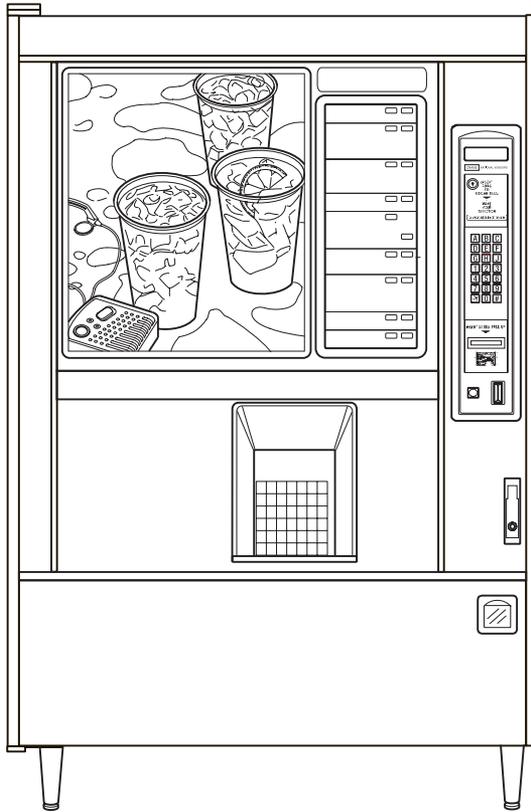


Model 327, 328

# Cold Drink Center



## Operators' Guide

**CRANE NATIONAL VENDORS**

12955 Enterprise Way  
Bridgeton, Missouri 63044-1200  
(314) 298-3500  
[www.nationalvendors.com](http://www.nationalvendors.com)  
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3270004

This machine has been engineered to our own rigid safety and performance standards. It has been designed to comply with sanitation and health guidelines recommended by the Automatic Merchandising Health-Industry Council (AMHIC) and it conforms with all other NAMA safety recommendations.

This machine has been manufactured in accordance with the safety standards of both Underwriter's Laboratories and the Canadian Standards Association. To maintain this degree of safety and to continue to achieve the level of performance built into this machine, it is important that installation and maintenance be performed so as to not alter the original construction or wiring and that replacement parts are as specified in the ***Parts Manual***. Your investment in this equipment will be protected by using this ***Operatos's Guide*** and the ***Parts Manual*** in your operation, service and maintenance work. By following pre-scribed procedures, machine performance and safety will be preserved.

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## **I. INITIAL SET-UP**

### **A. Power Requirements**

This merchandiser requires power as shown in the following table. NOTE: Each merchandiser should have its own electrical circuit.

**Table 1. Power Requirements**

| <b>Country</b>           | <b>Volts</b> | <b>Frequency (Hz)</b> | <b>Current (Amps)</b> |
|--------------------------|--------------|-----------------------|-----------------------|
| U.S., Mexico, and Canada | 115          | 60                    | 20                    |
| International            | 230          | 50                    | 13 - 16               |

This merchandiser is supplied with a service cord for the country of use and is terminated in a grounding type plug. The wall receptacle used for this merchandiser must be properly polarized, grounded, and of the correct voltage. Operating the merchandiser from a source of low voltage will VOID YOUR WARRANTY. Each merchandiser should have its own electrical circuit and that circuit should be protected with a circuit breaker or fuse conforming to local regulations.

**Voltage Check** - Place the leads of a voltmeter across the LINE (LIVE) and NEUTRAL terminals of the wall receptacle. The voltmeter should indicate 110-130 volts ac for 120 volt, 60 Hz locations, or 220-240 volts ac for 230 volt, 50 Hz locations.

**Polarity Check** - Place the leads of a voltmeter across the LINE (LIVE) and GROUND terminals of the wall receptacle. The voltmeter should indicate 110-130 volts ac for 120 volt, 60 Hz locations, or 220-240 volts ac for 230 volt, 50 Hz locations.

**Noise Potential Check** - Place the leads of a voltmeter across the NEUTRAL and GROUND terminals of the wall receptacle. The voltmeter should indicate 0 volts ac. A measurement greater than 1.5-2.0 volts ac could result in problems for the merchandiser's electronic circuitry caused by electrical noise.

Any deviation from these requirements could result in unreliable performance from your merchandiser.

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## **B. Water Requirements**

If your location has chemically softened water, one of the following steps is advised:

- Have a non-softened supply line run to the merchandiser
- Contact your local water filter supplier for information and suggestions

Well water can also be used in the Cold Drink Center. However, you should have it checked for levels of carbonates and alkalies. Contact your water filter supplier if these values are relatively high.

## **Water Pressure**

Minimum water pressure: 20 psi (138.0 KPa) at 1/2 gallon/minute

Maximum water pressure: 80 psi (522.0 KPa) at 1/2 gallon/minute

## **Supply Line Requirements**

Locate supply line at the rear of the merchandiser.

Equip the line with a shut-off valve.

## **Flushing Water Supply Line**

Flush the water supply line before connecting it to the merchandiser. A minimum of five gallons is usually required before connecting the merchandiser to the supply line. **DO NOT** flush the merchandiser water system to avoid introducing possible water line contaminants into the merchandiser.

## **C. Positioning The Merchandiser**

You can position this merchandiser anywhere in a bank of machines. It can even be placed on the end flush against a side wall.

Leave enough room in front of the merchandiser for the door to move freely.

**BE SURE THE REAR OF THE MERCHANDISER IS AT LEAST 6" AWAY FROM THE WALL. THIS WILL ENSURE WARM MOIST AIR IS VENTED OUT OF THE MACHINE'S INTERIOR AND THE REFRIGERATOR CONDENSER FAN IS NOT OBSTRUCTED.**

### **WARNING**

This machine is only rated for installation in an indoor location.

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## D. Final Installation

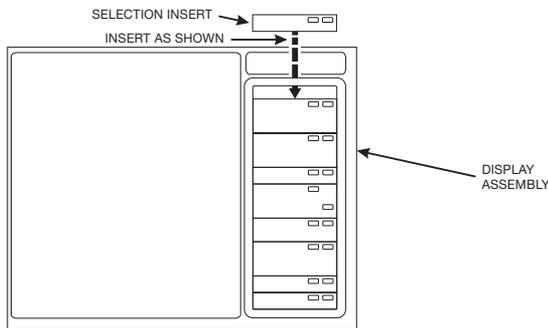
1. Connect the merchandiser to the water supply:
  - a. You will need the following:
    - A coil of copper tubing with outside diameter of 3/8 inch (9.5 mm) or greater. The appropriate plastic tubing may be substituted.
    - A 3/8 inch (9.5 mm) flare nut. A 3/8 inch (9.5 mm) male flare is provided.
  - b. Connect the merchandiser to your water supply.
2. Connect the merchandiser to the power source:

Power to the merchandiser is controlled by the main power switch, located on the power panel.

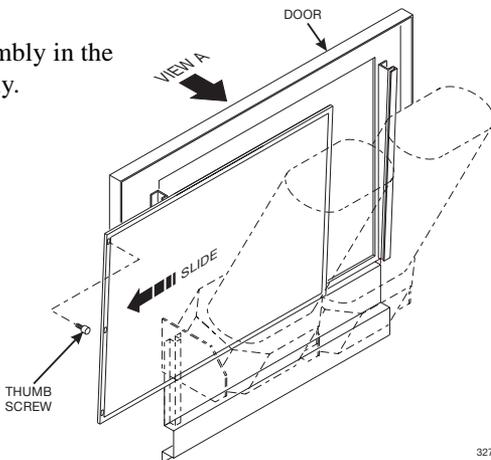
- a. Make sure the main power switch is **OFF**.
  - b. Connect the merchandiser's power cord to your wall outlet.
3. Using a spirit level, level the merchandiser front to back and side to side.
  4. Set up the menu assembly:

bly:

- a. Swivel the cup turrets away from the door.
- b. Remove the thumb screws as shown, and slide out the menu assembly.



- c. Install selection inserts as shown.
- d. Reinstall the menu assembly in the reverse order of assembly.



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**BRAND NAME LABELS FOR COLD DRINK SELECTIONS ARE AVAILABLE FROM THE FOLLOWING SOURCES:**

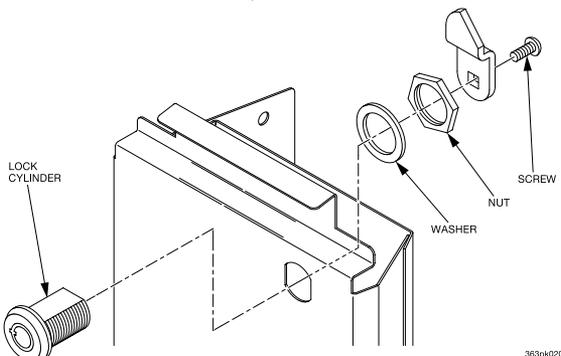
National Beverage Screen Printers  
609 East Main Street  
Williston, SC 29853-5272  
Outside South Carolina call: 1-800-325-9021  
Inside South Carolina call: 1-803-266-5272  
Fax: 1-803- 266-5301

The suggested style is: NBS-57  
Size: .81 x 2.62

5. Load the coin mechanism:
  - a. Open the cabinet door and the monetary door.
  - b. Insert coins into their respective tubes until each tube has been filled.
  - c. Inspect the tubes for shingled coins and correct if necessary.

## E. Install Options

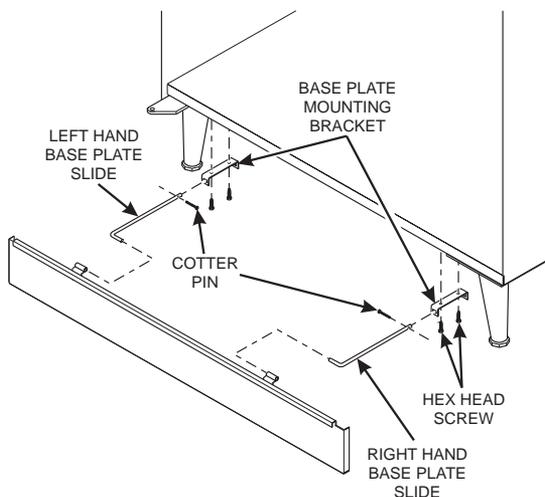
1. Install the coin box lock:
  - a. Install the lock cylinder, washer, and nut in the order shown.
  - b. Tighten the nut.
  - c. Install the lock bar as shown, and secure with the screw.



2. Mount the base plate brackets:
  - a. Secure a base plate bracket at each of the remaining pairs of holes with two of the hex head screws.

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3. Mount the base plate and slides:
  - a. Insert the short arm of the slides into the hinged tabs of the base plate. Position the slide so the notch near the short arm is on the bottom side.
  - b. Insert the long arms of the slides into the base plate brackets.
  - c. Insert a cotter pin through the hole in the back end of each slide. Secure the pins in place.
  - d. Push the base plate toward the merchandiser cabinet. The front tab of the base plate bracket should seat in the notch in the long arm of the base plate slides.



## **CAUTION**

The mounting brackets are subject to damage when moving the machine with a fork lift.

**Remove the brackets prior to moving the machine with a fork lift to prevent damage.**

4. Install the water filter cartridge:

**IF YOUR MERCHANDISER HAS THE WATER FILTER OPTION, IT CANNOT BE OPERATED WITHOUT A PROPERLY INSTALLED WATER FILTER CARTRIDGE.**

## **NOTE**

Check the water filter installation record. There is a place to write the vend number on the cartridge. Local conditions may require more frequent replacement.

- a. Your filter cartridge is shipped inside the waste pail. Locate it and remove the wrapping.
- b. Install the filter in accordance with the appropriate procedure:

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## EVERPURE WATER FILTER INSTALLATION

### NOTE

Check the water filter installation record. There is a place to write the vend number on the cartridge. The cartridge is effective for a maximum of 10,000 18 oz. vends, 11,000 16 oz. vends, 15,000 12 oz. vends, or 20,000 9 oz. vends. Local conditions may require more frequent replacement.

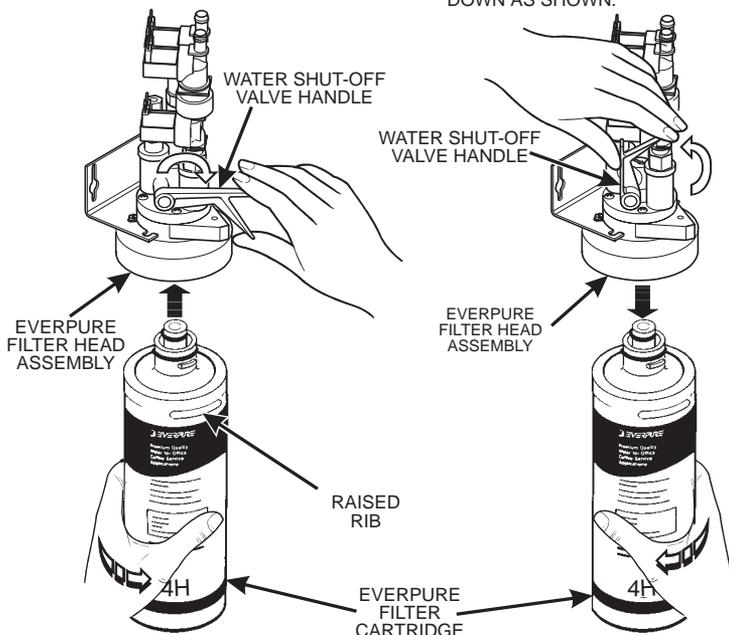
- Your filter cartridge is shipped inside the waste pail. Locate it and remove the wrapping.
- Gain access to the water filter head assembly, located at the cabinet back wall above the water bath.
- Install the filter as shown.

#### TO INSTALL FILTER:

- ALIGN RAISED RIB ON FILTER CARTRIDGE WITH MATING SLOT IN HEAD ASSEMBLY.
- FIRMLY INSERT FILTER CARTRIDGE INTO HEAD ASSEMBLY AND ROTATE COUNTER-CLOCKWISE 1/4 TURN TO THE STOP.
- OPEN THE WATER SHUT-OFF VALVE BY PUSHING THE HANDLE TO THE HORIZONTAL POSITION AS SHOWN BELOW.

#### TO REMOVE FILTER:

- CLOSE THE WATER SHUT-OFF VALVE BY LIFTING THE HANDLE TO THE VERTICAL POSITION AS SHOWN BELOW.
- ROTATE THE FILTER CLOCKWISE AND PULL DOWN AS SHOWN.



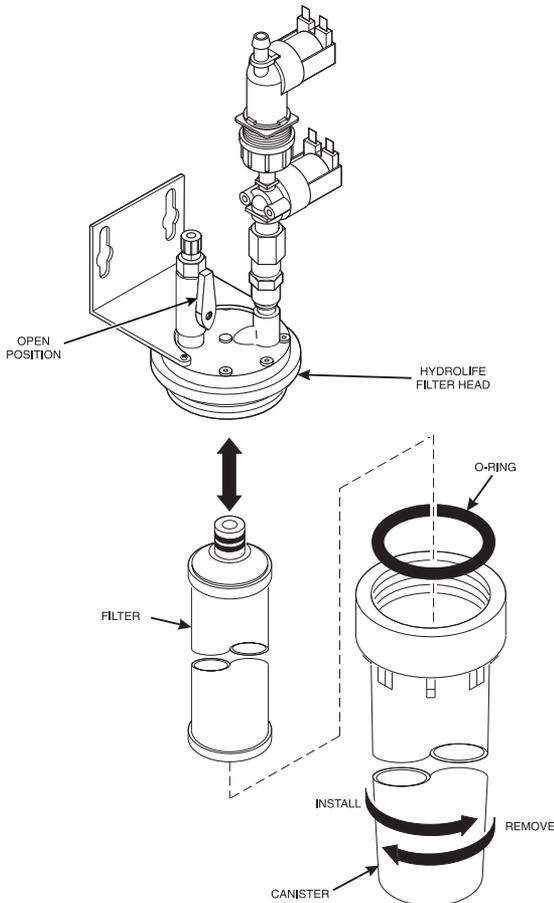
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## **HYDROLIFE FILTER INSTALLATION**

- Place the filter inside the canister. Be sure the o-ring is seated in the canister just below the threads.
- Screw the canister and filter assembly onto the filter head until it comes to a stop.
- Open the water valve on the inlet line by rotating the handle to the vertical position as shown.

