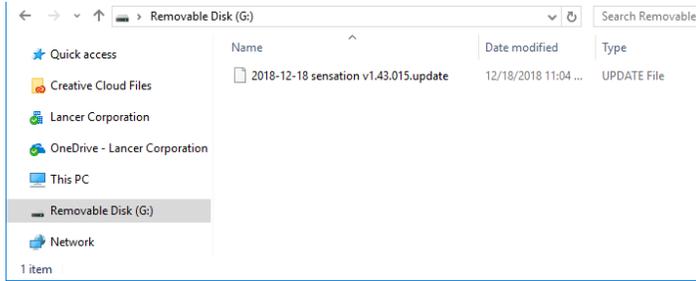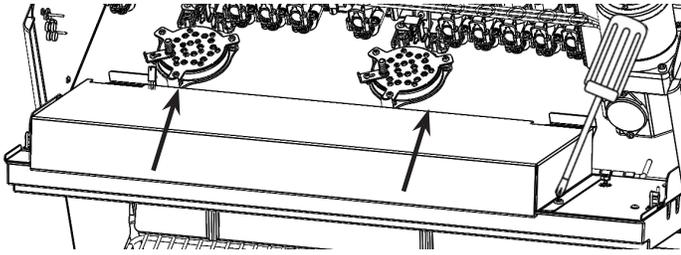
2. Unscrew and remove metal shield covering PCB.

3. Plug the USB into open port on the side of the PCB controller box.
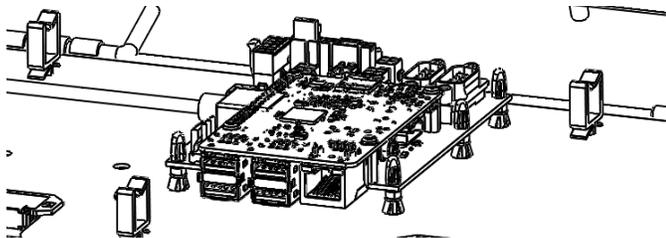
4. Access the Service menu on the left side screen and tap the *Data Management* button.
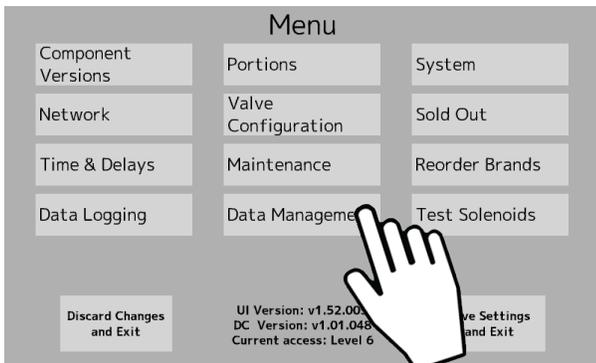
5. In the "Update from USB" section, tap the *Software* button.

6. Verify that the correct update is displayed on the screen then tap *Start Update*.

NOTE

The screen will automatically conduct a power cycle once the update is complete. Wait at least ten (10) seconds before accessing the Service Menu once the power cycle is complete.

7. Repeat Steps 2 - 6 for the right side PCB and screen.

Update Brands/Flavors

1. Create a USB drive with the updated *.brand* file in a folder named "brands" as shown in the image below.
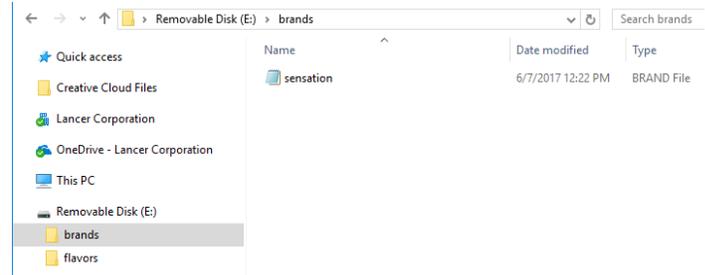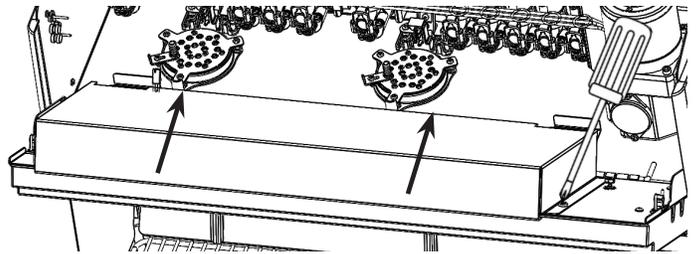

