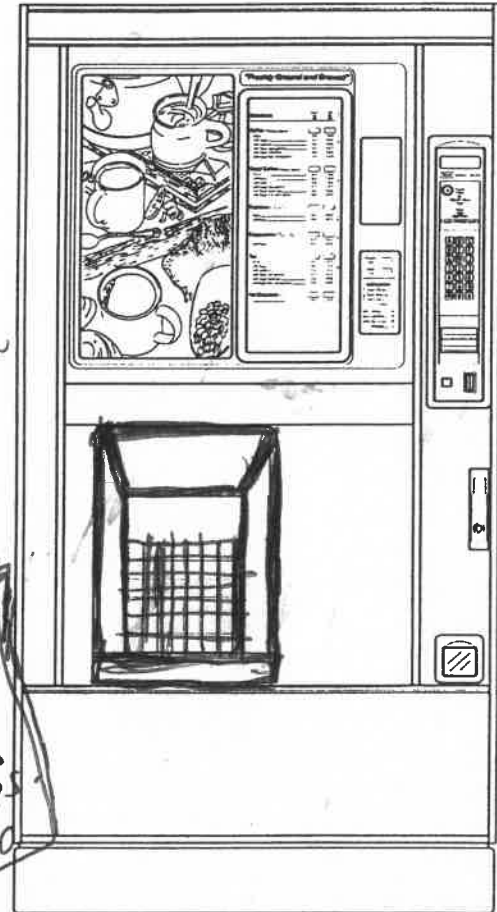


Hot Drink Center

WATER
THROW
ONLY
WATER
TIME
FOR
IND.
SELECTION
HIT
TEST

NEED
633.10
NEW
TONE
LID
NEED
SOFTWARE
33.10



MODEL 633 - 635 - 637

Operator's Guide

Copyright © 6-95

CRANE- National Vendors 

6330002



TABLE OF CONTENTS

TABLE OF CONTENTS

Specifications 2
Initial Setup 4
Major Parts 6
 Door Assembly - Exterior 6
 Door Assembly - Interior 7
Controls and Indicators 10
Adjustments and Minor Maintenance 17
 Set up the Coin Mechanism 17
 Empty the Bill Stacker 17
 Install the Water Filter Cartridge 18
 Install the Optional Coin Box Lock 20
 Adjusting Water Valves 20
 Cup Mechanism Adjustment 21
 Loading the Cup Mechanism 22
 Setting up the Display Assembly 24
 Adjusting the Grind 26
 Disengaging the Grinder 26
 Filling and Installing Canisters 27
 Loading Optional Filter Paper 28

Programming the Hot Drink Center 30
 Orientation 30
 Getting Around 30
 The Service Keypad 30
 The Selection Switch Panel 30
 The Display 31
 The Keys 31
 Summary 34
 Programming Flowcharts 36
 Machine Configuration 44
 Product Configuration 47
 Setting Throws 53
 Collecting Dry Product Gram Throws 54
 Dry Product Weight and Throw Time
 Factory Default Settings 55
 Caffé Latte Recipe 61
 Collecting Water Throws 62
 Water Throw Default Times and Volumes 63
 Pricing 64
 Set Prices for Individual Selections 64
 Set One Price for the Entire Machine 65
 Set Prices for All Regular Cups 66
 Set Prices for All Large Cups 67
 Set Prices Using Price Lines 68
 Time of Day 69
 Time Interval Editing 71
 the End of Message Character 73
 Custom Message Editing 73
 the Character Set 74
 Test Machine Functions 75
 Payout Coins 78



Free Vend	79
Data	80
Data Available for Viewing	80
Viewing Data Items	82
Clearing Data	83
Diagnostics	84
Setting the Supervisor Options	86
View Machine Information	88
Sanitation	89
Basics	89
Sanitation Procedures	91
Overall Cleaning	92
Preventive Maintenance Cleaning	92
Appendix A. Initial Set-up Guide	A1
I. Power Requirements	A1
II. Water Requirements	A1
III. Positioning the Merchandiser	A2
IV. Final Installation	A2
Connect the Merchandiser to the Water Supply	A2
Connect the Merchandiser to the Power Source	A2
Level the Machine	A3
Mount the Base Plate Brackets	A3
Mount the Base Plate and Slides	A3
Fill the Tank	A3
Appendix B. The Free Vend Keyswitch Option	B1
Appendix C. The Infrared Mug/cup Sensor	C1



NOTES



Lined area for taking notes, consisting of multiple horizontal lines.