## **HYDROLIFE FILTER REMOVAL**

- Close the valve on the inlet line by rotating the handle into the horizontal position as shown.
- Relieve water pressure by performing two or three water throws (see the programming section).
- Unscrew the filter and canister assembly from the filter head. Remove the filter from the canister.



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## **F. Get The Machine Ready To Vend Drinks**

1. Fill the water bath:
  - a. Open the convenience valve.
  - b. Fill the water bath level with the carbonator top, or until water runs out the water bath overflow tube.
2. Load and set up cold drink products:

### **Bag-in-box machines:**

- a. Place the bag-in-box containers on the left hand side of the cabinet with the fittings facing up.
- b. Connect the syrup lines to the bag-in-box containers. Note that the syrup lines are marked with the numbers **1** through **8**. These correspond to the pumps, which provide syrup for selections **A** through **H**, respectively. Make sure the bag-in-box containers you have installed agree with these markings.
- c. Place connectors inside box.

### **Syrup tank machines:**

- a. Load syrup into the tanks.
- b. Insert the syrup dip tubes into the tanks and place the lids on the tanks. Note that the syrup lines are marked with the numbers **1** through **8**. These correspond to the pumps, which provide syrup for selections **A** through **H**, respectively. Make sure the bag-in-box containers you have installed agree with these markings.

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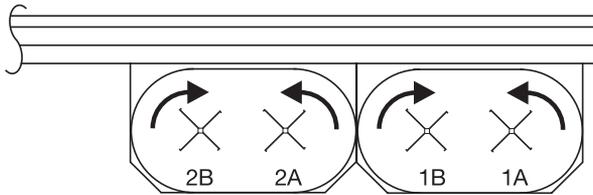
3. Load the cup mechanism:

## **CAUTION**

Use cups which have been designed for use in a cold beverage vending machine. Do **NOT** use cups made of clear (transparent) material.

For single cup size machines, the same size cups must be loaded in turrets 1A, 1B, 2A, and 2B. For dual cup size machines, small cups are loaded in turrets 1A and 1B; large size cups are loaded in turrets 2A and 2B. **The size of cup you load, and its location, must agree with the available cup mechanisms and the cup size that you select during programming. Refer to the programming section (and the section on cup mechanisms earlier in this guide) for more information.**

- a. Support the cup mechanism in the upright position.
- b. Push the latch forward to release the cup mechanism. Continue to support the cup mechanism while you lower it into the loading position.
- c. Remove the turret cover.



327p0006

## **OBSERVE PROPER HYGIENE - DO NOT TOUCH THE CUPS!**

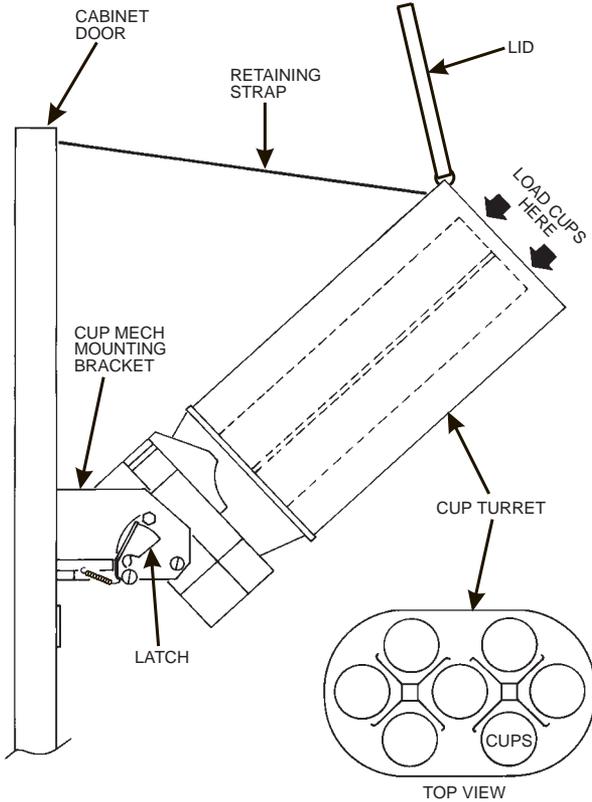
- d. Open the bottom of the wrapper on a stack of cups.
- e. Insert the wrapped cups into the turret and pull the wrapper out.

**DO NOT FILL CUPS ABOVE THE LEVEL MARKED ON THE OUTSIDE OF THE CUP TURRETS OR ABOVE THE "FILL LINE" LABEL INSIDE EACH TURRET, OR MOTOR JAMS WILL OCCUR.**

**USE ONLY THE SAME SIZE AND BRAND OF CUPS IN EACH TURRET; DO NOT INTERMIX!**

# Cold Drink Center (327/328) Operator's Guide

- f. Replace the turret cover after the turrets have been loaded.
- g. Be sure the cup mechanism is locked into the upright position.



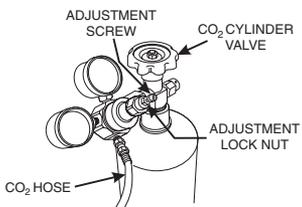
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## 4. Set up the CO<sub>2</sub> tank:

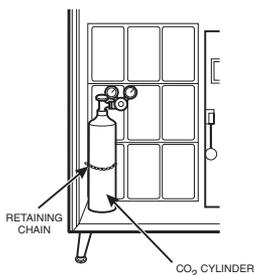
### WARNING

A full CO<sub>2</sub> tank can be dangerous if it is dropped or mishandled. Handle it with care and keep the tank lid in place until the tank is properly secured in the merchandiser.

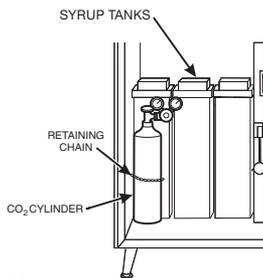
- a. Place the power switch in the OFF position.
- b. Install a full CO<sub>2</sub> tank on the merchandiser as shown. Secure the CO<sub>2</sub> tank with the retaining chain. (Note the various retaining chain configurations.)



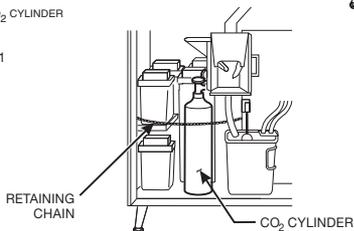
(REAR OF TANK SHOWN)



LOCATION 1



LOCATION 1



LOCATION 2

327p0008

- c. Remove the CO<sub>2</sub> tank lid. Briefly open and close the CO<sub>2</sub> cylinder valve to blow out any foreign matter.
- d. Locate the CO<sub>2</sub> regulator and flat plastic washer (in a box), and the tapered plastic washer (in plastic bag).

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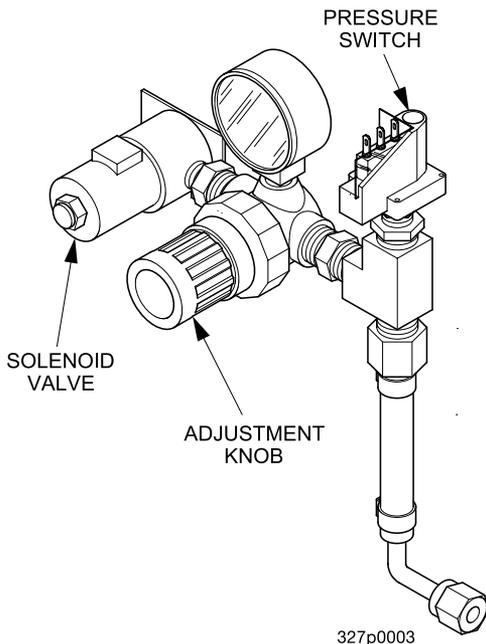
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- e. Connect the CO<sub>2</sub> hose from the secondary regulator tee fitting to the regulator. Firmly tighten the fitting.

### **WARNING**

Not using a wrench on the tank side may damage the CO<sub>2</sub> tank, resulting in personal injury.

- f. Using two wrenches, tighten the line to the regulator.
- g. Insert the flat washer into the regulator nut.
- h. Using two wrenches, connect the regulator to the tank outlet and tighten in place.
- i. Open CO<sub>2</sub> tank valve.
- j. Adjust the CO<sub>2</sub> regulator so that the gauge reads 60 PSI (4.10 bar).
- k. The secondary regulator is located behind the monetary panel on the right side of the cabinet. Adjust the secondary regulator to 40 PSI (2.76 bar).
- l. Lock the adjustment screw in place.
- m. Remove the water bath cover and actuate the pressure relief valve located on top of the carbonator tank for 3 to 5 seconds (see step 7).
- n. Check for gas leaks along the CO<sub>2</sub> line.



## ***BRIX***

Is the ratio of syrup to water in a cold drink machine. Also, to ***BRIX*** the machine is to set up that ratio.

### 5. Prime the Syrup System:

Before trying to ***brix*** the machine: Operate each syrup valve (increase flow) to flush any air or water out of the tubing, pump, or syrup system. This air and water is left in the system from factory leak testing and machine setup. If air passes through the syrup valve, syrup cannot, and the drink will be weak.

- a. Place a cup in the cup delivery compartment.
- b. Perform a syrup test throw. Refer to **Set Up a Cold Drink**, page 44 Measure the amount of syrup you get.
- c. Repeat step b until 1.7 oz (50 ml) of syrup (the proper amount of syrup for the 12 oz cup) is dispensed.
- d. Repeat steps a through c for all the remaining selections in the machine.
- e. Remove and discard the cup.

### 6. Test for Gas Leaks

Now that the pumps are primed, they will not pulse until syrup is called for. Test the lines for gas leaks as follows:

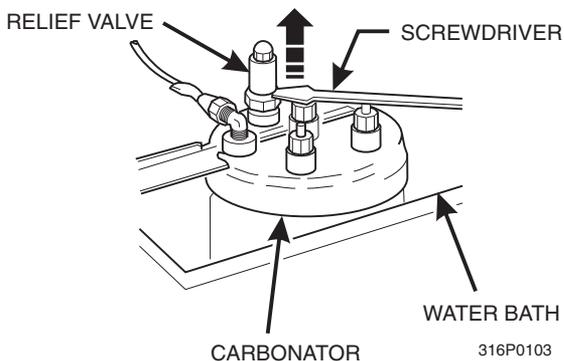
# ***Cold Drink Center (327/328) Operator's Guide***

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- a. Close the CO<sub>2</sub> cylinder valve.
- b. Observe the high pressure gauge. If the reading on the gauge decreases, there is a leak in the system.
- c. Locate the source of the leak and repair it.

## **7. Purge the Carbonator of Air**

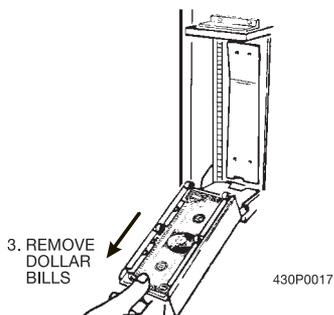
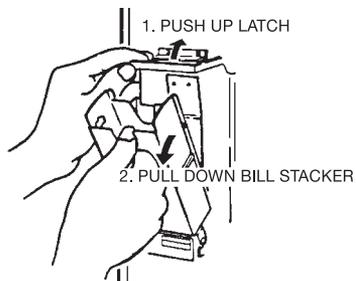
When a merchandiser is first put into service, air may be present in the carbonator. This air will not mix with the water, nor will it be absorbed into the water. As pressure builds up in the carbonator, the air will be trapped in the top of the carbonator and will prevent the carbonator from filling with water. The water pump will no longer be able to pump against this high pressure, and it will stop and display a **CARB LEVEL** diagnostic message. Purge the carbonator of any trapped air by lifting up on the pressure relief valve handle as shown. Once this condition is corrected, it will not happen again as long as the merchandiser is properly serviced.



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## **II. ADJUSTMENTS AND MINOR MAINTENANCE**

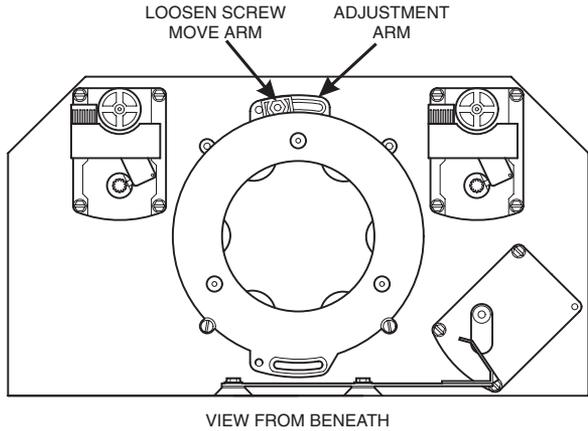
1. Emptying the bill stacker:



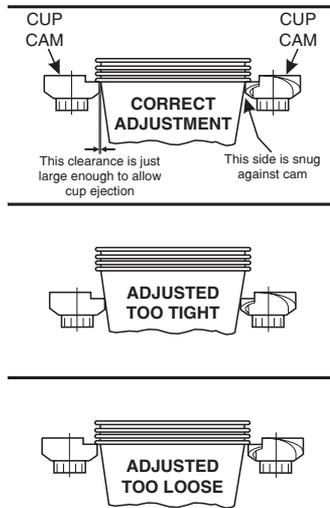
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2. Cup mechanism adjustment.
  - a. Place seven cups in the cup ring.
  - b. Observe the clearance as shown in view B.
  - c. If necessary adjust by first loosening the adjustment arm screw (view A).
  - d. Move adjustment arm until correct clearance is achieved.
  - e. Hold adjustment arm in place and tighten adjustment arm screw.

**View A**



**View B**



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## 3. Testing the water pump flow

The water pump should require between 13 and 21 seconds to completely refill the carbonator. To check the water flow, proceed as follows:

- a. Place a cup in the cup station and make sure the waste pail is in place.

- b. Press , then  until the display shows: *CARB TEST*.

- c. Press . The water pump starts, and the display shows *EMPTYING* while the carbonator dispenses, then shows *FILL XX* as the carbonator refills.

- d. After adjusting the flow, repeat step c until the desired time is achieved.

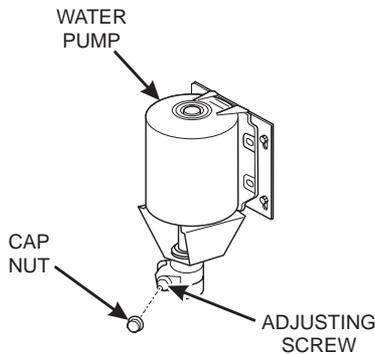
## 4. Adjusting the water pump flow:

- a. Remove the cap nut to expose the adjustment screw.  
b. Turn the adjustment screw:  
**CLOCKWISE** to decrease refill time.  
**COUNTERCLOCKWISE** to increase refill time.

### **CAUTION**

Failure to replace the cap nut will cause the water pump to leak.

- c. Replace the cap nut.



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## 5. Adjusting the water valve:

The water valves are located under the water bath cover.

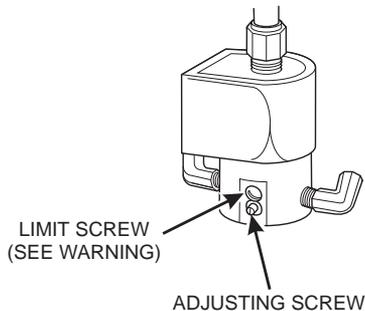
### WARNING

To prevent personal injury, only turn the adjusting screw when making adjustments. **DO NOT** loosen or remove the limit screw located above the adjusting screw.

### NOTE

See **Set Up a Cold Drink**, page 44, for the procedure and table for setting throws.

- a. Rotate the adjusting screw 1/8 turn:  
**CLOCKWISE** to decrease water throw.  
**COUNTERCLOCKWISE** to increase water throw.
- b. Repeat the testing steps until the water throw is as desired.



## 6. Testing the syrup throw:

- a. Place a graduated flask in the cup station.
- b. Refer to **Set Up a Cold Drink**, page 44, for information on how to set your syrup and perform test throws.
- c. Test throw syrup and compare the volume of syrup to the suggested volume in the table for the cup size being vended.
- d. If necessary, adjust the syrup valve to obtain the proper volume.
- e. Repeat steps c and d for all selections.