2. Unscrew and remove metal shield covering PCB.

3. Plug the USB into open port on the side of the PCB controller box.
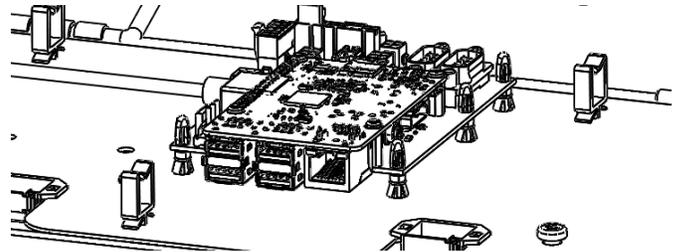
4. Access the Service menu on the left side screen and tap the *Data Management* button.
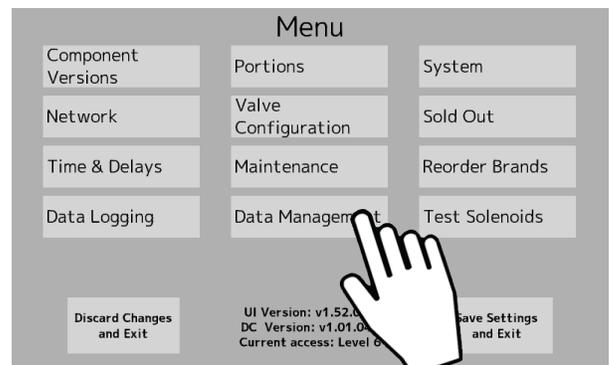
5. In the "Update from USB" section, tap the *Brands* button.
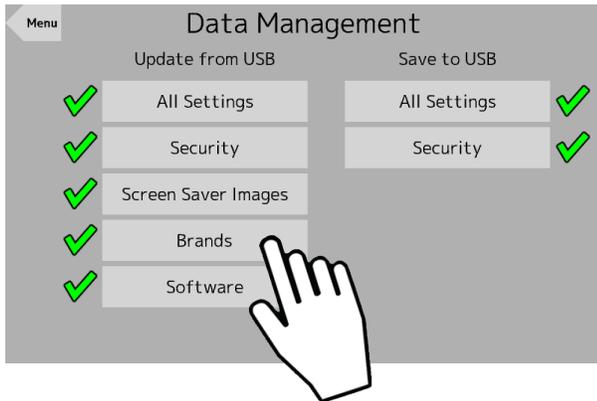
6. Once the Brands button turns green then the updated brands will be available.
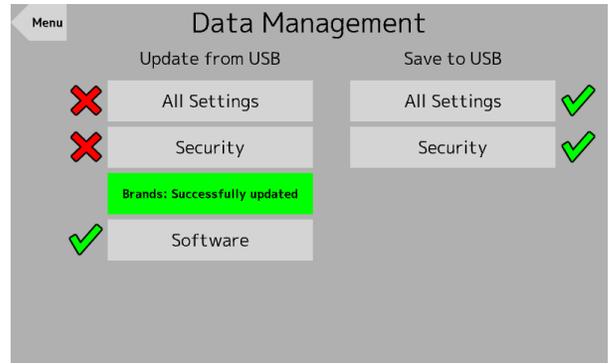
7. Repeat Steps 2 - 6 for the right side PCB and screen.

CLEANING AND SANITIZING

GENERAL INFORMATION

The operator of the equipment must provide continuous maintenance as required by this manual and/or state and local health department guidelines to ensure proper operation and sanitation requirements are maintained.

The cleaning procedures provided herein pertain to the Lancer equipment identified by this manual. If other equipment is being cleaned, follow the guidelines established by the manufacturer for that equipment.

Cleaning should be accomplished only by trained personnel. Sanitary gloves are to be used during cleaning operations. Applicable safety precautions must be observed. Instruction warnings on the product being used must be followed.

⚠ ATTENTION

- Use sanitary gloves when cleaning the unit and observe all applicable safety precautions.
- *DO NOT* use a water jet to clean or sanitize the unit.
- *DO NOT* disconnect water lines when cleaning and sanitizing syrup lines, to avoid contamination.
- *DO NOT* use strong bleaches or detergents; These can discolor and corrode various materials.
- *DO NOT* use metal scrapers, sharp objects, steel wool, scouring pads, abrasives, or solvents on the dispenser.
- *DO NOT* use hot water above 140° F (60° C). This can damage the dispenser.
- *DO NOT* spill sanitizing solution on any circuit boards. Insure all sanitizing solution is removed from the system.

Cleaning Solution

Mix a mild, non-abrasive detergent (e.g. Sodium Laureth Sulfate, dish soap) with clean, potable water at a temperature of 90°F to 110°F (32°C to 43°C). The mixture ratio is one ounce of cleaner to two gallons of water. Prepare a minimum of five gallons of cleaning solution. Do not use abrasive cleaners or solvents because they can cause permanent damage to the unit. Ensure rinsing is thorough, using clean, potable water at a temperature of 90°F to 110°F. Extended lengths of product lines may require additional cleaning solution.

Sanitizing Solution

Prepare the sanitizing solution in accordance with the manufacturer's written recommendations and safety guidelines. The type and concentration of sanitizing agent recommended in the instructions by the manufacturer shall comply with 40 CFR §180.940. The solution must provide 200 parts per million (PPM) chlorine (e.g. Sodium Hypochlorite or bleach) and a minimum of five gallons of sanitizing solution should be prepared.

Nozzle Sanitizing Solution

Prepare a chlorine solution (less than pH 7.0) containing 50 PPM chlorine with clean, potable water at a temperature of 90 – 110°F. Any sanitizing solution may be used as long as it is prepared according to manufacturer's recommendations and safety guidelines, and provides 50 PPM chlorine.

Integrity of Plastic Finish

Remove any plastic film. While caring for your unit, please note that there may be some cleaners that may compromise the integrity of the powder coated finish. The recommended method for cleaning the powder coated surface is to use warm water and a mild soap such as Windex, Dawn, 409, etc. Certain chemical cleaners such as Acetone, Mineral Spirits, or Lacquer thinners could cause aesthetic damage. Thoroughly rinse with water after cleaning the surface.