SPECIFICATIONS
SPECIFICATIONS
SPECIFICATIONS COMMON TO ALL MACHINES

DIMENSIONS	72" (183 cm) high 38.12" (97 cm) wide 28.5" (72 cm) deep
WEIGHT	570 lbs (258.5 kg)
WATER REQUIREMENTS	Minimum: 20 psi (137.8 kPa) Maximum: 80 psi (551.2 kPa)
AMBIENT TEMPERATURE	Minimum: 41° F (5° C) Maximum: 90° F (32° C)
OPERATING ENVIRONMENT	For indoor use only
CUP CAPACITIES (APPROXIMATE)	7 oz cups (squat) - 1150 8.25 oz cups - 1050 9 oz cups (squat) - 1100 10 oz cups - 1000 12 oz cups - 940
CANISTER CAPACITIES (APPROXIMATE)	Regular coffee beans - 14 lbs Ground coffee - 13 lbs Freeze dry coffee - 2 lbs Decaf coffee beans - 9.5 lbs Ground decaf coffee - 9 lbs Freeze dry decaf - 2 lbs Chocolate - 10 lbs Soup - 6.7 lbs Sugar - 11 lbs Lightener - 4.5 lbs Sugar substitute - 4 lbs Tea (freeze dry) - 1.5 lbs 6th product (freeze dry) - 6 lbs
PRODUCT OPTIONS	
Model 633 Fresh Brew	Up to eight selections of fresh brew regular and decaf coffee, freeze dried regular and decaf coffee, fresh brew and freeze dried tea, soup, chocolate, cappuccino, espresso, and caffè latte.
Model 635 Freeze Dried	Up to eight selections of freeze dried regular coffee, decaf coffee, tea, soup, chocolate, cappuccino, espresso, and caffè latte.
Model 637 Fresh Brew with Bean Grinder	Up to eight selections of fresh ground and brewed regular and decaf coffee, freeze dried regular and decaf coffee, fresh brew and freeze dried tea, soup, chocolate, cappuccino, espresso, and caffè latte.



SPECIFICATIONS

SPECIFICATIONS COMMON TO ALL MACHINES (continued)

OPTIONS AND ACCESSORIES	
OPTIONS	Coffee brewer filter paper (5000 vends per roll) Coin box lock Base grille kit Automatic delivery door Flex Ace door lock and key Van Door lock and key Sugar substitute kit 6th product kit Cup/mug electronic sensor (cup hold switch kit) Snap-on ingredient canister extension sleeves (4 tall) Everpure water filter system CUNO water filter system Debit card validator Free vend keyswitch Data printer kit Ingredient rinse tray

SPECIFICATIONS UNIQUE TO 115 VOLT MACHINES

ELECTRICAL	115 Volts AC 60 Hertz 12 Amps Single phase
OPTIONS AND ACCESSORIES	
COIN MECHANISM	MARS TRC-6000 COINTRON 3000 MARS TRC-6010XV (24 V) Maka/Conlux Model USPX-004 (24 V) Coin Acceptors Model 9302-LF (24 V)
BILL VALIDATORS	MARS VFM1 pulse MARS VFM3 serial MAKA pulse COINCO C.B.V.

SPECIFICATIONS UNIQUE TO 220 - 240 VOLT MACHINES

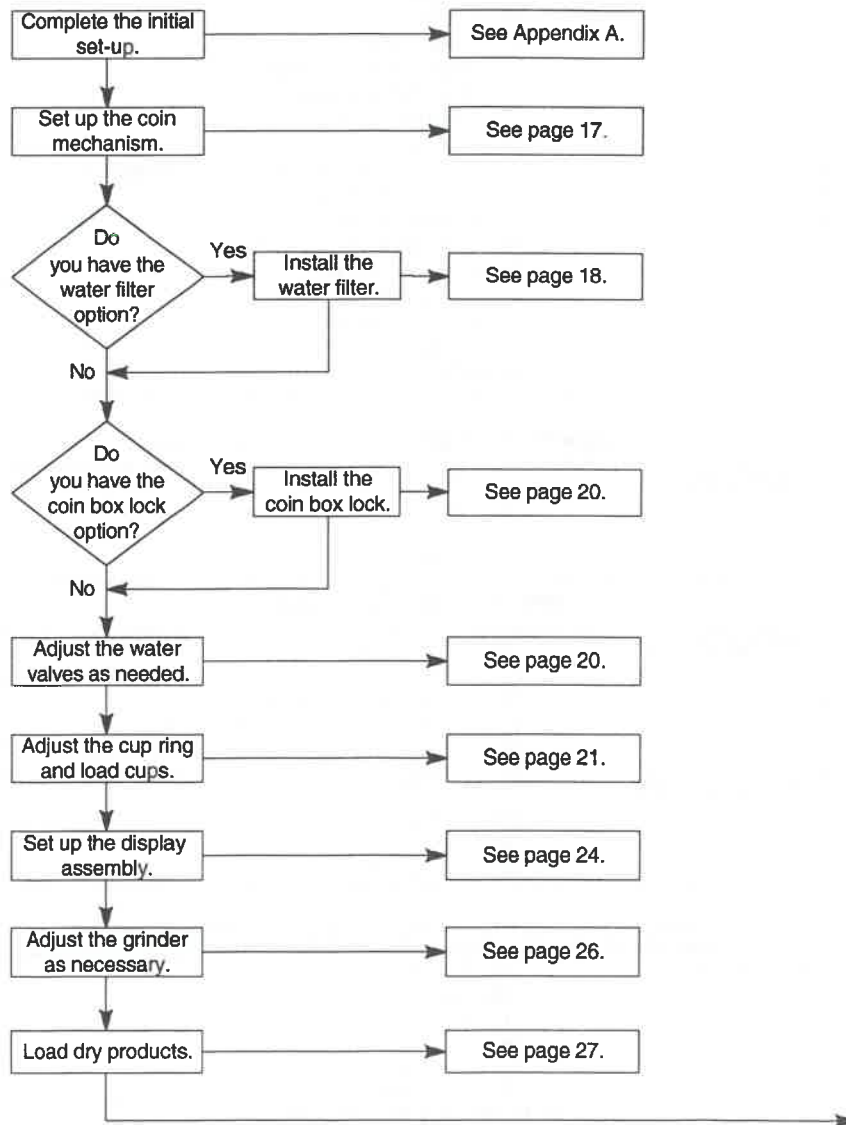
ELECTRICAL	220-240 Volts AC 50 Hertz 10 Amps 2 kW Single phase
OPTIONS AND ACCESSORIES	
COIN MECHANISM	Executive coin mechanism interface