### HINT

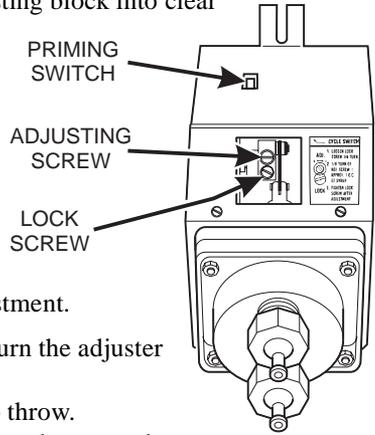
Software times do not control the output volume of diaphragm pumps; they simply start the motor. The output volume is controlled with a mechanical adjustment in the pump.

# Cold Drink Center (327/328) Operator's Guide

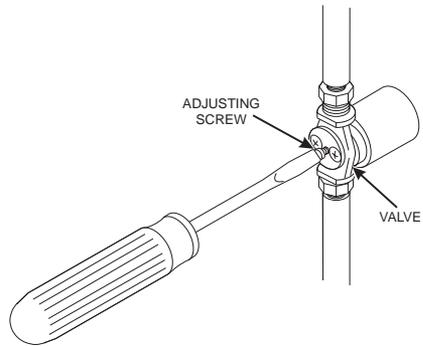
7. Adjusting the Syrup Throw (DIAPHRAGM PUMP):
  - a. Locate the adjusting block within the syrup pump. Momentarily activate the prime switch to put the adjusting block into clear view.

## CAUTION

When adjusting the crank arm adjuster screw, loosen the limit screw  $\frac{1}{4}$  turn only. Loosening the limit screw more than  $\frac{1}{4}$  turn may allow the adjuster screw to shift when the limit screw is tightened. This will result in an inaccurate adjustment.



- b. Loosen the limit screw  $\frac{1}{4}$  turn, then turn the adjuster screw:  
**CLOCKWISE** to decrease the syrup throw.  
**COUNTERCLOCKWISE** to increase the syrup throw.
    - c. Tighten the limit screw.
    - d. Repeat the test and adjustment procedure until the syrup throw is as desired.
    - e. Repeat the above steps for each syrup pump.
8. Adjusting the Syrup Throw (CO<sub>2</sub> PUMP)
  - a. Turn the adjustment screw:  
**CLOCKWISE** to decrease the volume.  
**COUNTERCLOCKWISE** to increase the volume.
  - b. Repeat step a for each pump.



# Cold Drink Center (327/328) Operator's Guide

## 9. Setting the icemaker water level:

A proper level should be maintained within the icemaker. To determine the water level, a label is located on the icemaker that indicates the proper level in the melt-down tube. The icemaker water level is dependent upon the feeder cup water level.

- Set the MAIN SWITCH to the **OFF** (down) position.
- Remove the water feeder cup cover.
- Adjust the float shaft bushing:  
**UP** - to raise the water level.  
**DOWN** - to lower the water level.
- Replace the water feeder cup cover.
- Check the new water level:
  - Set the MAIN SWITCH to the **ON** (up) position.

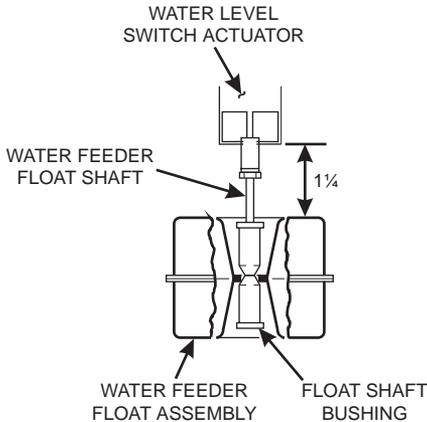
- Press , then  until the display shows *CARB TEST*.

- Press  to dispense still water; press  again to stop.

- Press . The feeder cup will refill after you leave the carbon-

ator test. When the feeder cup is full, press  to return to *CARB TEST*.

- When the water flow stops, check the water level in the melt-down tube.
- Repeat steps a through e until the water level is correct.

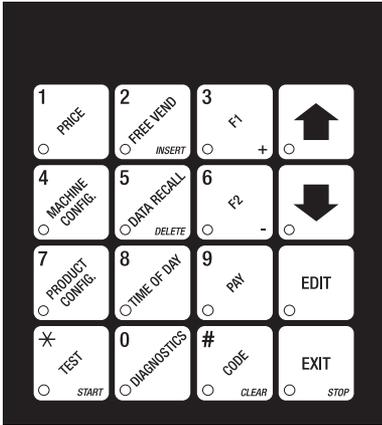


# Cold Drink Center (327/328) Operator's Guide

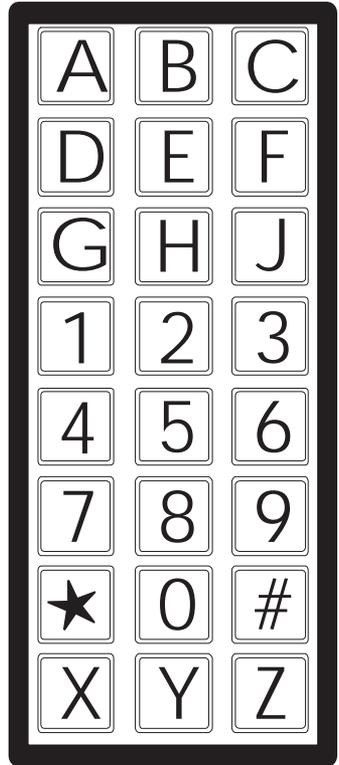
## III. PROGRAMMING

### How to program your Cold Drink Center

Some setup, test, and maintenance operations are computer controlled. The control panel switches and the selection panel switches regulate these operations.



Control Panel



Selection Panel

# Cold Drink Center (327/328) Operator's Guide

## A. The Displays

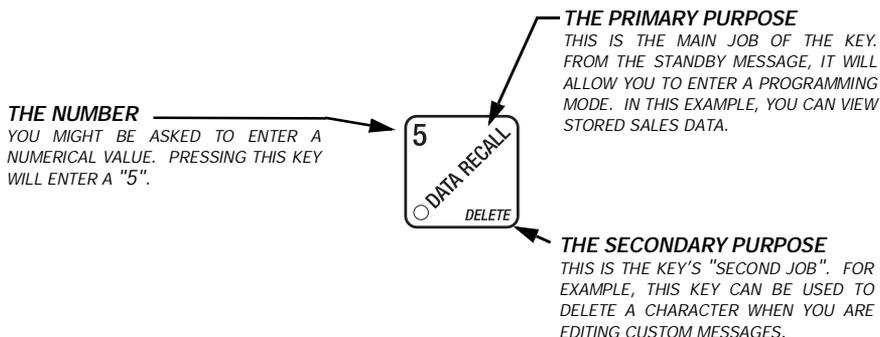
The 10-character display performs two functions, and is referred to in this book as "the display":

1. It shows the customer's selection and how much credit is in the machine, as well as the ready, service, and time of day messages.
2. It provides information and feedback to the service person during maintenance.



## B. The Function Keys

The keys on the control panel can be used for up to three things:



## C. Other Keys

The MOVEMENT keys on the control panel let you move inside a mode, and back and forth between modes. To see how these keys let you move around, study the flow diagram on the next page.



The up and down arrow keys are your "legs", which let you move up and down the list of tasks. These keys are what let you continue from one step to the next in programming procedures.



This is your "activate" or "choose" key. It "opens a door" to additional information and lets you begin a programming task once you are inside of a mode. Sometimes, it is used as a toggle switch to show you your choices during a programming task.



This is your "end" key. Pressing it one or more times will move you back to the start of the mode, or all the way back to the standby message.

## D. One Last Thing:

When you see the word **CONTINUE** at the end of a function, it means to press

until you return to the standby message.



# Cold Drink Center (327/328) Operator's Guide

## E. Control Panel Switch Functions Explained

Each of the control panel switches has one or more jobs to do. This list will give you a short overview of those jobs.



Press this button to put your machine into the Price Setting mode. You can see maximum and minimum machine prices, and change prices for entire machine, entire tray, or individual selection.



Press this button to select the Free Vend modes.



Press this button to view software version number, machine configuration, and active selection status.



Press this button to:

- Select display language
- Select monetary options
- Select coin mechanism bill validator, card reader, and options
- Set winner feature
- Set mug discount



Press this button to view total sales and vends by whole machine, selection, or drink size. Clear resettable data.



Press this button to:

- Download data into your portable data collection device (PDCD),
- OR**
- Set printer baud rate, depending upon which device you are using

Press this button to:

- Set machine configuration
- Set cup size
- Set up drinks



Press this button to:

- Set time of day and date
- Set up time of day intervals for inhibit, freevend, and discount vending
- Select display messages
- Edit messages



Press this button to pay one or more coins from the coin mechanism.



- Allows you to see any fault or condition that may place the machine out of service



Press this button to:

- Perform TEST VENDS
- Test various machine functions
- Test displays



Press this button to:

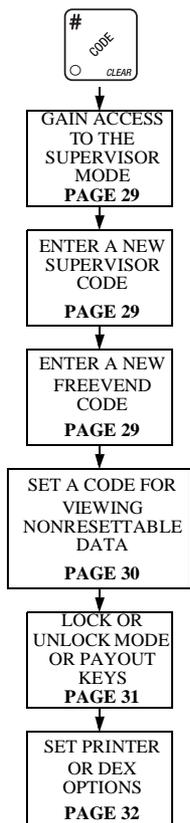
- Enter the SUPERVISOR mode
- Change the SUPERVISOR access code
- Lock and unlock access to functions
- Select printer or DEX operation

# Cold Drink Center (327/328) Operator's Guide

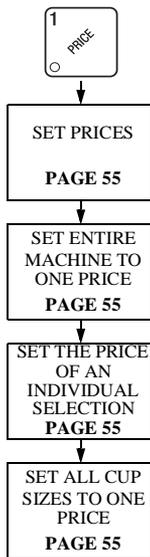
## F. Programming Flowcharts

The flowcharts on the following pages will provide you with a "map" to the different programming features of your machine. Once you are familiar with the detailed programming steps given later in this section, you can use the flowcharts as a shortcut. Each chart begins with the key you will use to access those steps. Follow the lines and arrows from one step to another.

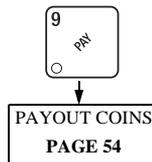
### Supervisor



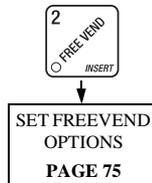
### Pricing



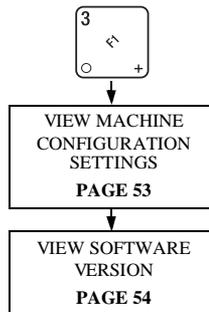
### Pay



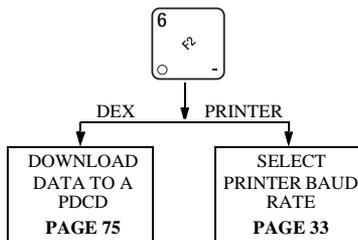
### Free Vend



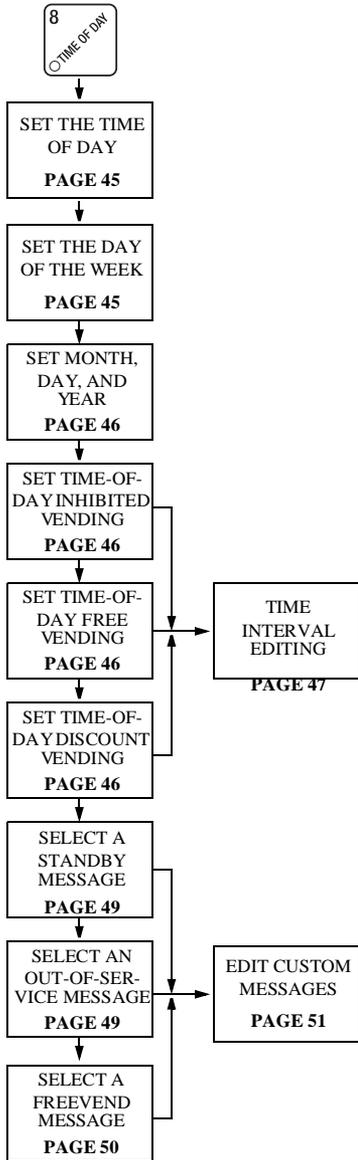
### Misc.



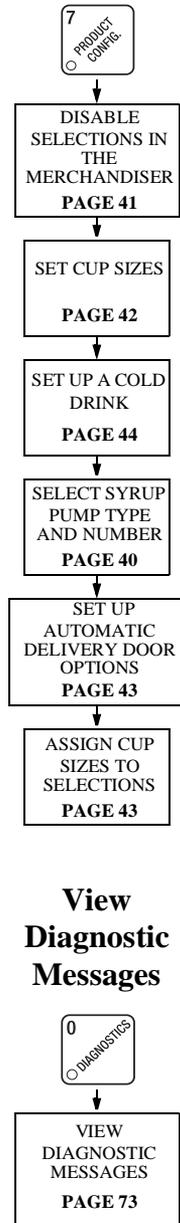
### DEX/Printer



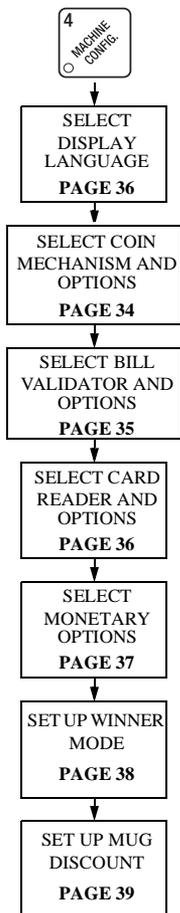
## Time of Day



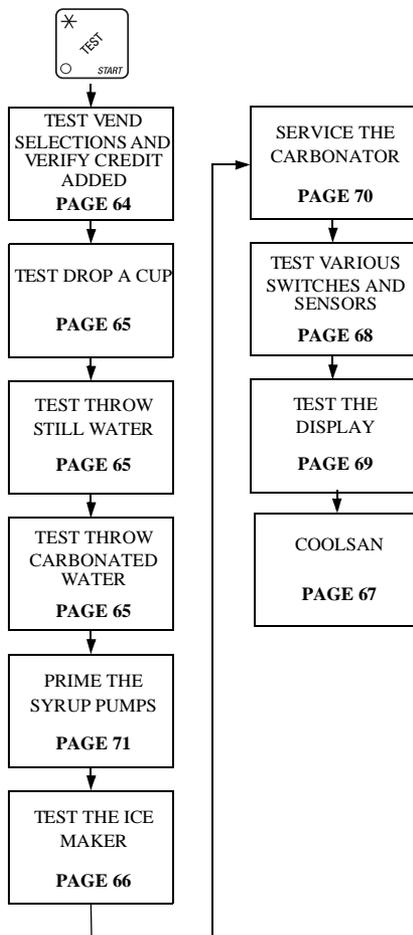
## Product Configuration



## Machine Configuration



## Tests



23, 31, 51-54



# Cold Drink Center (327/328) Operator's Guide

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## G. Programming Procedures

The pages that follow contain all the programming steps you will need for your merchandiser. Each procedure is presented so that it "stands alone". This means that you can look up a procedure, go directly to it, perform the procedure, quit the procedure then go on about your business.

However, after looking at the programming flowcharts, you should notice that

several procedures are grouped under each mode key (such as ) , and you can move between them by using the up and down arrow keys. Therefore, you don't have to exit a procedure before performing another one.

Most procedures respond to you the same way, like how to enter, leave, and move around inside them. Here is a short guide to help you through these common steps:

- To move directly from one procedure to another (provided they are both grouped under the same mode key), use  and .
- When you are finished with a function, you will want to CONTINUE. To do that, you can press  (you may have to press it more than once, depending on how far into a procedure you are). You can then perform another programming or maintenance function. If you are completely done with maintenance, just shut the merchandiser door.
- Text that looks like this: *DISPLAY* represents what you will see in the display on the monetary panel.
- Definitions and helpful information will appear in shadow boxes:

**HELPFUL HINT**

# Cold Drink Center (327/328) Operator's Guide

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## GAIN ACCESS TO THE SUPERVISOR MODE

1. Press . The display shows: *ENTER CODE*. You must enter the four-digit supervisor code within 6 seconds to gain access.