Other Supplies Needed:

1. Clean cloth towels
2. Bucket
3. Extra nozzle
4. Sanitary gloves
5. Small brush (PN 22-0017)

Scheduled Maintenance/Cleaning

As Needed	• Keep exterior surfaces of unit clean using a clean, damp cloth.
Daily	• With a clean cloth and cleaning solution, wipe off all of the unit's exterior surfaces. ***DO NOT SPRAY CLEANING PRODUCT DIRECTLY ON SCREEN. SPRAY SOFT CLOTH THEN WIPE SCREEN.*** • Clean exterior of dispensing valves and ice chute. • Remove cup rest then clean the drip tray and cup rest. Replace cup rest when finished. • Wipe clean all splash areas using a damp cloth soaked in cleaning solution. • Clean beverage nozzles as specified by the section "Cleaning and Sanitizing Nozzles" below.
Monthly	• Clean the ice bin, auger, and ice chute assembly as specified by the section "Cleaning and Sanitizing Ice Bin, Auger, and Ice Chute" on page 20.
Every Six Months	• Clean the syrup lines as specified by the section "Cleaning and Sanitizing Syrup Lines - Bag in Box" on page 21. • Pull out unit (if applicable) and clean behind and underneath. Check for any loose components or noises.

Cleaning & Sanitizing Nozzles

1. Prepare the nozzle sanitizing solution as described above.
2. Remove the outer nozzle by twisting clockwise and pulling downward.

> ⚠ **ATTENTION**
>
> **DO NOT** attempt to activate any valves while the outer nozzle is removed.
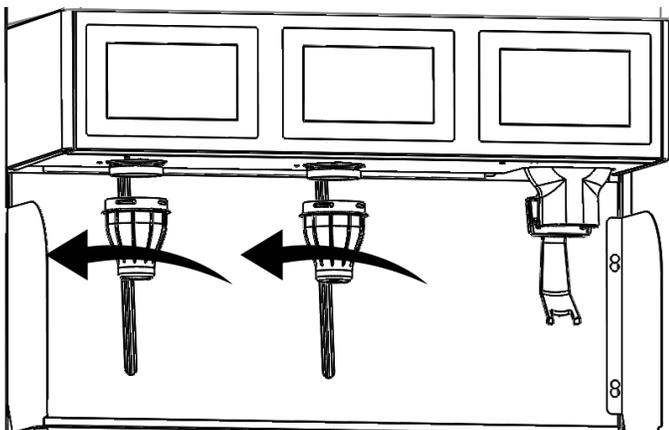
3. Using the nozzle brush provided in the installation kit and the cleaning solution described on page 17, clean the outer nozzle of any residual syrup.

4. Rinse the outer nozzle with clean, potable water then soak in the nozzle sanitizing solution prepared in step 1.

5. While the outer nozzle is in the sanitizing solution, using the nozzle brush, dip the brush in the nozzle sanitizing solution and thoroughly brush the bottom of the inner nozzle body.

6. Rinse the brush in warm 90° – 110°F (32.2°– 43.3°C), clean potable water and brush the bottom of the inner nozzle body once more **WITHOUT** the sanitizing solution.

7. After the outer nozzle has soaked for fifteen (15) minutes, rinse in warm 90° – 110°F (32.2°– 43.3°C), clean potable water for a minimum of twenty (20) seconds ensuring all surfaces of the nozzle have been thoroughly rinsed.

8. Allow outer nozzle to air dry (to expedite drying, forced convection is recommended).

9. Reinstall the outer nozzle to the unit.

10. Repeat Steps 2 - 9 for the second nozzle.

11. Wipe down push levers with solution.

Cleaning & Sanitizing Ice Bin, Auger, and Ice Chute

> **NOTE**
>
> **It is recommended to perform this procedure monthly, or more often if desired. Use the cleaning solution described on page 18. An alternate solution of one parts water to one part vinegar may be used to remove water spots and calcium deposits.**

> **NOTE**
>
> **Refer to the Automatic Agitation Warning on the first page of this manual.**

1. Disconnect power to the dispenser

2. Remove the Merchandiser and Top Cover.

3. Remove Ice Chute Lever, then remove Splash Plate Assembly by lifting it up and out from the dispenser face.

> **NOTE**
>
> **Always remove the ice chute lever before removing the splash plate.**

4. Remove or melt out any remaining ice from the ice bin.

5. Use a screwdriver to remove the Auger Motor shaft cover.

6. Remove the "C" clip from the Auger Motor Shaft.

A. Auger Motor Shaft
B. "C" Clip
C. Ice Chute
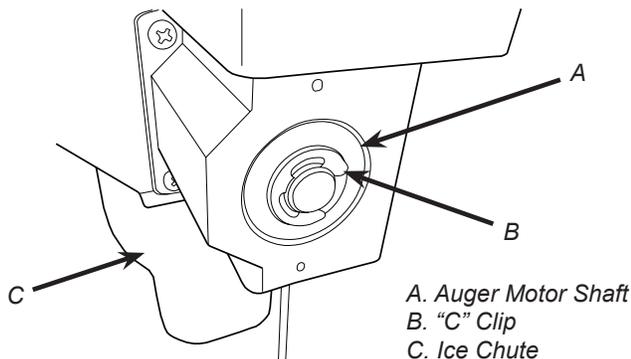
7. Disconnect the Auger Motor wire harness from junction box.