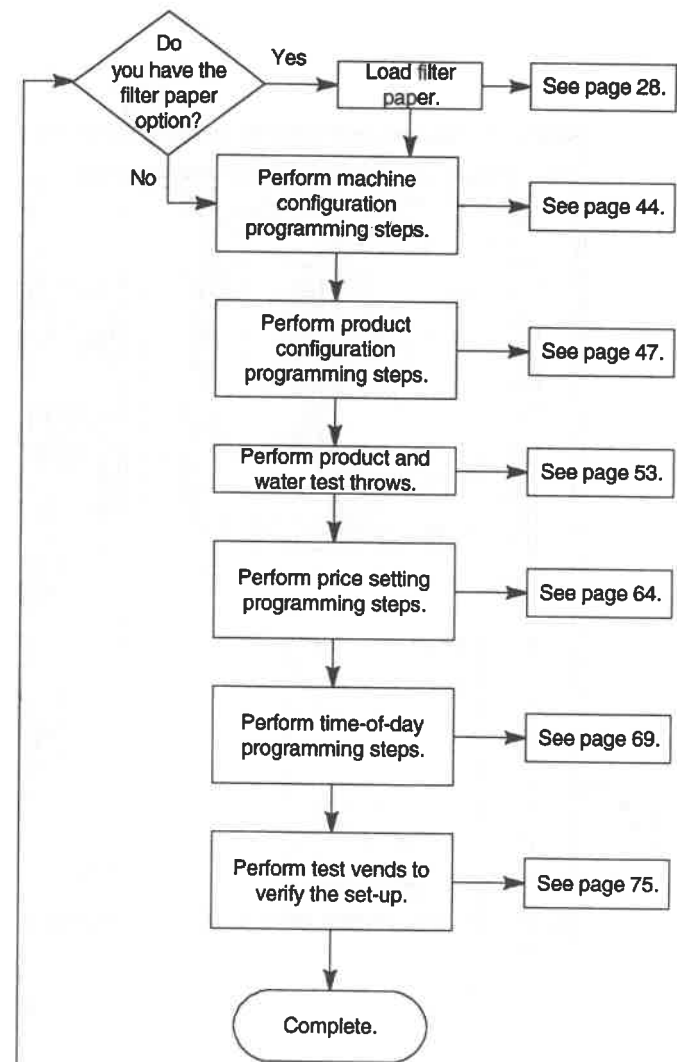


INITIAL SETUP

Initial Setup

The first thing you will do with a new merchandiser is set it up. This procedure is covered in Appendix A of this manual. On these two pages is a flow diagram which lists the various options in your merchandiser, and the steps you follow to get it up and running and serving your customers! Follow the flow diagram for the initial setup.