### NOTE

A new machine has a factory-set supervisor code of 0000.

When you have entered the right code, you will hear two beeps and see *UNLOCKED* in the display. After a few moments, the standby message returns.

2. At the standby message, press , then . You are now ready to perform various supervisor functions.



## ENTER A NEW SUPERVISOR CODE

1. If you already entered your supervisor code, skip to step 2. If not, follow the steps in **Gain Access To The Supervisor Mode**, page 29, then return here.
2. Press  until the display shows SUPER XXXX. The X's represent the current supervisor code. Use the number keys to enter a new code.

### IMPORTANT

If you enter a new code, be sure to keep a written record of it.  
There is no other way to access the SUPERVISOR mode.

3. CONTINUE.



## ENTER A NEW FREEVEND CODE

1. If you already entered your supervisor code, skip to step 2. If not, follow the steps in **Gain Access To The Supervisor Mode**, page 29, then return here.
2. Press  until the display shows *FREE XXXX*. The X's represent the current freevend code. Use the number keys to enter a new code.
3. CONTINUE.

## ***Cold Drink Center (327/328) Operator's Guide***

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### **SET A CODE FOR VIEWING NONRESETTABLE DATA**

Anybody can view nonresettable sales data without opening the machine door by entering a 4-digit code. This function allows the supervisor to set up that code number.

1. If you already entered your supervisor code, skip to step 2. If not, follow the steps in **Gain Access To The Supervisor Mode**, page 29, then return here.
2. Press  until the display shows *NR XXXX*. The X's represent the current code. Use the number keys to enter a new code, if desired. If the code is all zeros, this feature is disabled.
3. CONTINUE.

#### **To use:**

4. Enter the code. The display shows *NR\$ XXX.XX*. This is the total dollar amount of sales.
5. Press any key to clear the display.

# Cold Drink Center (327/328) Operator's Guide



## LOCK OR UNLOCK MODE OR PAYOUT KEYS

1. If you already entered your supervisor code, skip to step 2. If not, follow the steps in **Gain Access To The Supervisor Mode**, page 29, then return here.
2. Press  until the display shows either **#. LOCKED** or **#. UNLOCKED**.  
"#" is the  key. To see if another key is locked or unlocked, press that key.
3. Press  to change between locked and unlocked. When anyone other than the supervisor tries to enter a locked mode, the display shows **LOCKED**.

### NOTE

The following mode keys cannot be locked out:



4. CONTINUE.

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## SET PRINTER OR DEX OPTIONS

1. If you already entered your supervisor code, skip to step 2. If not, follow the steps in **Gain Access To The Supervisor Mode**, page 29, then return here.

2. Press  until the display shows one of the following:

*PRINTER* means that data will be sent directly to a printer. Skip to step 8,

- OR -

*DEX ONLY* means that data remains in memory after it is downloaded into a portable data collection device,

- OR -

*DEX + CLR* means that resettable data is cleared after it is downloaded into a portable data collection device (PDCD).

3. Press  to switch between the three choices.

4. Press  until the display shows one of the following:

*CA304=N.C* - transmits the value of bills in the stacker in a cash format (200 for two dollars)\*.

- OR -

*CA304=N.D* - transmits the value of bills in a dollar count format (2 for two dollars)\*.

5. Press  to switch between the two choices.

\* Check with your DEX host computer software supplier for the proper setting.

6. Press  until the display shows one of the following:

*LST.VND.ON* - transmits the date/time of the last vend for each selection,

- OR -

*LST.VND.OFF* - does not transmit the date/time of the last vend for each selection.

7. Press  to switch between the two choices.

8. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## LOCK OR UNLOCK DATA CLEARING ACCESS

1. If you already entered your supervisor code, skip to step 2. If not, follow the steps in **Gain Access To The Supervisor Mode**, page 29, then return here.

2. Press  until the display shows either *#. LOCKED* or *#. UNLOCKED*.

3. Press . The display will show either *5. LOCKED* or *5. UNLOCKED*.

**LOCKED** means that non-supervisors cannot clear resettable machine

sales and vend data from the  key.

4. Press  to switch between *5. LOCKED* and *5. UNLOCKED*.

### NOTE

The supervisor can clear data regardless of this setting, provided the supervisor code was correctly entered first.

5. CONTINUE.

---



## SELECT PRINTER BAUD RATE (PRINTER MODE ONLY)

### **BAUD RATE**

The speed of data transfer, expressed in bits per second. Your printer can receive data at a certain rate, and you must tell the machine what that rate is.

1. Press . One of the following is displayed:

*BAUD 1200 BAUD 2400 BAUD 4800 BAUD 9600*

2. Press  until the correct baud rate for your printer is displayed.

3. CONTINUE.

---

# Cold Drink Center (327/328) Operator's Guide

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## SELECT COIN MECHANISM AND OPTIONS

1. Press , then press  until the current **COIN MECHANISM** is shown in the display. Press  to choose the desired coin mechanism.

Your choices are: *DUMB MECH*, *MOB MECH*, *EXEC MECH*, or *NO MECH*.

2. Press  until the display shows *CHANGE X.XX*.

Coins and bills which are less than or equal to this value will be returned without a purchase being made.

Examples:

*CHANGED.00* - Forced vend; NO change returned without a purchase.

*CHANGE .25* - Nickels, dimes, and quarters returned without purchase.

*CHANGE1.00* - \$1 bills and SBAs will be returned as change without purchase. Nickels, dimes, and quarters are also returned.

3. Press  until the display shows: *LOW.MSG X.XX*. The display will show *USEEXACTCHANGE* when the amount of available change in the coin mechanism falls below the value of "**X.XX**". Enter a value with the number keys. For example, if *LOW.MSG 1.00* is displayed, the *USEEXACTCHANGE* message is displayed when less than a dollar's worth of change is in the coin mechanism.
4. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide



## SELECT BILL VALIDATOR AND OPTIONS

1. Press , then press  until one of the following is displayed:

*NO DBV*

- No bills will be accepted or there is no bill validator installed (you can exit the function).

*SER.1.2.5.10.20*

- The serial bill validator is selected and will accept \$1, \$2, \$5, \$10, and \$20 bills. Use **BILL SELECTION METHOD** below to change the bills which will be accepted.

- A standard MDB bill validator is selected. It will accept \$1, \$2, \$5, \$10 and \$20 bills. Use **BILL SELECTION METHOD** below to change the bills which will be accepted.

*MDB.1.2.5.10.20*

### **BILL SELECTION METHOD:**

The standard \$1, \$2, \$5, \$10 and \$20 bills are enabled by pressing the **1, 2, 5, 6, or 7** key(s), respectively, to display which bill(s) will be accepted.

*MDB. <\*>*

- An MDB bill validator which accepts non-standard bills or tokens is connected and operating. Press  to enter list of bills. (See **INITIAL SETUP OF NON-STANDARD BILL VALIDATOR:**, page 36.)

### **BILL LIST OPERATION:**

Use  and  to scroll through the list of bills.

Use  to turn the bill acceptance ON or OFF.

Use  to move up to the top level screen.

*1.1.00ON* - 1. = Bill validator channel 1, each bill has its own channel  
1.00 = Bill value ON = \$1.00 bill will be accepted

*1.1.00OFF* - OFF = \$1.00 bill will not be accepted

*TKN* - Token bills (same as coupon bills)

# Cold Drink Center (327/328) Operator's Guide

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## - INITIAL SETUP OF NON-STANDARD BILL VALIDATOR:

Connect the bill validator, select MDB in the bill validator selection screens. The standard "MDB.1.2.5.10.20" screen will appear first. Exit the bill validator setup by pressing . Bill information is now collected from the validator. Re-enter the bill validator selection screen and the non-standard screen "MDB. <\*>" will appear.

*PULSE DBV* - The pulse bill validator will accept \$1 bills.

Press  to choose the desired option.

2. CONTINUE.

---



## SELECT DISPLAY LANGUAGE

1. Press . The current LANGUAGE is shown in the display. Press

 to choose the desired language. Your choices are: *ENGLISH, DEUTSCH, FRANCAIS, ESPANOL, PORTUGUES, SWEDISH, or NEDERLANDS.*

2. CONTINUE.

---



## SELECT CARD READER AND OPTIONS

1. Press , then press  until the current card reader is shown in

the display. Press  to choose the desired card reader.

Your choices are: *NO CARD, DUMB CARD, or MDB CARD.*

2. Press  until one of the following is displayed:

*REVALUE.ON* - Allows credit to be transferred onto the card

*REVALUE.OFF* - Credit cannot be transferred to the card

Press  to display the desired choice.

3. CONTINUE.

---

# Cold Drink Center (327/328) Operator's Guide



## SELECT MONETARY OPTIONS

This function lets you:

- Set declining balance,
- Set currency acceptance on low change,
- Set overbuy options,
- Set last bill stacking options

**DECLINING BALANCE** One credit is established, multiple vends may occur until the coin return is pressed.

1. Press , then press  until one of the following is displayed:  
*DECLINE.ON* - More than one vend is allowed, with a declining balance.

- OR -

*DECLINE.OFF* - A declining balance is not allowed.

Press  to display the desired choice.

2. Press  until one of the following is displayed:

*ACC < \$\$ X.XX* -The last bill which meets or exceeds maximum price will be held in escrow.

- OR -

*ACC.STK X.XX* -The last bill which meets or exceeds maximum price and MDB coupon bills (token bills) will be immediately stacked.

**Example:** If setting is *ACC.STK 1.00* and maximum price is \$1.50. This setting will immediately stack the second \$1.00 bill inserted.

Press  to display the desired choice.

# Cold Drink Center (327/328) Operator's Guide

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The value of "X.XX" has two purposes:

- a. The value of "X.XX" tells the machine how big a bill or coin to accept even though there is not enough change in the coin mech to cover all possible paybacks.
  - For example, enter **1.00**. Therefore, the machine will take a dollar bill or coin even though there is less than \$1.00's worth of change. Entering **5.00** tells the machine to take a five even though there is less than \$5.00's worth of change, and so forth.

**NOTE:** This could cause a customer to be short-changed.
  - Entering **0.00** means that bills or coins will only be accepted if there is enough change to cover them.
- b. The value of "X.XX" tells the machine how much the customer is allowed to overbuy a product. The customer will be short-changed when an overbuy occurs.

**Example:** For a value of \$0.25: if there is no change in the machine and the customer inserts a \$1.00 bill. The customer can purchase a product for \$0.75 even though the change cannot be paid back. The customer will be short-changed. Normally a purchase will not be approved unless all change can be paid.

Entering **0.00** means that the vend will only be approved when the correct change can be returned (overbuy disabled).

## 3. CONTINUE.

---



## SET UP WINNER MODE

1. Press , then press  until one of the following is displayed:

**WINNER OFF** Winner function is disabled.

**- OR -**

**WIN XXX** Winners are allowed at certain intervals, represented by "XXX".

Press  to display the desired choice.

If you selected **WINNER OFF**, you can exit the function.

2. The display shows **WIN XXX**. XXX represents the number of vends which must occur per each winner vend. For example, an interval number of 50 means that a winner can happen any one time during the next 50 vends. Using the number keys, enter an interval number between 10 and 9999.

# Cold Drink Center (327/328) Operator's Guide

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3. Press . The display shows \*-----\*. The dashes in the display represent which selections are allowed winners. Press the appropriate letter key to enable a selection, press the key again to disable it. For example, pressing A, C, and E will cause the display to look like this: A-~~C~~-~~E~~----, meaning that all A, C, and E selections can have a winner.

## Advanced Options:

- Press  to enable all selections; press  to disable all selections.
- Press 0 or 1 to enable winners by cup size.

## An Example . . .

You want to enable winners on all selections except E and F. Do the following:

- a. Press . The letters A through J appear in the display instead of the dashes.
- b. Press "E" and "F". The letters ~~E~~ and ~~F~~ in the display are replaced by dashes.
4. CONTINUE.



## SET UP MUG DISCOUNT

You can establish a discount for customers who use their own mug.

1. Press , then press  until the display shows *MUGDSC .00*.  
This example shows the existing discount amount is zero.
2. Enter a discount amount. This will be in cents, for example press  or **5** to enter a discount amount of 5 cents.
3. CONTINUE.



## SELECT SYRUP PUMP TYPE AND NUMBER (SUPERVISOR ONLY)

The proper type and number of syrup pumps for your machine should be set at the factory. Use this function to make sure your pump selection agrees with the actual configuration of your machine.

1. Press  then  until the display shows one of the following:  
*GAS PUMP* Your machine has syrup pumps powered by CO2.  
*DIAPH. 50HZ* Your machine has electric syrup pumps, and your site has 50Hz electrical power.  
*DIAPH. 60HZ* Your machine has electric syrup pumps, and your site has 60Hz electrical power.
2. Press  until the proper type of pump is in the display.
3. Press  until the display shows either *SIX SELECT* or *EIGHT SELECT*.
4. Press  until the proper number of pumps is shown in the display.
5. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## DISABLE SELECTIONS IN THE MERCHANDISER

1. Press  then  until the display shows something like this:

*LK. ABCDEFGH.* This display means that all regular size selections (A - H) are not available for vending. An available selection has its letter replaced by an empty space.

2. Press the appropriate letter to toggle the display on or off.

### NOTE

Press  to lock all selections; press  to unlock all selections.

3. Press  to display blended selections (*LK. XYZ 89*).

### NOTE

Unconfigured selections will not appear on this screen.

4. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## SET CUP SIZES

Make sure the cup sizes you select agree with the cups you have actually loaded during setup.

1. Press  then  until the display shows *X OZ Y*. "X" is the currently selected drink size for the #2 cup ring, and "Y" is the currently selected drink size for the #1 cup ring.
2. Press  or **1** to change the #1 cup ring size; press  or **2** to change the #2 cup ring size.
3. Any changes made to the cup sizes must be "locked in". There are two ways to do this:
  - a. If you are keeping some cup sizes the same, or putting the same cups in different cup rings, press and hold . The display momentarily shows *CLEARING*, two beeps sound, then shows *FINISHED*. This will reassign the old throw times to the new cup size, if possible.
  - b. If you are loading all different size cups, or want to load all new default times, press and hold . The display momentarily shows *CLEARING*, two beeps sound, then shows *FINISHED*. This will reload the factory default times for all cup sizes, clearing any custom throw times you have established. (See the tables on the following pages for the factory default times.)
4. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## ASSIGN CUP SIZES TO SELECTIONS (SUPERVISOR MODE ONLY)

Under some circumstances, you may not want a certain selection to use one of the cup sizes in your machine.

1. Press then until the display shows something like this:  
*D. ABCDEFGH*. This display means that the regular size cup ( ) is available for all selections (A - H).
2. Press to display the selections configured for the large ( ) cup size.
3. At either of the above two screens, press to display blended selections (*D. XYZ B9*).
4. At either of the above screens, press the appropriate letter or number to toggle the selection on or off. (*A selection that doesn't vend the displayed size cup has its letter replaced by a space.*)

### NOTE

Press to display all selections; press to clear all selections.

5. CONTINUE.



## SET UP AUTOMATIC DELIVERY DOOR OPTIONS (SUPERVISOR MODE ONLY)

1. Press then until the display shows one of the following:  
*DOOR ON+* The door opens at the beginning of the vend.  
*DOOR ON-* The door opens at the end of the vend.  
*DOOR OFF* The door does not open automatically.
2. Press to select the desired option.
3. CONTINUE.

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## SET UP A COLD DRINK

Be sure that the cup sizes you set in **Set Cup Sizes**, page 42, agree with the cup sizes actually in your machine. All procedures for setting up the cold drinks are similar, so this example will demonstrate how to set up the D selection (regular cup size).

1. Press  then  until the display shows *SETUP - \**.
2. Press **D**. (For the large cup "D" selection you would press **1D**, and so on.) The display shows *CLD.D 6.80*. This means that the currently set non-carbonated cold water throw time for this selection is 6.80 seconds. Enter a new time if desired.
3. Press . The display shows *CRB.D 6.80*. This means that the currently set carbonated cold water throw time for this selection is 6.80 seconds. Enter a new time if desired.
4. Pressing  after each display will cause the following screens to appear:
  - SRP.D* View and change the syrup throw time
  - PCT.D* View and change the settings for the percentage of carbonation (0- 100)
  - ICE.D* View and change the settings for the ice throw time
  - ICE.D+* View and change the settings for extra ice throw time
5. At any of the preceding displays, you can press  to test throw that item.