8. Remove the four (4) screws from the bracket holding the Auger Motor, and LED light bracket.

9. Slide the Motor and Mounting Plate Assembly off of the Auger Shaft.

A. Auger Motor
B. Auger Shaft
C. Solenoid
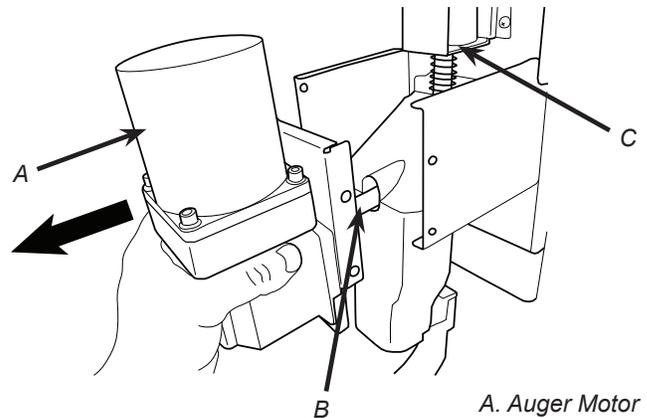
10. Remove the Auger Motor Shaft Key and set aside.

11. Remove the second clip from the Auger Shaft.

12. Disconnect the Ice Chute wire harness from the junction box.

13. Disconnect the solenoid from Ice Chute link by pushing pin through shaft until link is free. (Pin shown in out position)

A. Solenoid
B. Solenoid Pin
C. Ice Chute Link
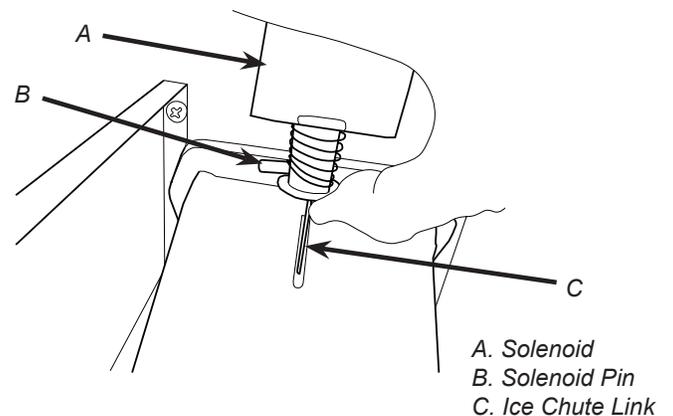
14. Remove the Ice Chute Assembly by removing four (4) screws that secure to unit and set aside.

15. Remove Auger by pulling straight out from unit and set aside.

A. Auger Motor
B. Remove Screws
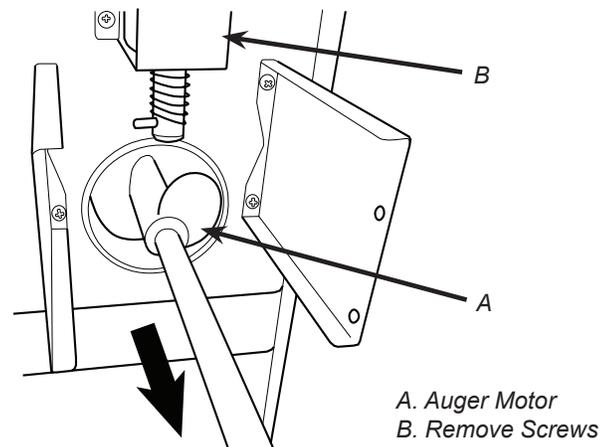
16. Remove Agitator Clip and Pin from Agitator bar in Ice Bin.

A. Agitator Clip/Pin
B. Hub
C. Agitator Bar
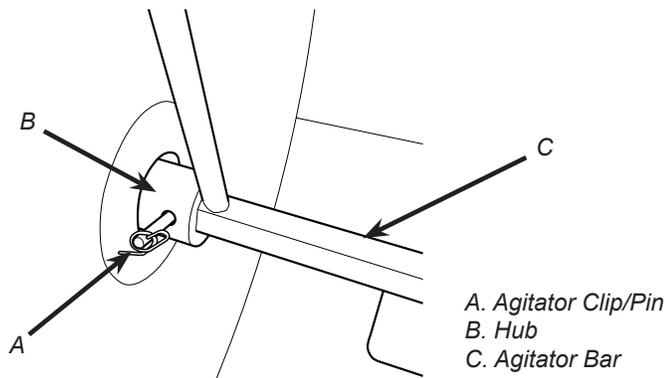
17. Remove the Agitator bar and Hub from the Ice Bin.

18. Using the Cleaning Solution (page 18) and a clean cloth or soft brush, clean the Ice Chute Assembly, Ice Shroud, Auger, all sides of the Ice Bin, and surface of the aluminum casting.

19. Using the Cleaning Solution and the sponge brush provided, clean all interior surfaces of the ice chute and the ice chute feed through.

20. Using hot water, thoroughly rinse away the cleaning solution.

21. Wearing sanitary gloves, use a clean cloth or towel and the Sanitizing Solution (page 18) to wash all surfaces of removable parts, sides of the Ice Bin, and surface of the aluminum casting.

22. Using the Sanitizing Solution and the sponge brush provided, clean all interior surfaces of the ice chute and the ice chute feed through.