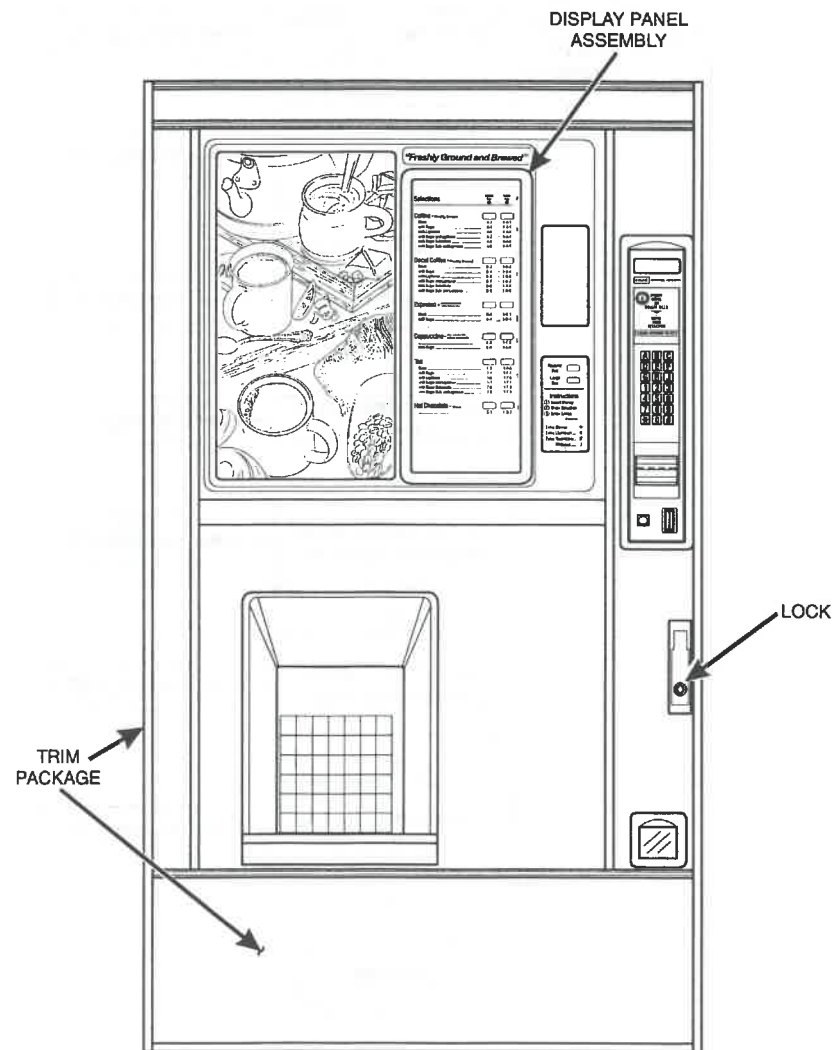




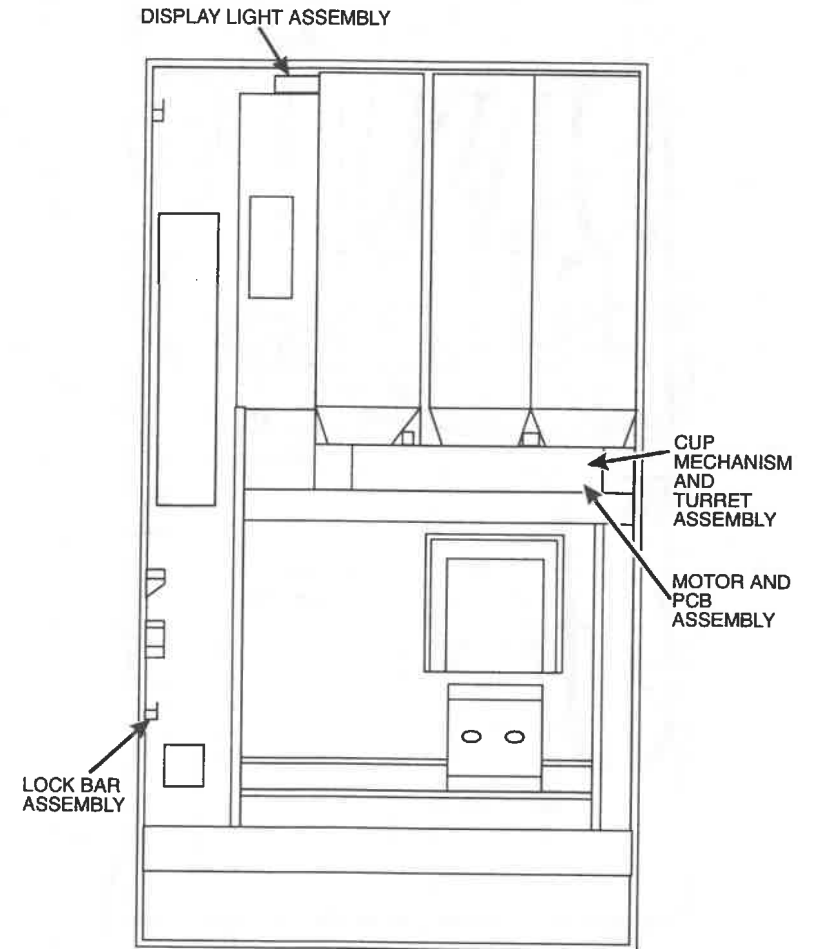
MAJOR PARTS

Major Parts

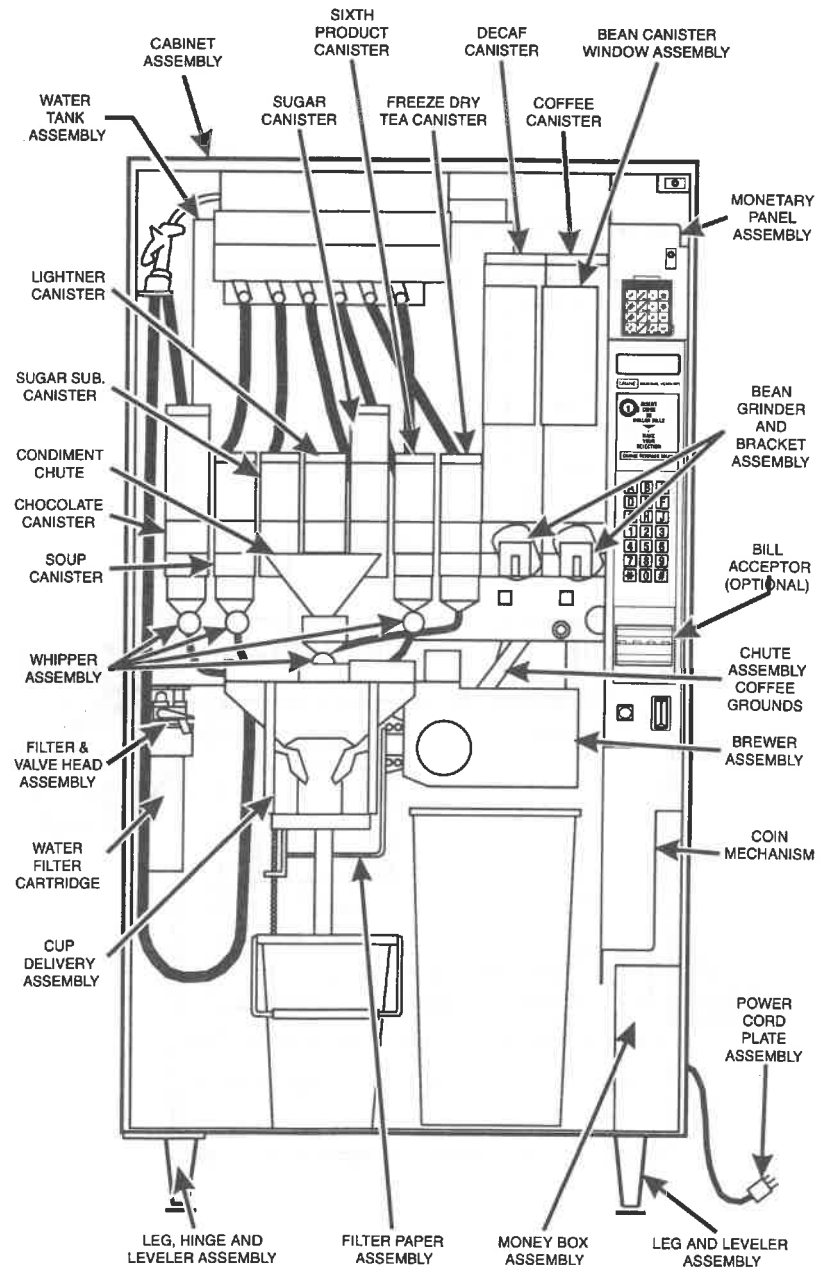
The diagrams on the following pages will acquaint you with the major parts of the Hot Drink Center. For more detailed information, please consult your PARTS MANUAL. If you do not have a PARTS MANUAL, contact National Vendors Parts Department.