**Hint: Set water and syrup times to provide a full cup without ice. The throws will adjust automatically for the amount of ice to be thrown.**

6. CONTINUE.

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**Table 2. Factory Default Throw Times and Volumes**

| Cup Size |     | Syrup Throw |    |       | Still and Carb. Water |     |       | Ice    |    |      | Extra Ice |     |      |
|----------|-----|-------------|----|-------|-----------------------|-----|-------|--------|----|------|-----------|-----|------|
|          |     | Volume      |    | Time  | Volume                |     | Time  | Volume |    | Time | Volume    |     | Time |
| oz       | ml  | oz          | ml | sec   | oz                    | ml  | sec   | oz     | gr | sec  | oz        | gr  | sec  |
| 5        | 148 | 0.7         | 21 | 3.40  | 3.6                   | 107 | 5.10  | 1.5    | 42 | 1.85 | 2.0       | 57  | 2.50 |
| 7        | 210 | 1.0         | 30 | 4.80  | 5.0                   | 150 | 7.20  | 1.5    | 42 | 1.85 | 2.0       | 57  | 2.50 |
| 8        | 237 | 1.1         | 33 | 5.30  | 5.7                   | 169 | 8.10  | 1.5    | 42 | 1.85 | 2.0       | 57  | 2.50 |
| 9        | 270 | 1.4         | 40 | 6.40  | 6.7                   | 200 | 9.60  | 1.5    | 42 | 1.85 | 2.0       | 57  | 2.50 |
| 10       | 295 | 1.5         | 45 | 7.20  | 7.5                   | 222 | 10.70 | 2.0    | 57 | 2.50 | 2.0       | 57  | 2.50 |
| 12       | 355 | 1.7         | 50 | 8.00  | 8.4                   | 250 | 12.00 | 2.0    | 57 | 2.50 | 3.0       | 85  | 3.50 |
| 16       | 473 | 2.3         | 96 | 11.00 | 11.7                  | 345 | 16.60 | 3.0    | 85 | 3.50 | 3.7       | 105 | 4.50 |
| 18       | 532 | 2.7         | 79 | 12.60 | 13.3                  | 395 | 19.00 | 3.0    | 85 | 3.50 | 3.7       | 105 | 4.50 |
| 20       | 590 | 3.0         | 88 | 14.00 | 15.0                  | 439 | 21.00 | 3.0    | 85 | 3.50 | 3.7       | 105 | 4.50 |

**NOTE:** For all cup sizes... Carbonation percentage is 100%;  
Blend mixture percentage is 50%.



## SET THE TIME OF DAY

- Press . The display shows *TIME HH.MM*. "HH.MM" is the time of day in 24-hour format.
- Enter the current time using the number keys.

### NOTE

9:00 am is entered with a leading zero, like this: 0900; 9:00 pm is entered as 2100.

- CONTINUE.



## SET THE DAY OF THE WEEK

- Press  , and press  until the display shows @ *SMTWTFS*. The letter representing the currently set day of the week will be flashing.
- Press  until the correct day of the week is flashing.
- CONTINUE.

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## SET MONTH, DAY, AND YEAR

1. Press , and press  until the display shows *MM/DD YY*. "MM" is the month, "DD" is the date, YY is the year.
2. Enter the current month, date, and year using the number keys.

**For example, press the following keys to enter September 30, 1998:  
0, 9, 3, 0, 9, 8**

3. Press  to switch between MM/DD and DD/MM formats
  4. CONTINUE.
- 



## SET TIME-OF-DAY INHIBITED VENDING

Vending can be inhibited up to four times a day.

1. Press , and press  until the display shows *INHIB ----*.
  2. Go to **Time Interval Editing**, page 47, for an example of how to set up time-of-day inhibited vending.
- 



## SET TIME-OF-DAY FREE VENDING

1. Press , and press  until the display shows *FREEV ----*.
  2. Go to **Time Interval Editing**, page 47, for an example of how to set up time-of-day free vending.
  - 3.
- 



## SET TIME-OF-DAY DISCOUNT VENDING

1. Press , and press  until the display shows *DISCOUNT ----*.
2. Go to **Time Interval Editing**, page 47, for an example of how to set up time-of-day discount vending.



## TIME INTERVAL EDITING

You can select up to four times of day for each special vending period.

### NOTE

If two or more of these time periods overlap, the interval with the highest priority will overrule the other(s). This order of precedence is:

**INHIBIT**  
**FREEVEND**  
**DISCOUNT**

For example, if a DISCOUNT time period is scheduled for a certain area before the end of an INHIBIT time period, DISCOUNT does not begin until the INHIBIT interval has ended for that area.

The time interval editing procedure is almost the same for the INHIBIT, FREEVEND, and DISCOUNT intervals. There is one difference for the DISCOUNT time interval, so we will use it in our example. Assume you just finished the SET TIME-OF-DAY DISCOUNT VENDING procedure. Step 1 picks up where you left off . . .

1. The display shows *DISCT----*. Press the number of the time interval you want to

edit, or  to edit time interval 1 (we'll use interval 1 for this example).

2. The display shows *1.DISCTON* or *1.DISCTOFF*. This display tells you whether your

time interval (represented by 1) is on or off. Press  to change the condition of the time interval.

### NOTE

If you turn an interval ON, it must be edited. You can edit a time interval now, then turn it OFF until another time.

3. Press . The display shows *1.DSCT X*. "X" represents the discount percent-

age for this period. Enter a discount percentage of 25 with the number keys. (Discount percentages of from 0 to 99 are permitted.) The machine will apply a 25% discount to each price, rounding up to the nearest nickel (or whatever is the smallest coin accepted by the coin mechanism).

4. Press . The display shows *1.STRT X.XX*. "X.XX" is the currently set start

time. Enter a new start time (24-hour format) for this interval. To enter the time for 3:30 pm, enter 1530.

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5. Press . The display shows *1.STOP X.XX*. "X.XX" is the currently set stop time. Enter a new stop time (24-hour format) for this interval. To enter the time for 6:00 pm, enter 1800. You have now established a 25% discount that starts at 3:30 pm and ends at 6:00 pm.

6. Press . The display shows *1.@ - - - - -*. The dashes represent the days that this time interval is active. Pressing number keys 1 through 7 switches the days on/off. For example, press "2", "4", and "6". The display now shows *1.@ - 1 - 3 - 5 - -*. This discount interval is only active on Monday, Wednesday, and Friday.

7. Press . The display shows *\* - - - - -*. The dashes represent the trays affected by this time interval. Press the appropriate letter key to enable a tray, press the key again to disable it. For example, pressing A, C, and E will cause the display to look like this: *A - C - E - - - -*, meaning that all A, C, and E selections are affected by this interval.

Press  to turn on all levels; press  to turn all levels off.

8. Press . The display shows *1.MESG OFF* or *1.MESG X*. "OFF" means there is no custom message selected, and "X" represents the custom message number set for this interval. Press the number key of the message (1 through 8) you want displayed. To edit this message, press  and follow the procedure given in

**EDIT CUSTOM MESSAGES** (page 51). Press 0 to turn the message OFF for this time interval.

9. Press  until you have left the function

## STANDBY MESSAGES

The message that is displayed during normal vending periods where there are no out-of-service faults on the machine.



## SELECT A STANDBY MESSAGE

1. Press , then press  until the display shows *STANDBYXX*. "XX" represents the current message number selected for the standby message. Two dashes mean that the factory-set message is selected.
2. To select a message, just press the corresponding number (1 through 8). To display the factory-set message, press 0.
3. The selected message (except the factory-set message) can be edited. To do this, press  and follow the procedure given in **EDIT CUSTOM MESSAGES** (page 51).
4. Press  until you have left the function.



## SELECT AN OUT-OF-SERVICE MESSAGE

1. Press , then press  until the display shows *SERVICEXX*. "XX" represents the current message number selected to display when the machine is out-of-service. Two dashes mean that the factory-set message is selected.
2. To select a message, just press the corresponding number (1 through 8). To display the factory-set message, press 0.
3. The selected message (except the factory-set message) can be edited. To do this, press  and follow the procedure given in **EDIT CUSTOM MESSAGES** (page 51).
4. Press  until you have left the function.

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## SELECT A FREEVEND MESSAGE

5. Press , then press  until the display shows *FREEVEND XX*. "XX" represents the current message number selected for the message that displays when the machine is in the freevend mode. Two dashes mean that the factory-set message is selected.
6. To select a message, just press the corresponding number (**1** through **8**). To display the factory-set message, press **0**.
7. The selected message (except the factory-set message) can be edited. To do this, press  and follow the procedure given in **EDIT CUSTOM MESSAGES** (page 51).
8. Press  until you have left the function.

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## EDIT CUSTOM MESSAGES

1. Press , and press  until the display shows *EDIT MSG'S*. Press the number of the message you want to edit. *MESSAGEX* is displayed (X represents the message number you pressed).
2. Press . The message text is displayed with the first character flashing.
3. To view the message, press . The message scrolls across the display. To stop the scrolling, press .
4. When the character you want to change is flashing, either enter it directly, or use  and  to step through the character set until the desired character is displayed. Use the arrow keys to highlight different characters. See the section on the next page for an explanation of special keys and the character set.

### SHORTCUT

Instead of stepping through the whole character set to enter a letter that is not on your keypad, enter one close to the one you want, then step to it. Example: If you want to

enter an **L**, first press , then press  six times. Your **L** should now be displayed.

### A special case...

**PRESS ANY KEY TO REOPEN** appears after every vend. It means that in case a product does not drop quickly enough, the customer can operate the sliding door one time only within 25 seconds of making a selection. This message is stored in *M.B* at the factory, and is not translated when a language other than English is selected. If you want to translate it to your language, follow the directions shown in this section. To eliminate the message, replace the first character (P) with the end-of-message character. That way, all you have to do is reinsert a (P) to display the message again.

## THE END OF MESSAGE CHARACTER

This is the most important character in your message, because it tells the machine when the message is ended. If you don't use this character, your message will be followed by a bunch of zeros. This character can be selected either from the character set or by a direct key entry..



## ENTERING YOUR MESSAGE

Most of the keys on the control panel have a special purpose to help you create and edit your messages:



Inserts an **R** at the flashing character.



Inserts a space at the flashing character.



Inserts an **S** at the flashing character.



Deletes the current character and closes up the space.



Inserts a **T** at the flashing character.



Deletes the current character and leaves the space.



Repeats the letter to the left of the flashing character.



Enters the special "end of message" character, which denotes the end of the message.



"Pages" through the message, ten characters (one screen) at a time.



Steps forward and backward through the message, one character at a time.



Steps forward and backward through the character list, one character at a time. See **Available Display Characters**, page 53.

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Table 3. Available Display Characters

|   |   |   |         |   |   |
|---|---|---|---------|---|---|
| 0 | A | J | U       | { |   |
| 1 | B | L | V       | } |   |
| 2 | C | M | W       | # |   |
| 3 | D | N | X       | P |   |
| 4 | E | O | Y       | + |   |
| 5 | F | P | Z       | - | >   |
| 6 | G | Q | (SPACE) | / | ?   |
| 7 | H | R | _       | . | @   |
| 8 | I | S | \$      | < | 0   |
| 9 | J | T | '       | / |  |



## VIEW MACHINE CONFIGURATION SETTINGS

1. Press . The display shows the configured syrup pump type.
2. Press . The display shows the configured automatic vend door setting.
3. Press . The display shows the active selections for the regular size drink (0). Press  to view the blended selections.
4. Press . The display shows the active selections for the large size drink (1) - (provided you have two sizes of cups loaded and configured). Press  to view the blended selections.
5. CONTINUE.

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## VIEW SOFTWARE VERSION

1. Press , and press  until the display shows *VER XXXXXX*. "XXXXXX" represents the current software version number.
  2. CONTINUE.
- 



## PAYOUT COINS

1. Press . If a dumb mech was selected, the display shows *NOQ=123*; if an MDB mech was selected the display shows *PAY 123*.
2. Press . A dumb mech pays out one *N*ickel; an MDB mech pays a coin from tube *1*. Press . A dumb mech pays out one *D*ime; an MDB mech pays a coin from tube *2*. Press . A dumb mech pays out one *Q*uarter; an MDB mech pays a coin from tube *3*.
3. To continuously pay out coins, hold down the appropriate key.
4. CONTINUE.

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## SET PRICES

1. Press . The display shows \*\* 2.50 .25. This display shows the maximum and minimum prices set in the machine. In this example, the maximum price is \$2.50 and the minimum is \$0.25.
2. Enter prices as using one of the following methods:

### SET ENTIRE MACHINE TO ONE PRICE

- a. Press . The display shows \*\* X.XX. Enter a price using the number keys. All selections in the machine are now set to this price.

### SET THE PRICE OF AN INDIVIDUAL SELECTION

- a. Press the number of the selection to be priced. (Example: **1A**.) The display shows **1A X.XX**. Enter a price using the number keys. The selection is now priced.
- b. Press another letter key, or  to price another selection.

### SET ALL CUP SIZES TO ONE PRICE

You can set all regular drinks to one price, and all large drinks to a different price:

- a. Press **0** for regular size, or **1** for large size cups. If you pressed **1**, the display shows **1\* .XX .XX**. This is the currently set minimum and maximum price.
- b. Press . The display shows **1\***.
- c. Enter a price using the number keys. All large cup drinks are set to one price.
- d. Press  to change the other size cup.

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## **SET ALL SIZES OF A SELECTION TO ONE PRICE . . .**

- a. Press a selection letter (A - H, X, Y, Z, 8, or 9). If you pressed **C**, the display shows \* $\text{C}$  . $XX$  . $XX$  . This is the currently set maximum and minimum price.
- b. Press  . The display shows \* $\text{C}$  . Enter a price using the number keys. All sizes of this selection are set to one price.
- c. Press  or another selection number to change other selections.

3. CONTINUE.

---



## **VIEW NONRESETTABLE SALES AND VEND DATA**

1. Press  . The display shows *NR*\$  $XX.XX$  . "XX.XX" is a dollar and cents figure showing the total of all sales in the machine. This is a running total, and is not resettable.
2. Press  . The display shows *NR*  $X$  . "X" is the total number of vends made by the machine. This is a running total, and is not resettable.
3. CONTINUE.

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## VIEW DATA THREE DIFFERENT WAYS

Paid sales and vends can be viewed three different ways: By whole machine, by selection, and by drink size within the selection. The first screen of the data item shows its machine total.

- To view the data by selection:

- Press the letter of the selection you want to see. You can then press



and



to see data for all the active selections.

- To view the data by drink size:
- Press **0** for regular size drinks or **1** for large size drinks.
  - Press the letter of the selection you want to see.

### FOR EXAMPLE:

**To view the data for a large A selection, press 1A. The data will be displayed.**

You can then press



and



to see data for all the active selections of that size.



## VIEW TOTAL PAID SALES

- Press



, then press



until the display shows \*\*\$ XX.XX.

"XX.XX" is a dollar and cents figure showing the total of all PAID sales in the machine (as opposed to unpaid sales like winner and free vends). This is the total since the last time it was cleared.

- If desired, view this data by individual selection or drink size.
- CONTINUE.



## VIEW TOTAL PAID VENDS

- Press



, then press



until the display shows \*\* XX. "XX" is

the total number of paid vends for the entire machine.

- If desired, view this data by individual selection or drink size.
- CONTINUE.

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## CLEAR ALL RESETTABLE DATA

1. Press . The display shows *NR\$ XX.XX*. This is a running total, and is not resettable.
  2. Press and hold . Two beeps sound and the display shows *CLEARING* momentarily, and then changes to *FINISHED*. All data is cleared.
  3. CONTINUE.
- 



## CLEAR PAID SALES DATA ONLY

1. Press , then press  until the display shows *\*\*\$ XX.XX*.  
"XX.XX" is a dollar and cents figure showing the total of all **PAID** sales in the machine (as opposed to unpaid sales like winner and free vends). This is the total since the last time it was cleared.
  2. Press and hold . Two beeps sound and the display shows *CLEARING* momentarily, and then changes to *FINISHED*. All paid sales data is cleared; other data is not cleared.
  3. CONTINUE.
- 



## VIEW ALTERNATE SALES DATA (NOT SHOWN IF ZERO)

When the machine is out of one size of cups, an alternate size will be substituted. For example, if a regular size black coffee is requested, and regular cups are out, a large selection will be substituted at no extra cost to the customer.