23. Wearing sanitary gloves, reassemble all removable parts. Ensure agitator clip is locked.

24. Fill unit with ice and replace Top Cover.

25. Reconnect dispenser to power source.

Cleaning & Sanitizing Syrup Lines - Bag in Box

1. Disconnect syrup lines from BIB's

2. Place syrup lines, with BIB connectors and any adapters, in a bucket of warm water.

3. Activate each valve to fill the lines with warm water and flush out syrup remaining in the lines.

4. Prepare Cleaning Solution described on previous page 18.

5. Place syrup lines, with BIB connectors and any adapters, into cleaning solution.

6. Activate each valve until lines are filled with cleaning solution then let stand for ten (10) minutes.

7. Flush out cleaning solution from the syrup lines using clean, warm water.

8. Prepare Sanitizing Solution described on page 18.

9. Place syrup lines into sanitizing solution and activate each valve to fill with sanitizer. Let sit for ten (10) minutes.

10. Reconnect syrup lines to BIB's and draw drinks to flush solution from the dispenser.

11. Taste the drink to verify that there is no off-taste. If off-taste is found, flush syrup system again.

⚠ **CAUTION**

Following sanitation, rinse with end-use product until there is no aftertaste. Do not use a fresh water rinse. This is a NSF requirement. Residual sanitizing solution left in the system creates a health hazard.

Dispenser Disposal

To prevent possible harm to the environment from improper disposal, recycle the unit by locating an authorized recycler or contact the retailer where the product was purchased. Comply with local regulations regarding disposal of the refrigerant and insulation.