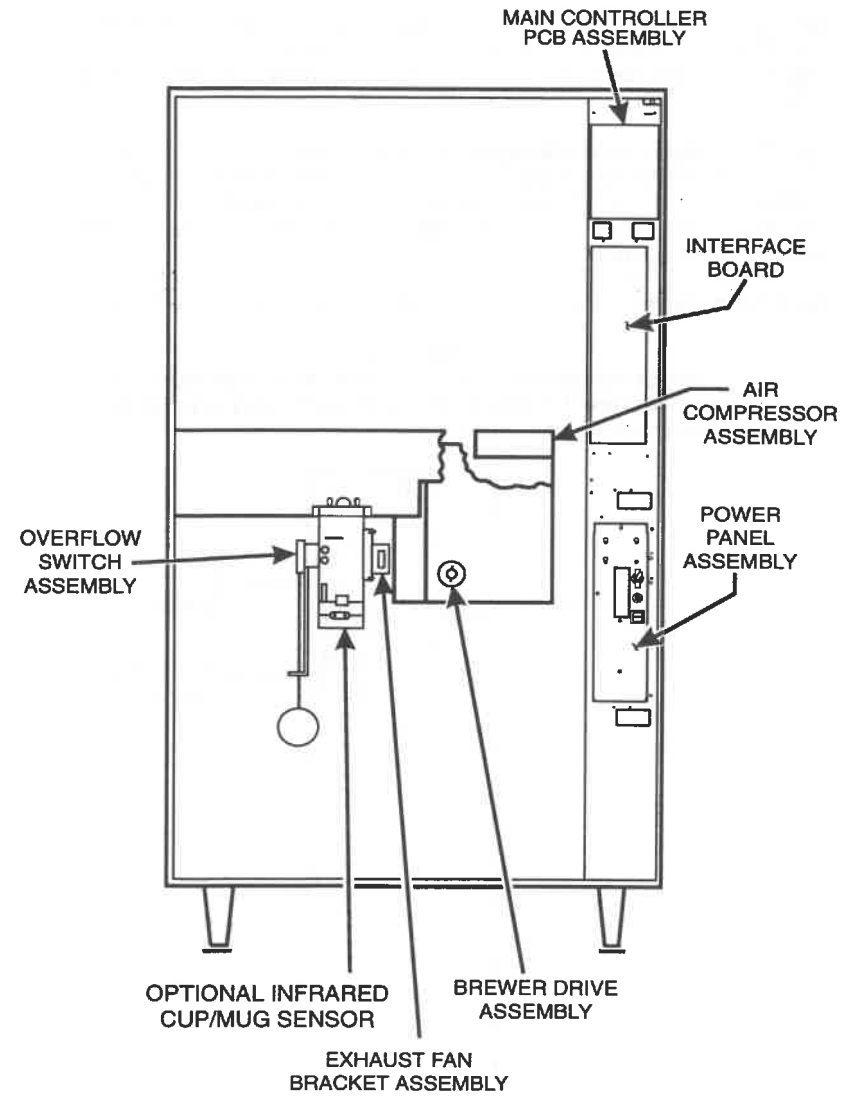


Door Assembly - Exterior



Door Assembly - Interior







Controls and Indicators

POWER PANEL. You may have one of three power panels, depending upon where you live. The controls are fundamentally the same, however.

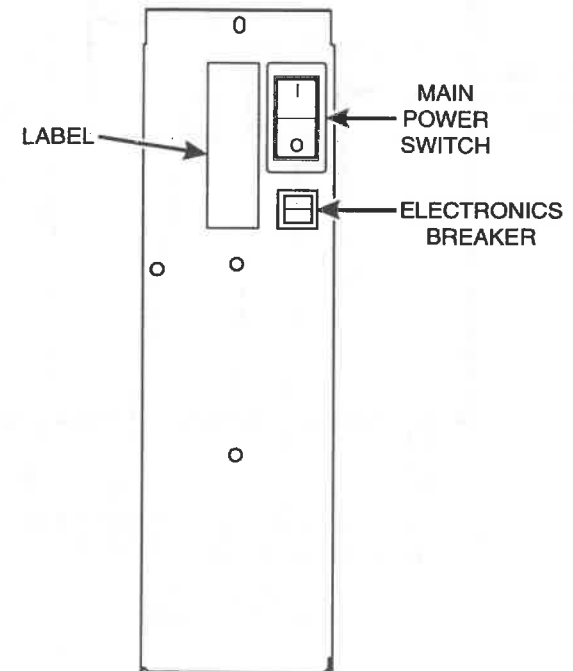
Circuit Breakers and Fuses. Circuit breakers and fuses protect the merchandiser against failures in the power supply or any of the electrical components. If a circuit breaker trips and cannot be reset, or if a fuse repeatedly blows, contact a field service representative.