1. Press , then press  until the display shows *ALT\$ .XX*. "XX" is the number of alternate vends.
  2. If desired, view this data by cup size and individual selection.
  3. CONTINUE.
-

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## VIEW AMOUNT IN COIN BOX (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *CBX XX.XX*.  
"XX.XX" is the dollar and cents amount in the coin box.
2. CONTINUE.



## VIEW AMOUNT IN VALIDATOR (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *DBV XX.XX*.  
"XX.XX" is the dollar amount in the bill stacker.
2. Press  to show the quantities of bills in the stacker. For example, the display shows *\$01 20*, meaning that there are 20 dollar bills in the bill stacker. Press  again to show the quantities of other bills, such as \$5s, \$10s, or \$20s.

### NOTE

You may also see *TKNXX* in the display if your validator accepts token coupons.

3. CONTINUE.

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## VIEW CARD REVALUE TOTAL (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *RVL\$ XX.XX*.  
"XX.XX" is the dollar amount of debit card revalues.
2. Press  to show the revalue total.
3. CONTINUE.



## VIEW CARD REVALUE COUNT (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *RVL XX.XX*.  
"XX.XX" is the quantity of debit card revalues.
2. Press  to show the revalue quantity.
3. CONTINUE.



## VIEW FREEVEND SALES BY TIME INTERVAL (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *-0\$ XX.XX*.
2. Press , then press  until the display shows *1.FRV .00*. This is the total sales for freevend interval 1, shown even if zero.
3. Press  to view intervals 2 through 4.
4. CONTINUE.

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## VIEW DISCOUNT SALES BY TIME INTERVAL

1. Press , then press  until the display shows **\*\*\$ XX.XX**.
  2. Press . The display shows **1.05C .00**. This is the total sales for discount interval 1 (not shown if zero).
  3. Press  to view intervals 2 through 4.
  4. CONTINUE.
- 



## VIEW FREE VENDS (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows **-0\$ XX.XX**.
  2. Press , then press  until the display shows **FRV XX.XX**.  
"XX.XX" is the total machine-wide freevends, shown even if zero.
  3. CONTINUE.
- 



## VIEW WINNERS (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows **-0\$ XX.XX**.
2. Press , then press  until the display shows **WIN XX.XX**.  
"XX.XX" is the total machine-wide winners, shown even if zero.
3. CONTINUE.

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## VIEW TIME DATA

1. Press , then press  until the display shows *TIME DATA*.
2. Press . The following message scrolls across the display:

*MAIN.1 45M 08/01 09.31*

This example shows that the door was open for 45 minutes (45M) on August first (08/01) starting at 9:31 am (09.31).

3. Press . The following message scrolls across the display:

*LAST POWER 01/30 13.51 FOR 00. 0.23*

This example shows that the last time the machine lost power was on January 30 (01/30) at 1:51pm (13.51) for zero days, zero hours, and 23 minutes (00. 0.23).

4. Press . The following message scrolls across the display:

*LONG'ST PWR 01/30 10.58 FOR 00. 2.47*

This example shows that the longest time the machine was without power was on January 30 (01/30) at 10:58am (10.58) for zero days, 2 hours and 47 minutes (00. 2.47).

5. Press . The following message scrolls across the display:

*FULL CLEAR 01/30 8.58*

This example shows that the last time resettable sales was fully cleared was on January 30 (01/30) at 8:58am (8.58).

6. Press . The following message scrolls across the display:

*TIME SET 01/30 9.15*

This example shows that the last time the time or date was set was on January 30 (01/30) at 9:15 am (9.15).

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7. Press . The following message scrolls across the display:

*PRICE SET 01/30 9.42*

This example shows that the last time prices were set was on January 30 (01/30) at 9:42 am (9.42).

8. CONTINUE.
- 



## VIEW TOTAL UNPAID SALES (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *\_0\$ XX.XX*.

"XX.XX" is the total unpaid sales (free vends, winner vends, 100% discounts, zero price vends) for the entire machine.

2. If desired, view this data by tray and individual selection.  
3. CONTINUE.
- 



## VIEW TOTAL UNPAID VENDS

1. Press , then press  until the display shows *\_0 XX*. "XX" is

the total number of unpaid vends for the entire machine.

2. If desired, view this data by tray and individual selection.  
3. CONTINUE.
- 



## VIEW NUMBER OF TEST VENDS (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *TST X*. "X" is the

number of test vends.

2. If desired, view this data by tray and individual selection.  
3. CONTINUE.
-

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## VIEW MACHINE ID NUMBER

1. Press , then press  or  until the display shows *I.D. XXXXXX*. The X's represent the 6-digit machine ID number.
  2. You can edit the machine ID number if the SUPERVISOR access code has been previously entered.
  3. CONTINUE.
- 



## VIEW NUMBER OF MUG VENDS (NOT SHOWN IF ZERO)

1. Press , then press  or  until the display shows *I.D. XXXXXX*. The X's represent the 6-digit machine ID number.
  2. You can edit the machine ID number if the SUPERVISOR access code has been previously entered.
  3. CONTINUE.
- 



## TEST VEND SELECTIONS AND VERIFY CREDIT ADDED

1. Press . The display shows *TEST .00*. You may now test vend selections. If you insert money into the machine, the zeros in the display will be replaced with the amount of the credit. After the item vends, your money will be returned.
2. CONTINUE.

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## TEST DROP A CUP

1. Press , then press  until the display shows *CUPTEST*.
  2. Press  to drop a cup. If the machine is configured for two cup sizes, one cup will drop from each ring. If the machine is configured for one size, only one cup will drop, using a different ring each time.
  3. Press **1** to drop a cup from ring #1; press **2** to drop a cup from ring #2.
  4. CONTINUE.
- 



## TEST THROW STILL WATER

1. Press , then press  until the display shows *CLD. A.XX*. XX is the currently set throw time for still water.
  2. Press  to throw still water.
  3. CONTINUE.
- 



## TEST THROW CARBONATED WATER

1. Press , then press  until the display shows *CRB. A.XX*. XX is the currently set throw time for carbonated water.
  2. Press  to throw carbonated water.
  3. CONTINUE.
- 



## TEST THE AUTOMATIC DELIVERY DOOR

1. Press , then press  until the display shows *DOORTEST*.
  2. Press . The automatic delivery door operates.
  3. CONTINUE.
-

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## TEST THE SYRUP PUMPS

1. Press , then press  until the display shows *SYRUP TEST* for a few moments. The display will then show *5. 12345678*.
2. Press the number of the syrup pump you want to test. Press the same number again to stop testing.

### NOTE

In a diaphragm pump machine, there are no sold out sensors, so the display only shows the pump number. With gas pumps, the numbers shown also reflect the sold out status. However, status is only updated while dispensing. Soldout status is "frozen" when dispensing stops.

3. CONTINUE.
- 



## TEST THE ICE MAKER

1. Press , then press  until the display shows *ICE TEST*.
2. Press  to dispense ice for about 1 second. Press  to throw ice until  is pressed again. The time delay (as described below) can be reset by dispensing ice for approximately 7 seconds.

### NOTE

When the merchandiser is idle for an extended period of time, there is a software-controlled delay for replenishing ice to the ice maker. This predetermined delay is initiated from the actuation of the low level hopper switch. The delay is automatically reset during normal vending conditions. For testing purposes, you can manually reset the delay: Press and hold



. The display shows *CLEARING*, then *FINISHED*.

3. CONTINUE.
-

# Cold Drink Center (327/328) Operator's Guide



## COOLSAN

The *CoolSan*<sup>®</sup> system cleans the icemaker and related plumbing.

### NOTE

Do not interrupt the cool-san cycle once it has started.

1. Empty the liquid waste bucket.
2. Remove the upper ice chute.
3. Remove the ice maker cover.
4. Position the empty waste pail under the ice maker door and hang the pail handle on the hook.
5. Press , then press  until the display shows *COOL SAN*. Press and hold  until the display shows *FINISHED*.
6. After **10 seconds**, the ice dispensing door will open and dispense ice for **5 minutes**.
7. After the ice has stopped dispensing, remove the waste pail from the hook and place it in the normal position under the cup station.
8. When the display shows *ADD SOL'N*, lift the water feeder cup cover and add one (1) ounce of cleaning solution to the feeder cup. **Do not add more than 1 ounce. Take care to not pour solution onto the float assembly.**
9. **Ten (10) minutes** after the start of the CoolSan cycle, the cleaning solution will begin circulating.
10. **Twenty (20) minutes** after the start of the cool-san cycle, the rinse cycle begins. Fresh water from the supply is brought into the feeder cup, recirculated, and dispensed to the waste bucket. Included in this rinsing cycle is a routine to rinse the water from the still water circuit.
11. Upon completion of the cleaning cycle, the display shows *FINISHED*.
12. Replace the ice maker cover and the upper ice chute.
13. Empty the liquid waste bucket.
14. Return the machine to service.

### WARNING

If the waste pail is not approximately 1/2 to 2/3 full, the cleaning device may not have been working properly.



# Cold Drink Center (327/328) Operator's Guide

On input screen #2, you can press the following letters to perform the indicated operation:

- A Dispense ice (and turn on the icemaker compressor if the hopper is not full)
  - B Force CO<sub>2</sub> valve on
  - C Dispense carbonated water
  - D Dispense still water
5. Actuate each switch or sensor to test its function. As you actuate each input, the display element representing that switch blinks on. Releasing the switch causes that element to blink off again.
6. CONTINUE.



## TEST THE DISPLAY

1. Press , then press  until the display shows *DSPLYTEST*.
2. Press  to light all display segments; press  to turn them off.
3. Pressing a **NUMBER KEY** on the control panel causes all segments to display that character.
4. Pressing a key on the maintenance keypad causes all segments to display that character (found in the upper left hand corner of the key). Please note that the character is displayed along with a leading apostrophe to indicate that the maintenance keypad is being tested.
5. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## SERVICE THE CARBONATOR

This screen serves several functions. One is to test the refill capability of the carbonator pump. The second is to empty the carbonator before storage or shipping. The third function is to dispense still water.

1. Press , then press  until the display shows *CARBTEST*.
2. Press  to test the carbonator. The carbonator will dispense until it is empty, then it will refill. After it is full, the display will show the refill time. You can adjust the carbonator pump to set the refill time to 15 - 25 seconds.
3. Press  to run non-carbonated water through the dispensing lines.
4. Press  to empty the carbonator without refilling. Before doing this, you should turn off water to the machine and dispense still water (see step 2) until the feeder cup is empty.
5. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## PRIME THE SYRUP PUMPS

1. Press  then  until the display shows *SYRUP TEST*. After a moment this changes to *5. 12345678* (depending on how many pumps your machine has. This display indicates that all syrup pumps are "sold out". When there is syrup present, the number will be replaced by a dash (-).
2. Press the number key which corresponds to the pump you want to prime. For example, press **2**. A period appears in the display after the number(s) you pressed: *5. 1-345678*. This indicates that pump #2 is working and has syrup in the lines.
3. When syrup comes out of the nozzle, press the number key again to stop the pump. The display will now show *5. 1-345678*. You can repeat the steps for the remaining empty tanks.
4. If you are setting up a new machine and need to prime all the pumps at once, press  to run all the pumps. In a gas pump machine, all pumps will dispense until another key is pressed. In a diaphragm pump machine, each pump will run once in succession.

### NOTE

In a diaphragm pump machine, there are no sold out sensors, so the display only shows the pump number. With gas pumps, the numbers shown also reflect the sold out status. However, status is only updated while dispensing. Soldout status is "frozen" when dispensing stops.

5. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide

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## CLEAN THE CARBONATOR TANK

1. Disconnect the icemaker hopper switch harness from the hopper switch so the icemaker remains off.
2. Press  then  until *CARB TEST* is displayed. Press  to drain the feeder cup.
3. When the feeder cup is empty press  to drain the carbonator.
4. Wait until only CO<sub>2</sub> is escaping from the spigot and then set the main switch to the **OFF** (down) position.
5. Remove the feeder cup cover.
6. Pour citric solution (1 oz. Citric acid crystals to 1 quart of water) into the feeder cup and replace the cover.
7. Set the main switch to the ON (up) position. The carbonator will now refill with the solution.
8. Allow solution to remain in the carbonator for 30 minutes.
9. Press  then  until *CARB TEST* is displayed.
10. Press  to empty solution from the carbonator. Wait until only CO<sub>2</sub> is escaping from the spigot then press . The carbonator will refill.
11. Repeat steps 9 and 10 to ensure a complete flush.
12. Reconnect the ice hopper switch.
13. CONTINUE.

# Cold Drink Center (327/328) Operator's Guide



## VIEW DIAGNOSTIC MESSAGES

1. Press  the display shows any of the following diagnostic messages, depending upon any fault(s) present:

- NOERRORS** None of the following errors are detected:
- KEYPADXY** Key(s) x, y stuck.
- ROMERROR** Error in the programming EPROM. MACHINE WILL NOT OPERATE.
- RAMERROR** RAM is not initialized or is not compatible with the currently loaded software. If this message appears, initialize your RAM by performing the following procedure:

**NOTE:** Initializing RAM will erase all your data and drink settings. Be sure you have written this information down before continuing.

Press AND HOLD  until two beeps are heard, and the display shows **FINISHED**.

- KEYSWITCH** The keyswitch input is active and configured as an inhibit.
- CONFIG ERR** Configuration error; displays the machine configuration screen.

**NOTE:** this is the actual config screen. You may press  to select the correct configuration directly on this screen without further action.

- RING1,2** The cup ring is jammed.
- MTR1A1B2A2B** Cup turrets are jammed
- NOCUPS 1,2** Out of cups.
- WASTEPAIL** The waste pail is full.
- LOW WATER** The feeder cup is empty.
- DOOR JAM** The automatic delivery door is jammed.
- DOOR ERR** The automatic delivery door is not properly configured. Press

 to select **DOOR+**, **DOOR-**, OR **DOOR OFF**

- NOCO2** CO<sub>2</sub> pressure is low.
- 5.12345678** Syrup tank(s) are empty (tank 1 - 8). Fill tank, then prime the affected pump by pressing the corresponding number key. Press the key a second time to stop the pump after syrup begins to flow.

## ***Cold Drink Center (327/328) Operator's Guide***

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|                           |  |
|---------------------------|--|
| <b><i>NOMECH</i></b>      | Coin mech not detected - machine will not operate if configured for coin mech.   |
| <b><i>MECHCOMM</i></b>    | Incomplete coin mech communications — check harness.   |
| <b><i>MECH.SENSOR</i></b> | Coin mech reporting a bad tube sensor — replace mech.  |
| <b><i>MECHROM</i></b>     | Replace the coin mechanism.  |
| <b><i>MECH.ACCEPT</i></b> | Coin mechanism acceptor section is unplugged from the main body of the coin mech. Connect the cable and cycle machine power OFF and then ON.   |
| <b><i>MECHJAM</i></b>     | One or more coin tubes are jammed. Pay a coin from each tube until the jam is cleared.   |
| <b><i>DEBITCARD</i></b>   | Card reader reporting error — machine will not operate if configured for DEBIT ONLY.   |
| <b><i>CHECKDBV</i></b>    | Bill validator reporting error — machine will not operate. Empty stacker, clear jams, etc.   |
| <b><i>DBVCOMM</i></b>     | Incomplete bill validator communications — check harness.  |
| <b><i>DBVMOTOR</i></b>    | One of the motors has failed. The unit will disable itself until the error is corrected. Check for bill stuck in the acceptance path. If no bill is present, replace the validator. Cycle machine power OFF and then ON.   |
| <b><i>DBVSENSOR</i></b>   | One of the sensors in the bill validator has failed. The unit will disable itself until the error is corrected. Check for bill stuck in the acceptance path. If no bill is present, replace the validator. Cycle machine power OFF and then ON.  |
| <b><i>DBVJAM</i></b>      | A bill is jammed in the acceptance path. The unit will disable itself until the error is corrected. Remove bill stuck in the acceptance path. Cycle machine power OFF and then ON.   |
| <b><i>DBVSTACKR</i></b>   | The stacker is open or removed. The unit will disable itself until the error is corrected. Install the stacker correctly.  |
| <b><i>CHKPRICE</i></b>    | Price error detected and changed to maximum - check prices.  |
| <b><i>NONEREADY</i></b>   | all selections are reported out of service.  |
| <b><i>CARBLEVEL</i></b>   | the inlet to the carbonator is restricted, keeping it from being filled. The pump is shut down to avoid damage and cold drink vending is inhibited. To reset, clear obstructions in the line, close the cabinet door. The carbonator will automatically refill.                        |
| <b><i>CARB.PROBES</i></b> | The carbonator is showing both high and low probes active at the same time.  |
| <b><i>FEEDER.SWS</i></b>  | The feeder cup is showing both high and low switches active at the same time.  |
| <b><i>AUGER.JAM</i></b>   | The ice auger (auger motor) is jammed or stopped. Check the overload indicator on the motor. If it popped out, attempt to reset it. If it won't reset, replace it. NOTE: Ice may have formed a solid pack due to the motor being inactive. Defrost icemaker prior to resuming service. |

# Cold Drink Center (327/328) Operator's Guide

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## DOWNLOAD DATA TO A PDCD

1. Connect your portable data collection device (PDCD) in accordance with its operating instructions.

2. Press . Data is downloaded into your PDCD.

### NOTE

Depending upon the setting selected in set **Set Printer Or DEX Options**, page 32, data may be cleared after the download is complete.