PLUMBING DIAGRAM

Drive Thru Solution Unit Plumbing Diagram

LANCER
RECOMMENDED PLUMBING

| A1 | A2 | A3 | A4 | | A5 | A6 | A7 | A8 |

| S16 | S15 | S14 | S11 | S9 | | S8 | S6 | S3 | S2 | S1 |

| CW | | S13 | S12 | S10 | PW | | PW | S7 | S5 | S4 | CW |

LEFT NOZZLE

RIGHT NOZZLE

| PW IN | CW IN | S1 IN | S2 IN | S3 IN | S4 IN | S5 IN | S6 IN | S7 IN | S8 IN | S9 IN |

| S10 IN | S11 IN | S12 IN | S13 IN | S14 IN | S15 IN | S16 IN |

CO2 INLET

| A1 | A2 | A3 | A4 |

| A5 | A6 | A7 | A8 |

A: Ambient Syrup Lines   S: Chilled Syrup Lines

PLUMBING DIAGRAM PN: 06-4131
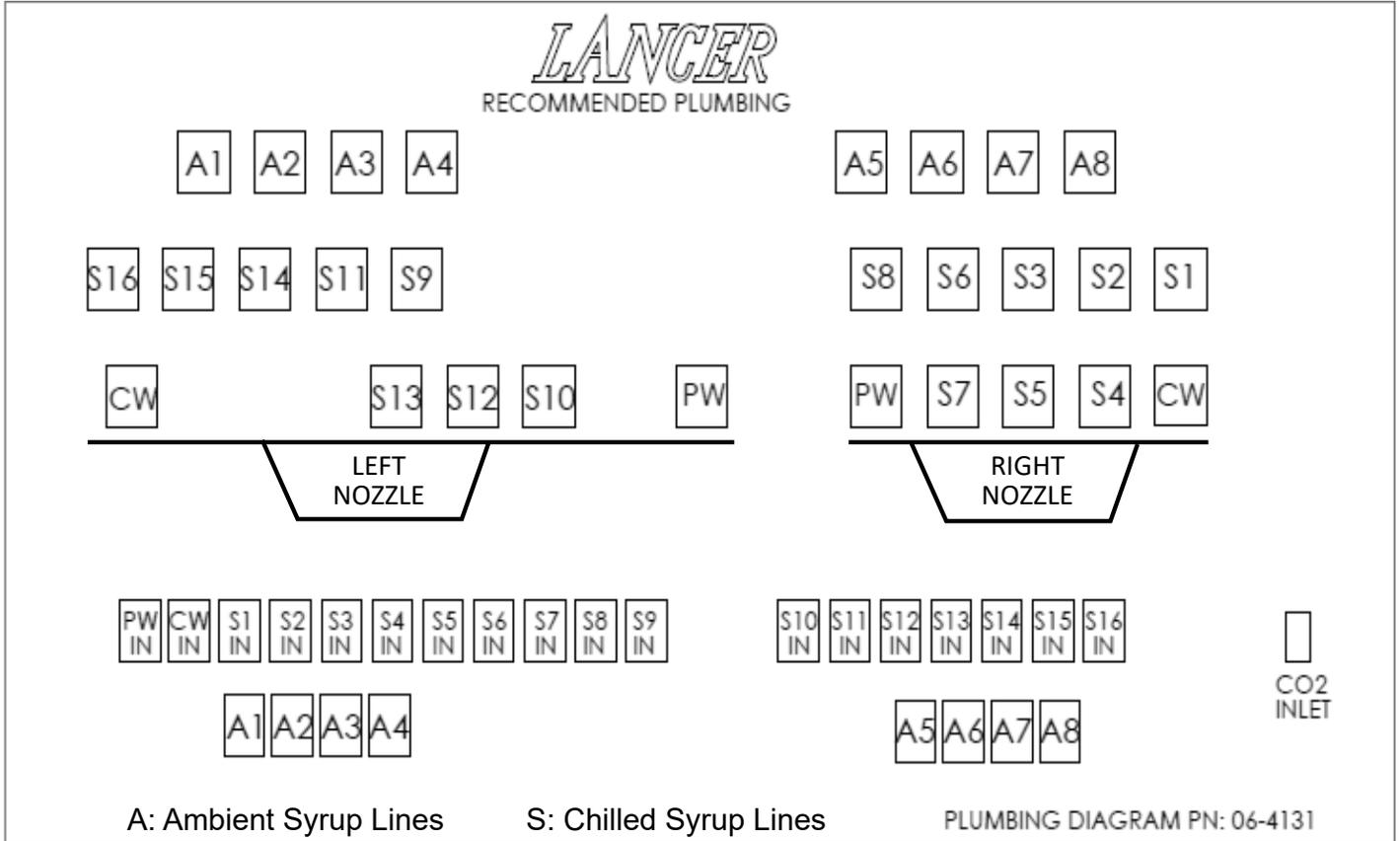
WIRING DIAGRAMS

Drive Thru Solution Unit Wiring Diagram
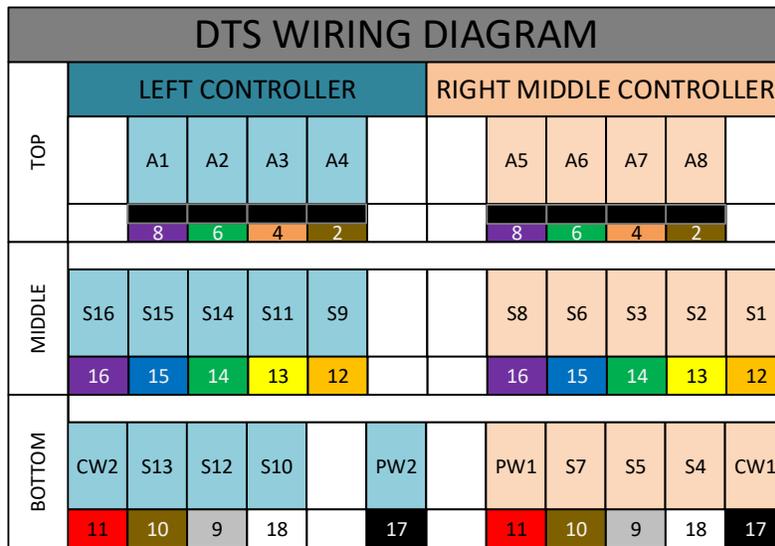
14 valves each side
4 ambient
8 syrups
1 plain water
1 carb water

DTS WIRING DIAGRAM

		LEFT CONTROLLER					RIGHT MIDDLE CONTROLLER				
TOP		A1	A2	A3	A4		A5	A6	A7	A8	
		8	6	4	2		8	6	4	2	
MIDDLE		S16	S15	S14	S11	S9	S8	S6	S3	S2	S1
		16	15	14	13	12	16	15	14	13	12
BOTTOM		CW2	S13	S12	S10	PW2	PW1	S7	S5	S4	CW1
		11	10	9	18	17	11	10	9	18	17