Back Side of U.S./Canada Power Control Panel. The circuit board mounted on the rear of the U.S. and Canadian power control panel is a dc power supply for the coin mechanism. A fuse protects the board circuitry in the event of a coin mechanism solenoid failure. If the coin mechanism is not working, check this fuse. If the fuse is blown, a bad coin mechanism solenoid could be at fault.

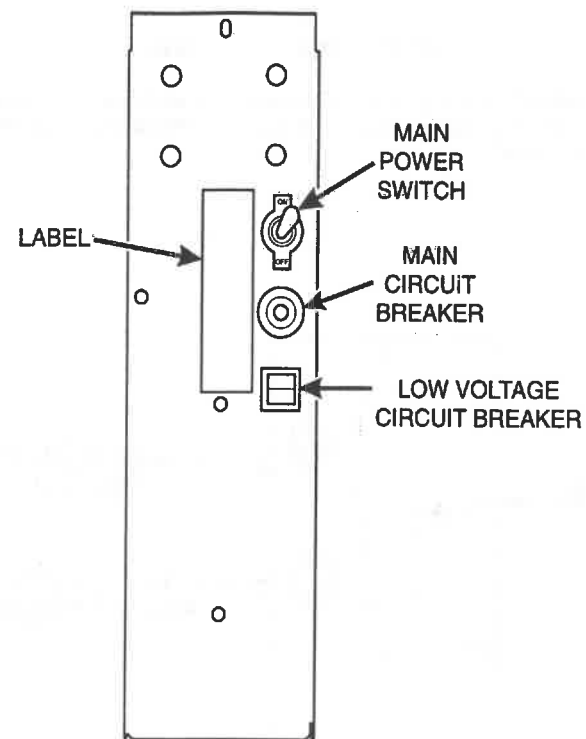
Main Power Switch. This is the main ON/OFF switch for the merchandiser.

WARNING

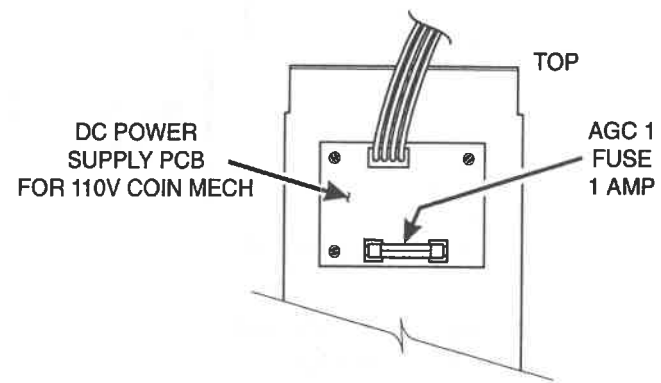
To protect against electrical shocks and possible damage to the machine, turn this switch **OFF** when performing any maintenance on the merchandiser.



POWER CONTROL PANEL
(FRANCE / GERMANY / SPAIN)



POWER CONTROL PANEL
(U.S. / CANADA)