3. CONTINUE.
- 



## SET FREEVEND OPTIONS

1. Press  until one of the following is displayed:

**FREE OFF** - Normal vending mode. No items are on freevend. (A closure on the optional keyswitch input causes the machine to go out of service.)

**- OR -**

**FREE ALL** - All items are on freevend. The credit display shows

**NO MONEY REQUIRED**

(A closure on the optional keyswitch causes the machine to go out of service.)

**- OR -**

**FREE W/KEY** - All items are freevended while there is a closure on the optional keyswitch input. Normal cash sales are supported when the optional keyswitch input is open.

**- OR -**

**FREE ONCE** - A closure on the optional keyswitch input causes only the next item to be freevended. Coin mechanism errors are ignored. this state is designed for card or token systems where one item is vended per token. Normal cash sales are also supported.

2. Press  until the option you want is displayed.
  3. CONTINUE.
-

## **IV. CLEANING AND SANITATION**

### **A. Introduction**

Anybody who services vending machines must use proper sanitizing procedures. Health regulations require that hands be clean when cups, commodities, and food-contact parts are handled or serviced.

In addition, Health Departments require regular cleaning and sanitizing procedures for food contact parts.

The information in this section will explain how to clean and/or sanitize the merchandiser on a regular basis. A clean and well maintained merchandiser will provide a better product and greater safety for your customers.

### ***CLEANING AND SANITIZING -- WHAT'S THE DIFFERENCE?***

**CLEAN** means "free of visible soil". In cup vending machine servicing cleaning is done to maintain product quality and to remove food soils, oils, and mineral stains that could affect product taste, aroma, and appearance.

**SANITIZING** means the reduction to safe levels of the number of disease-causing bacteria that remain on the surface after cleaning. Therefore, cleaning and sanitizing are done in separate steps, as prescribed by health regulations and good industry practice.

When you sanitize you create a healthy and hygienic condition. This leads to wholesome food, which in turn leads to satisfied customers.

***SANITIZING IS NO SUBSTITUTE FOR GOOD CLEANING***

# ***Cold Drink Center (327/328) Operator's Guide***

## ***HOW DO I SANITIZE?***

You can sanitize by using either of these two methods:

**Chemicals:** The object to be sanitized is treated with a bactericidal compound.

**Heat:** Raise the temperature of the object to be sanitized high enough to kill bacteria. Water must be at least 77°C (170°F). Hot brew water (if available) is an acceptable sanitizer. When food-contact surfaces are washed and/or rinsed, use the hot water available in the machine.

***Be sure to turn the machine off before using water on the machine.***

In either case, the object to be sanitized must be thoroughly clean and completely rinsed in order for the sanitizing process to work. Caked-on soils, not removed by cleaning for example, may shield bacteria from a sanitizing solution.

## ***A GOOD PLACE TO START -- YOUR SANITATION KIT***

You need to be sure that each machine is clean, safe and functioning when you leave the location. In order to properly do this, you need to have a complete set of the right tools.

Here is a checklist of the items needed for a good sanitation kit:

- Sanitation pail
- Tube and nozzle brushes for food contact surfaces
- Utility brush for dry spillage around canisters, etc.
- Disposable towels, wet-strength and lint-free

### **NOTE**

Wiping with towels can recontaminate sanitized food-contact parts. Therefore, towels should not be used to dry food-contact surfaces. Instead, these parts should be air dried.

- Spray detergent, diluted to desired strength
- Urn cleaner packets for coffee stains and oils
- Odor control chemicals for pails
- Replacement parts (if the exchange method is used)
- Cabinet polish or window cleaner for the outside of the machine

Feel free to add some items to this list. For example, you may want to use a portable vacuum cleaner.

# ***Cold Drink Center (327/328) Operator's Guide***

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## **B. Overall Cleaning**

Inspect your merchandiser inside and out. Be sure to check corners and less visible areas of the merchandiser. Clean as needed. Allow the inside of the cabinet to dry thoroughly before closing the door.

### **CAUTION!**

Before using a liquid cleaner, shut off power to the machine. Failure to do so could result in an electrical shock. Make certain all components are dry and properly installed before restoring power.

## **Cleaning Procedures**

### ***Non Food-Contact Parts***

- Daily** Cabinet Delivery Door - Wash with a clean, damp, disposable paper wiper.
- Waste Bucket - Empty, wash with a chlorinated detergent or equivalent chemical and rinse with hot water. Sprinkle detergent powder in the bottom of the bucket to help control odors. Be sure to replace the drain lines and overflow switch float.
- Cabinet Door - Wipe the door inside and out with a clean, damp, disposable paper wiper.
- Monthly** Refrigeration Screens and Condenser - Inspect the refrigeration air intake and exhaust screens and condenser. Remove any accumulated dust.

## **Cleaning And Sanitation Procedures**

### ***Food Contact Parts***

- Daily** Cup Delivery Compartment - Remove the cup delivery compartment from the merchandiser. Thoroughly wash the cup delivery compartment with a chlorinated detergent or equivalent detergent sanitizer using a clean, damp, disposable paper wiper. Rinse with clean, hot, flowing water. Reinstall.

# ***Cold Drink Center (327/328) Operator's Guide***

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## **Monthly**

Ice Chute - Remove and clean the ice chute with the large diameter cleaning brush. Sanitize the ice chute and dry before replacement.

Ice Maker - To use the optional Cool-San feature to clean and sanitize the Ice Maker system follow the procedure in Appendix C of this Operator's Guide.

Discharge Nozzles - Disconnect all of the beverage dispensing tubes from the nozzles. Remove the nozzles from the mounting bracket. Dip the tube cleaner brush in a detergent solution and thoroughly clean the nozzles inside and out. Rinse the tube cleaner brush thoroughly with clean, hot water and brush the nozzles thoroughly between each rinse. Use a clean, damp, disposable paper wiper. Rinse with clean, hot water and air dry thoroughly before installing.

## **Semi-Annual Syrup Tubes - Bag-in-box machines only - Remove the plastic fittings from empty bag-in-box containers. These will serve to hold the check valves at the end of the syrup tubes open during cleaning and sanitizing.**

Ensure that the waste bucket is in place. Remove the plastic syrup tubes from the bag-in-box containers or syrup tanks. For bag-in-box machines connect the bag-in-box fitting to the end of your syrup tube.

In a clean bucket, make up a 100 ppm sanitizing solution by mixing 2 oz. of household chlorine bleach in a gallon of warm water ( not to exceed 130 deg. F). Place the end of the syrup tubes into the sanitizing solution.

Prime the system with the sanitizing solution so that all of the syrup is expelled and sanitizing fluid pours from the dispense nozzle. Allow the sanitizing solution to remain in the system for at least 1 minute. Pump clean warm water through the system to rinse. Replace the syrup lines.

# ***Cold Drink Center (327/328) Operator's Guide***

Make copies of this cleaning record, cut it out, and keep it in the plastic bag mounted on the inside of the door. It will be your record of cleaning all three areas of your Twin Drink Center.

|     | <b>FOOD CONTACT PARTS</b> | <b>CARBONATOR</b>        | <b>SYRUP TUBES</b>       | <b>BY</b>            |
|-----|---------------------------|--------------------------|--------------------------|----------------------|
| JAN | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| FEB | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| MAR | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| APR | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| MAY | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| JUN | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| JUL | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| AUG | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| SEP | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| OCT | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| NOV | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| DEC | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |

# ***Cold Drink Center (327/328) Operator's Guide***

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## **APPENDIX A. THE INFRARED MUG/CUP SENSOR**

The infrared mug/cup sensor can sense the presence of a mug or cup without using moving parts.

### **Indicator light**

The sensor is equipped with an indicator light. This light will help you get the best results from the infrared mug/cup sensor.

Under these conditions:

- Machine door open
- Cup station in place
- No cup in the station

The indicator light should be off. If it is on, it is indicating improper cup station alignment or excessive sensor sensitivity.

Under these conditions:

- Machine door closed
- Cup station in place
- No cup in the station

Press any letter on the selection switch panel, for example, **A**. Only the letter **A** should be showing in the message display. If **AMUG** is displayed, it indicates one or more of the following:

- Improper cup station alignment
- Excessive sensitivity (the sensor is sensing the delivery door)
- Cup station lens is not clean

### **Cleaning**

As indicated in the Sanitation section, you should remove the cup station to clean it. Pay particular attention to the dark colored infrared mug/cup sensor lens, which is part of the cup station. If it is not thoroughly cleaned, the sensor will not work properly.

### **CAUTION**

Do not get liquid inside the sensor unit.

Cleaning the infrared mug/cup sensor unit itself is not usually necessary. If it does require cleaning, just wipe it with a damp cloth.

# ***Cold Drink Center (327/328) Operator's Guide***

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## **Calibration**

1. Remove the plastic cap in the rear of the sensing unit, exposing the potentiometer adjusting screw, Figure A1.
2. Turn the screw clockwise to increase sensitivity of cup detection, or counterclockwise to decrease sensitivity.
3. Calibrate the sensor:

### **CAUTION**

Do not adjust sensitivity too far, or unreliable sensing could result.

- a. Using a piece of **WHITE** poster board or heavy cardboard, make a 5" x 5-5/8" target.

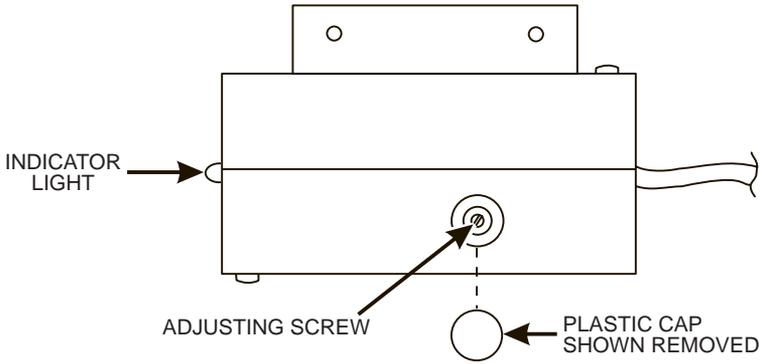
### **NOTE**

**IT IS VERY IMPORTANT THAT THIS MATERIAL BE WHITE.**

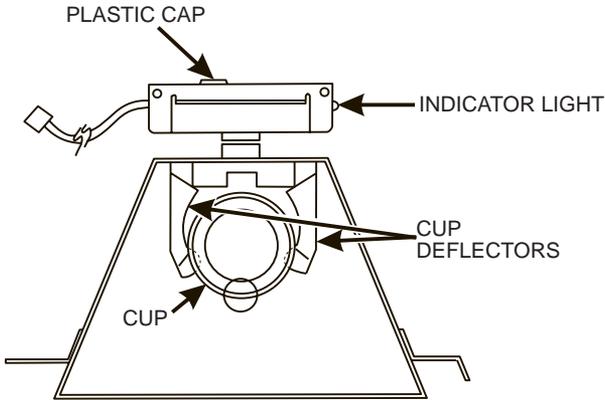
- b. Place the target in the cup station just beyond the cup deflectors, Figure A2. The target should be standing vertically; not tilted forward or backward.
- c. With the target in place, turn the adjusting screw clockwise very slowly until the indicator just turns **ON**.
- d. Turn the adjusting screw counterclockwise very slowly until the indicator just turns **OFF**.

This calibration will be adequate for most cups or mugs. In some cases, a slightly more sensitive setting is needed if the cup or mug is a dark color.

## VIEWING REAR OF SENSOR ASSEMBLY



**Figure A1**



**Figure A2**



## **APPENDIX B. THE FREE VEND KEYSWITCH OPTION**

The free vend keyswitch allows someone to set up free vending without needing to open the door.

### **NOTE**

Freevend Options **MUST** be set to *FREEW/KEY* (see the programming section) for this to work properly.

### **C. TO START FREE VEND:**

1. Place your key in the free vend keyswitch and turn it to the right. (If the keyswitch is already turned to the right, turn it to the left, then back to the right.) The display shows: *ENTER CODE*.
2. Enter the four-digit free vend code. If you enter the wrong code, you have to return to step 1 and start over.
3. If you enter the correct code, the display shows: *FREE ON*.
4. Remove your key. NOTE: You don't have to turn the key back to the left to remove it, but it's a good idea to do so.

### **D. TO END FREE VEND:**

1. Place your key in the free vend keyswitch and turn it to the right. (If the keyswitch is already turned to the right, turn it to the left, then back to the right.) The display shows: *ENTER CODE*.
2. Turn the keyswitch back to the left and remove your key. The display returns to the standby message.

### **E. TO ELIMINATE THE CODE REQUIREMENT:**

1. The factory default code is 0000. If this code is used, the machine will not ask for a code, but will simply enter freevend mode.
2. To require a CODE entry, change the code to something other than 0000. See "Enter a New Freevend Code" on page 29.

**Note that no code is necessary to remove the machine from free vend.**



## **APPENDIX C. CUP CANISTER MODIFICATION**

Modify a cup canister turret to aid in vending 12 oz. Cups.

Proceed as follows:

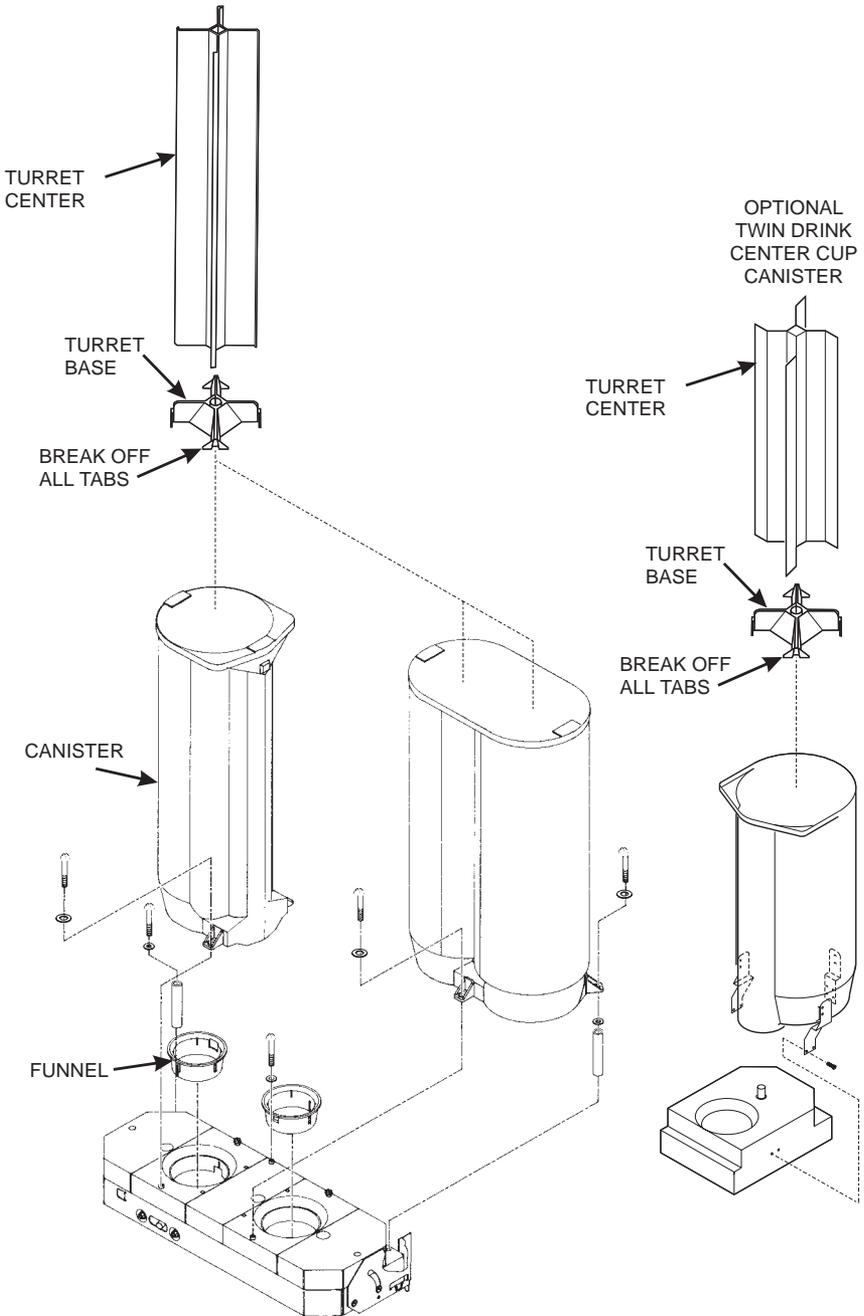
3. Remove all cups, then remove the turret center and turret base assembly from the canister.
4. Break off all 8 tabs on the bottom of the turret base as shown.