BLK VIO		BLK GRN		BLK ORG		BLK BRN
8	7	6	5	4	3	2	1
A1		A2		A3		A4

PUR	BLU	GRN	ORG	ORG	RED	BRN	GRY	WHT	BLK
16	15	14	13	12	11	10	9	18	17
S16	S15	S14	S11	S9	CW2	S13	S12	S10	PW2

BLK VIO		BLK GRN		BLK ORG		BLK BRN
8	7	6	5	4	3	2	1
A5		A6		A7		A8

| PUR	BLU	GRN	ORG	ORG	RED	BRN	GRY	WHT	BLK
16	15	14	13	12	11	10	9	18	17
S8	S6	S3	S2	S1	PW1	S7	S5	S4	CW1

Unit Wiring Diagram - 115 Volt
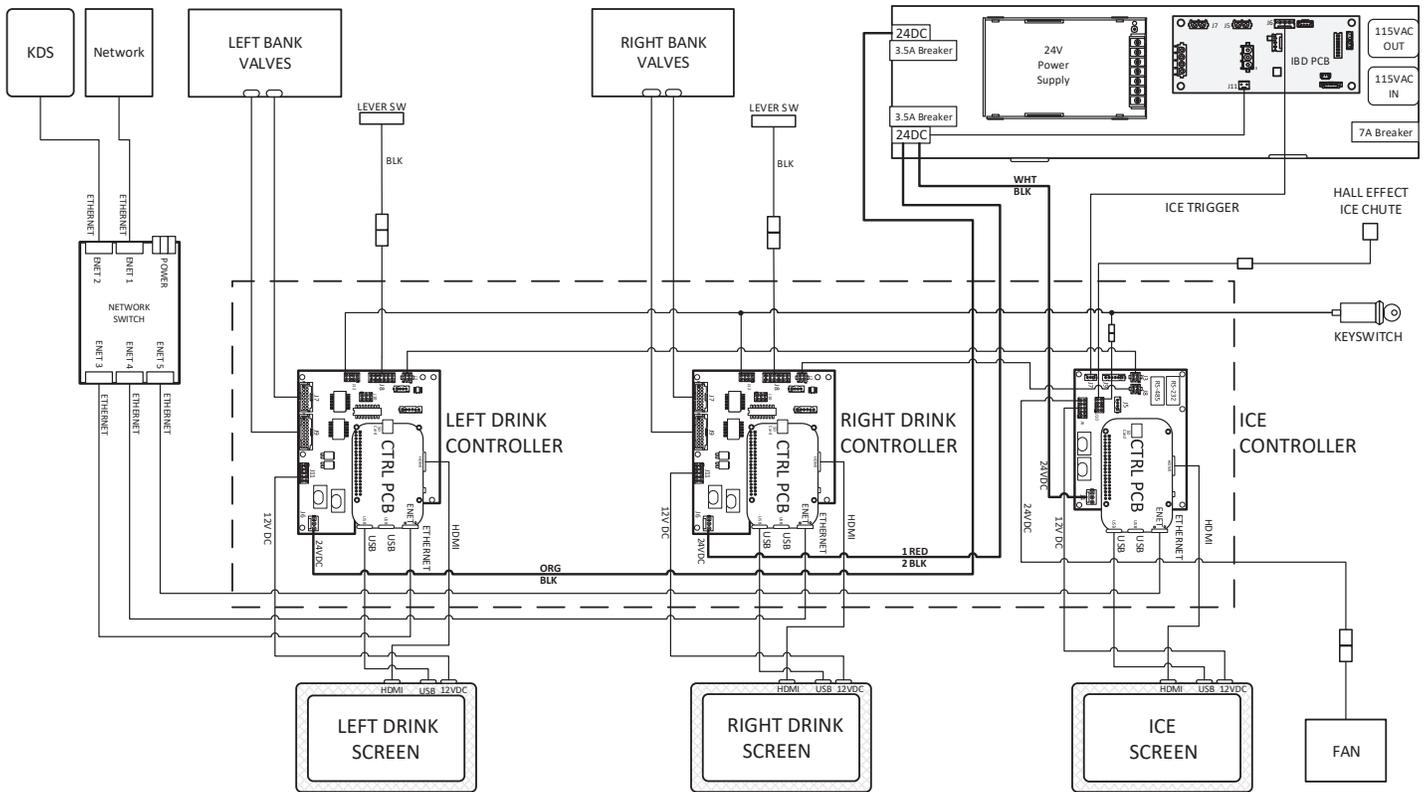
Portion Control Wiring Diagram - 115 Volt
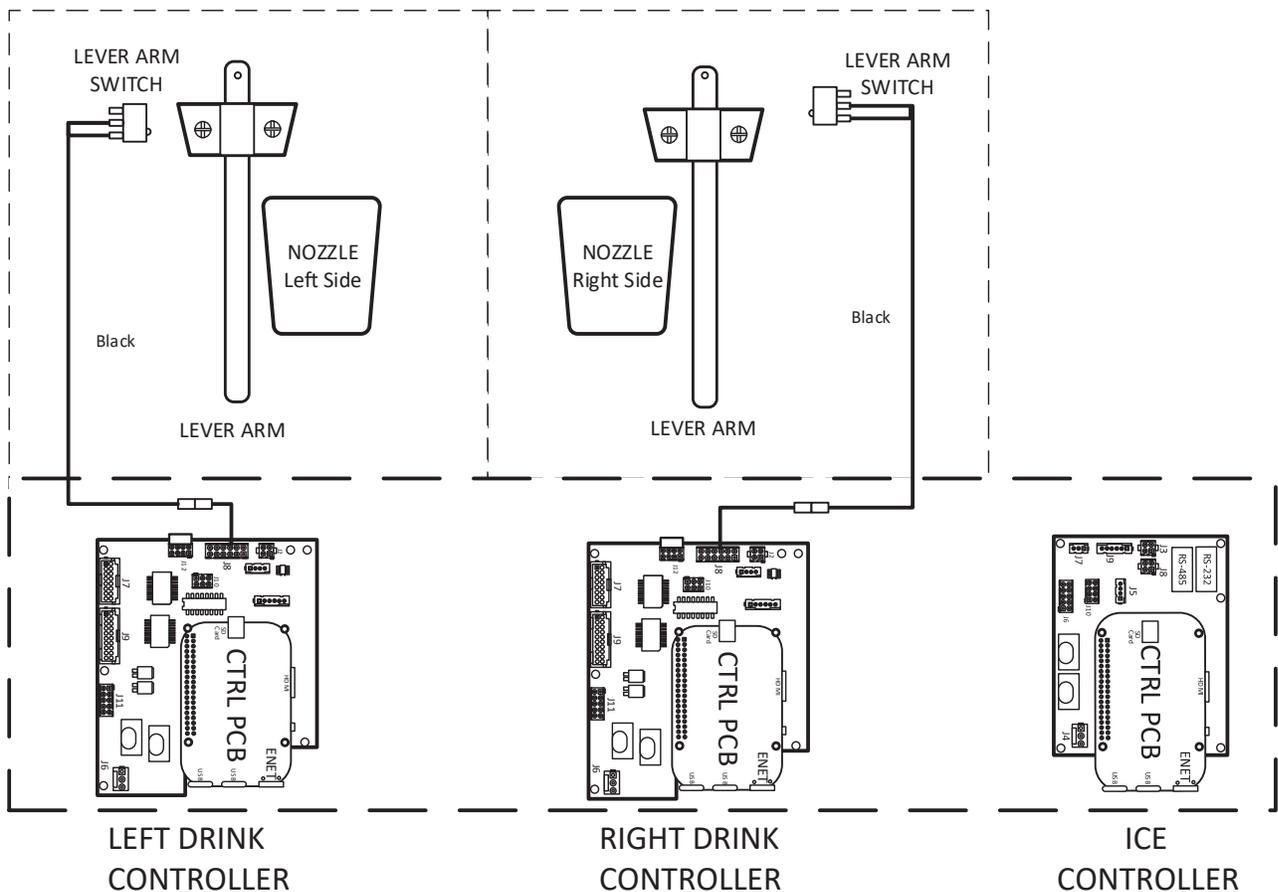
# Power Supply Wiring Diagram - 115 Volt
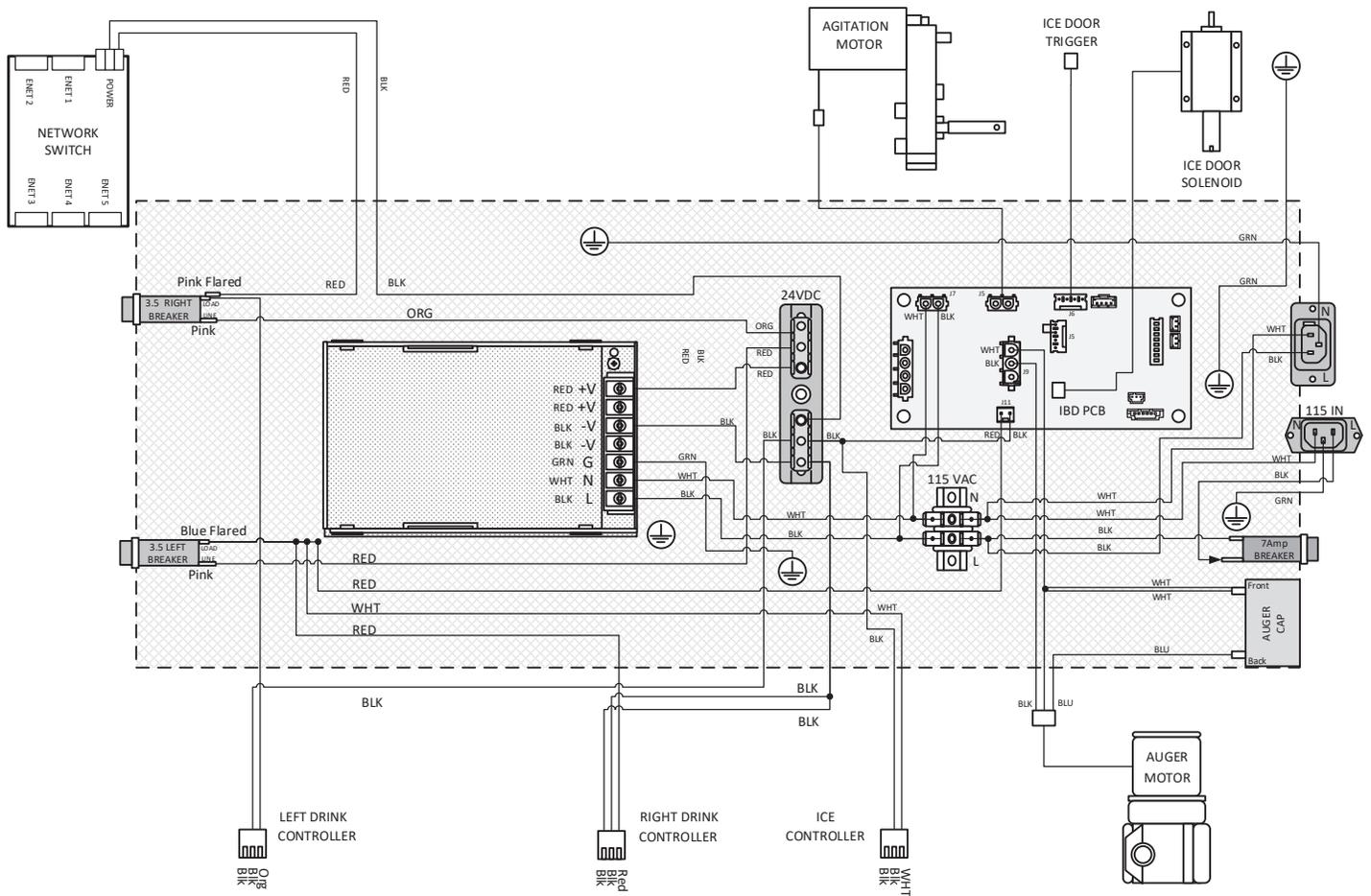
DIP Switch Legend