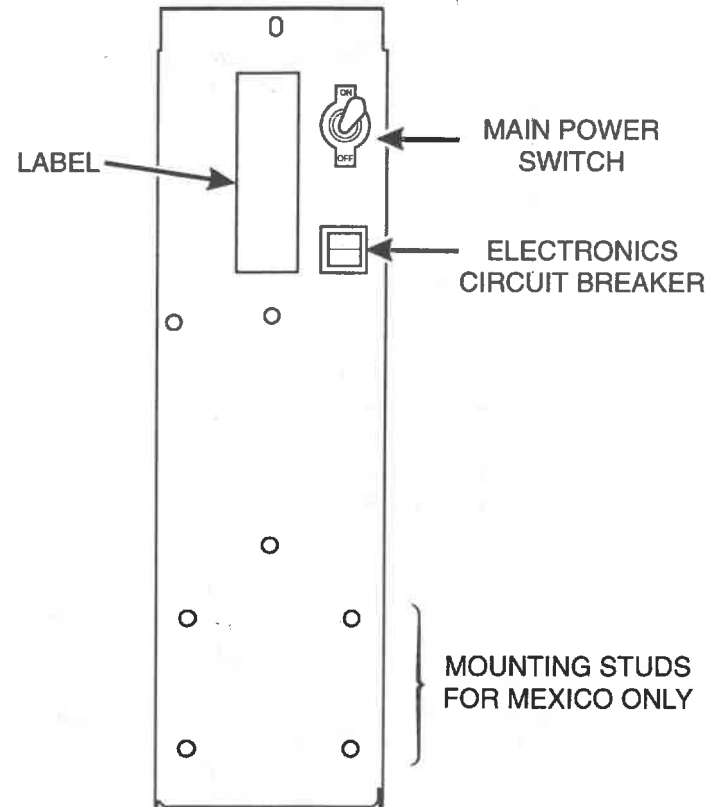


BACK SIDE OF
U.S. / CANADA POWER CONTROL PANEL

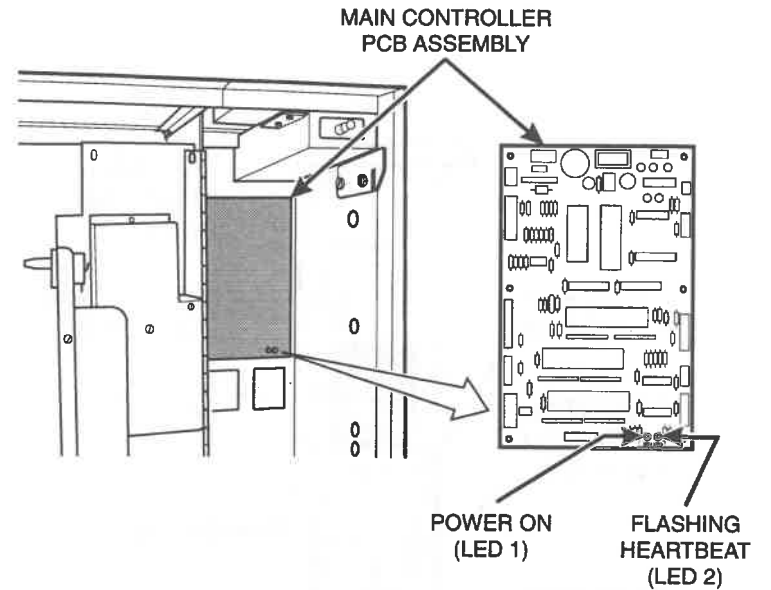


SPECIAL NOTE FOR MEXICO:

Merchandisers sold to Mexico require an additional electrical connection prior to being put into service. Please see Appendix A for details.



**POWER CONTROL PANEL
(U.K. / MEXICO)**



MAIN CONTROLLER PCB DISPLAY

Main Controller PCB Display. This display consists of two light emitting diodes (LED) mounted on the controller PCB.

POWER ON (LED 1) When lit, this red LED indicates electrical power is applied to the controller PCB.

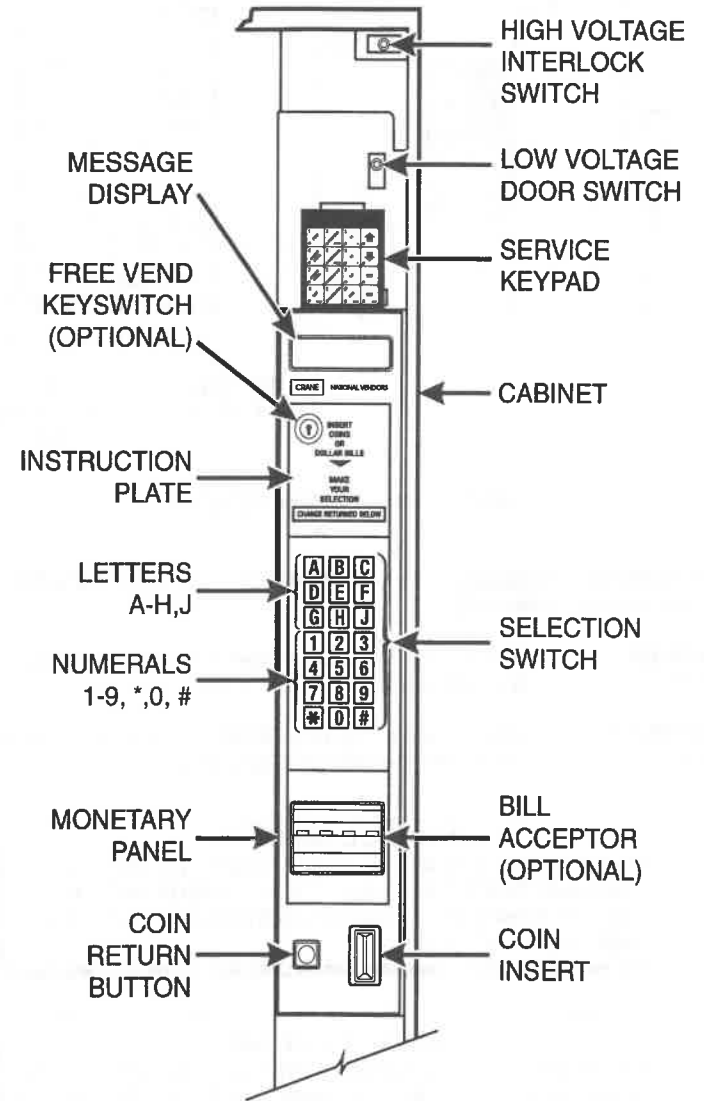
HEARTBEAT (LED 2) When flashing, this red LED indicates that the controller PCB is active, and the software is operating.

NORMAL CONDITIONS:

When the merchandiser is operating normally, you should see a steady red **POWER ON** indicator. The red **HEARTBEAT** indicator should be flashing with a balanced on/off pattern (on for the same length of time that it is off).

ERROR CONDITIONS:

If an error is present, the red **HEARTBEAT** indicator will flash with an unbalanced on/off pattern (on longer than it is off). The error(s) can be viewed under the **DIAGNOSTICS** mode.





High Voltage Interlock Switch (U.S./ Canada). When the cabinet door is open, this switch turns off the optional fan and bean light (if so equipped) and turns on the service light.

High Voltage Interlock Switch (International). When the cabinet door is open, this switch turns off all high voltage to the cabinet. Pulling the switch out restores high voltage for maintenance purposes.