### **NOTE**

You will no longer be able to vend smaller cups from this canister! To return to vending smaller cups you must replace the modified turret base with an original turret base (part number 6233048) from National Vendors Parts Department.

5. Replace the turret center and turret base in the canister and load cups.

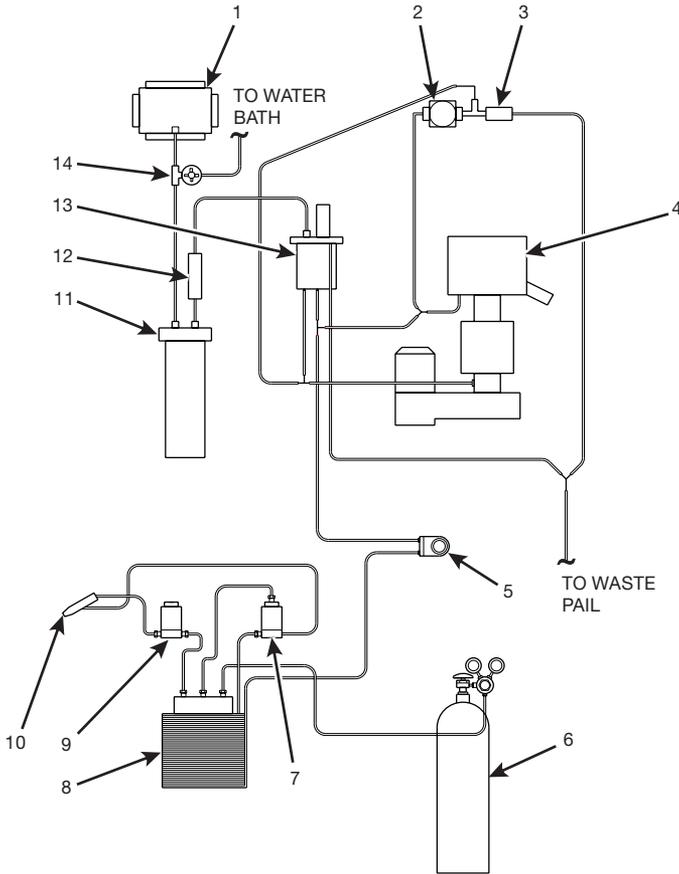
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## APPENDIX D. WATER AND CARBONATION SYSTEM DIAGRAMS

327 WITH  
COOL SAN

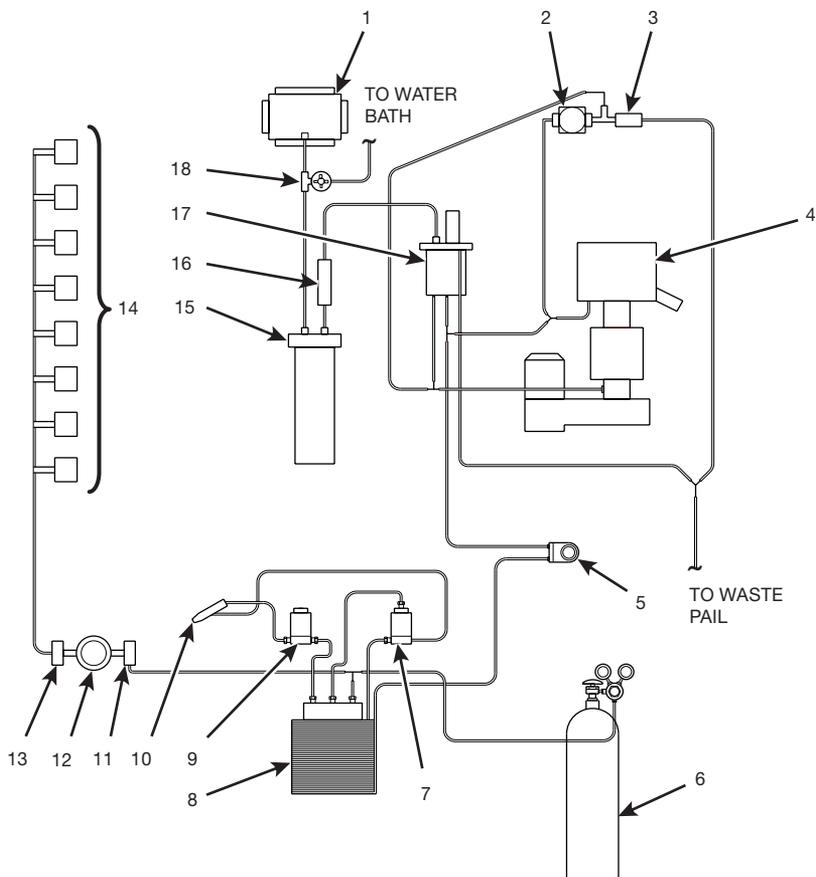


327p0011

| INDEX | DESCRIPTION           | INDEX | DESCRIPTION             |
|-------|-----------------------|-------|-------------------------|
| 1     | External water source | 8     | Water cooling coil      |
| 2     | Cool San pump         | 9     | High carb water valve   |
| 3     | Dump valve            | 10    | Water discharge spigot  |
| 4     | Ice maker             | 11    | Filter head             |
| 5     | Water pump            | 12    | Inlet valve             |
| 6     | CO2 cylinder          | 13    | Water feeder cup        |
| 7     | Non carb. water valve | 14    | Convenience water valve |

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328 WITH  
COOL SAN

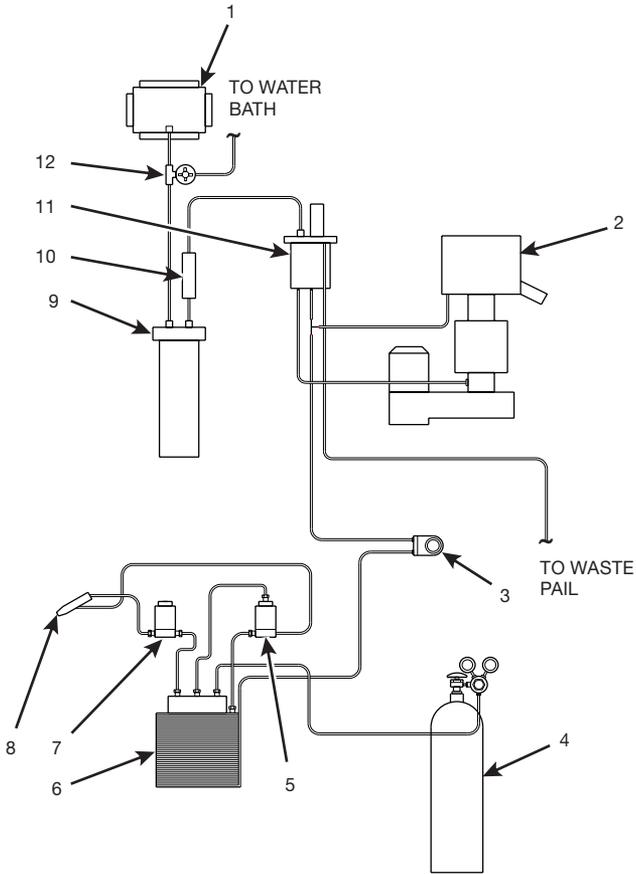


327p0012

| INDEX | DESCRIPTION           | INDEX | DESCRIPTION                             |
|-------|-----------------------|-------|---|
| 1     | External water source | 10    | Water discharge spigot                  |
| 2     | Cool San pump         | 11    | CO2 pressure switch                     |
| 3     | Dump valve            | 12    | CO2 regulator (pumps)                   |
| 4     | Ice maker             | 13    | Valve                                   |
| 5     | Water pump            | 14    | CO2 manifold assembly - 6 pump & 8 pump |
| 6     | CO2 cylinder          | 15    | Filter head                             |
| 7     | Non carb. water valve | 16    | Inlet valve                             |
| 8     | Water cooling coil    | 17    | Water feeder cup                        |
| 9     | High carb water valve | 18    | Convenience water valve                 |

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327 WITHOUT  
COOL SAN

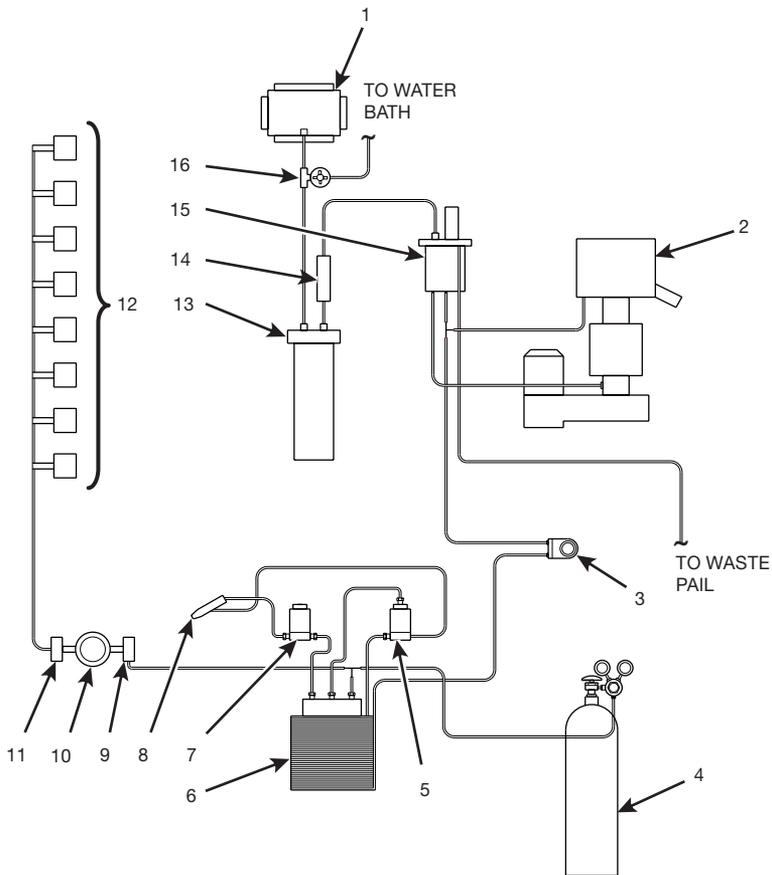


327p0013

| INDEX | DESCRIPTION           | INDEX | DESCRIPTION             |
|-------|-----------------------|-------|-------------------------|
| 1     | External water source | 7     | High carb water valve   |
| 2     | Ice maker             | 8     | Water discharge spigot  |
| 3     | Water pump            | 9     | Filter head             |
| 4     | CO2 cylinder          | 10    | Inlet valve             |
| 5     | Non carb. water valve | 11    | Water feeder cup        |
| 6     | Water cooling coil    | 12    | Convenience water valve |

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## 328 WITHOUT COOL SAN



327p0014

| INDEX | DESCRIPTION            | INDEX | DESCRIPTION                             |
|-------|------------------------|-------|---|
| 1     | External water source  | 9     | CO2 pressure switch                     |
| 2     | Ice maker              | 10    | CO2 regulator (pumps)                   |
| 3     | Water pump             | 11    | Valve                                   |
| 4     | CO2 cylinder           | 12    | CO2 manifold assembly - 6 pump & 8 pump |
| 5     | Non carb. water valve  | 13    | Filter head                             |
| 6     | Water cooling coil     | 14    | Inlet valve                             |
| 7     | High carb water valve  | 15    | Water feeder cup                        |
| 8     | Water discharge spigot | 16    | Convenience water valve                 |

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## APPENDIX E. BLENDED DRINKS

In addition to regular syrup drinks, specialty drinks can be produced by blending two syrups in a single drink. An example of this would be Iced Tea with Lemon. Use the regular tea syrup together with the lemonade syrup to make tea with lemon. Other well-known combinations are Lemon Pepsi or Cherry Coke.

### NOTE

These types of drinks are only available on machines using the CO<sub>2</sub> pumps, because of the need to control the syrup throw time. The throw volume of a diaphragm pump cannot be controlled electronically, so the needed adjustment is not available with that type of machine.

6. Press , then  until the display shows *SETUP*. Select the drink

you want to blend (**X**, **Y**, and **Z** are valid), then press  to view the different screens of the recipe.

Most screens are similar to normal drink setups, such as cold water (*CLD.X*), carbonated water (*CRB.X*), and syrup (*SYR.X*). The setup screens that you will NOT normally see are the percentage plus (*PCT.X+*) and valve selection (*MIX.X*) screens. On these screens, you will add information needed only for the blended drinks.

**Percentage plus** is where you will select the amount of each syrup you want to use. For example, set percentage plus to .80 (*PCT.X.80*). This means the syrup will be divided 80% from the first valve, and 20% from the second.

**Valve selection** is how you decide which syrups to mix together. (Obviously, you will need to know which valves dispense which syrups.)

7. Press  to set the first valve selection screen to valve 1: *MIX.X V.1*.
8. Press , then  to set the second valve selection screen to valve 2: *MIX.X+V.2*. You have now created a drink where 80% comes from syrup valve 1 and 20% comes from syrup valve 2.
9. Set the remaining screens as you would for a normal drink, and enjoy!

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## **Spritz Drinks**

Spritz drinks are special versions of blended drinks that require a slightly different setup. The idea is to dispense a cold water drink with just a hint of flavoring. An example would be water with lemon. You can easily do this with a blended setup by doing the following:

1. Set up all times as you would with a water only drink.
2. Set the *MIX.X* and *MIX.X+* screens to dispense from the same valve.
3. Set the *PCT.X+* screen to 50%.
4. Alter the syrup timer so that the total syrup throw is only a fraction of a normal throw (1 or 2 seconds).
5. An alternate technique is to set the first valve to the desired flavor, then set percent plus to 100%. Either way, all the syrup comes from only one valve, and the throw time can be adjusted to taste.

This Merchandiser is warranted for one (1) year against defective parts and workmanship. Any part or parts which are proven to be defective within one (1) year of the date of shipment will be repaired or replaced free of charge when the defective part is returned, with transportation charges prepaid, to the destination designated by the National Vendors Warranty Department.

This warranty applies only to the original purchaser of the Merchandiser and is null and void if the Merchandiser is sold during the period of warranty.

This warranty does not apply to a) electrical components, wiring, or circuits and/or for all mechanical parts or assemblies damaged as a result of operating the Merchandiser at other than the design voltage and frequency specified on the Electrical Rating Tag, or b) in event of vandalism, fire or negligence, or c) incandescent lamps, neon lamps, fluorescent lamps, ballasts, starters or other expendable items or d) when other manufactured components are installed in National Vendors Merchandisers.

National Vendors is not responsible for any cost of service rendered or repairs made by customer or its agents on Merchandiser or parts unless authorization to incur such expense has been given in writing by National Vendors prior to incurring such expense.

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