SW1

SWITCH #		AUTO AGITATE OFF TIME
3	4	
*OFF	OFF	NO AUTO AGITATION
OFF	ON	20 MINUTES
ON	OFF	40 MINUTES
ON	ON	60 MINUTES

SWITCH #		AGITATOR ON TIME
5	6	
OFF	OFF	11 SECONDS
OFF	ON	9 SECONDS
*ON	OFF	7 SECONDS
ON	ON	5 SECONDS

SWITCH #		AUGER RUN TIME
7	8	
OFF	OFF	6 SEC DISPENSED
OFF	ON	9 SEC DISPENSED
*ON	OFF	12 SEC DISPENSED
ON	ON	15 SEC DISPENSED

SW2 SWITCH 1: MUST BE ON FOR MODEL 4900
SW2 SWITCH 2: POSITION DOES NOT MATTER
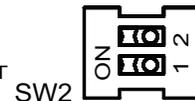
SW1 SWITCH 1: NOT USED FOR MODEL 4900
SW1 SWITCH 2: NOT USED FOR MODEL 4900
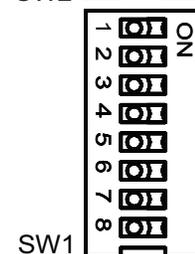
LANCER PN: 06-3289/01

*= DENOTES DEFAULT

LANCER
W O R L D W I D E

6655 Lancer Boulevard
San Antonio, TX 78219
lancerworldwide.com