Low Voltage Door Switch. Informs the controller software of the main door open or closed status.

Message Display. This is how the merchandiser communicates with the outside world. Customers can see messages about how much money they have put into the merchandiser. The message display also tells customers when a selection is sold out and when vending is free, inhibited, or discounted. The message display shows you what you are doing when you program the merchandiser, and can show you what is wrong if there is a failure.

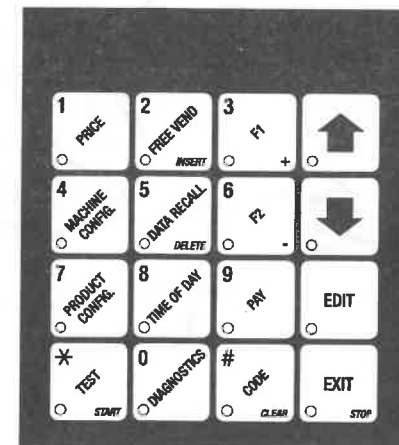
Free Vend Keyswitch. This allows someone (other than maintenance people) to set the merchandiser to free vend without opening the door.

Selection Switch Panel. The customer uses these switches to make selections. Also, maintenance people may use this switch panel during programming and other support modes.

Coin Return Button. Pressing this button returns any coins that have been paid into the merchandiser prior to a vend.

Bill Acceptor (Optional). Accepts bills in various denominations, depending upon the type of bill validator, and how the machine is configured.

Service Keypad. The service keypad is located at the top of the monetary panel. It gives service personnel the means to program, retrieve data from, and view diagnostic information about the merchandiser.



SERVICE KEYPAD

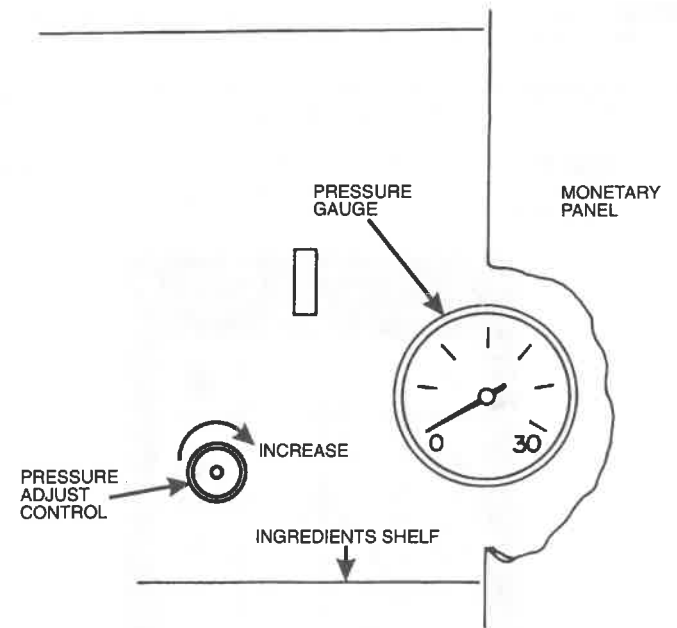


Pressure Adjust Control. This control determines the system pressure provided by the air compressor. Adjust the pressure as follows:

- a. With the compressor running, pinch the brewer inlet air tube.
- b. Adjust the pressure to read 10 - 12 psi on the gauge.

This will produce a pressure of 3 - 6 psi using regular coffee and 8¼ oz cups. No further air pressure adjustments should be necessary.

Pressure Gauge. This indicator shows the amount of air pressure in the system.



PRESSURE CONTROLS



Adjustments and Minor Maintenance

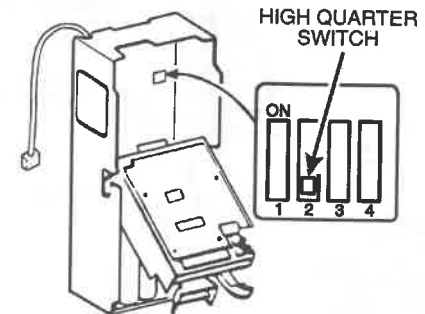
SET UP THE COIN MECHANISM

Setting the Quarter Switch. If your coin mechanism is not a MARS TRC 6000, skip this procedure and begin **LOADING THE COIN MECHANISM**.

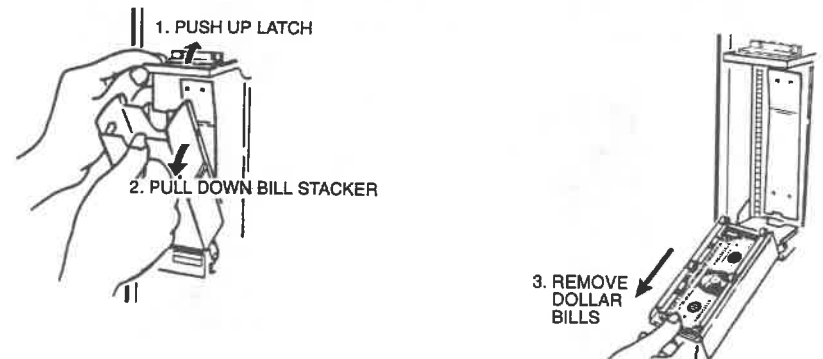
1. Flip down the front of the coin mechanism as shown, and set the quarter switch.

Loading the Coin Mechanism.

1. Open the cabinet door and the monetary door.
2. Insert coins into their respective tubes until each tube has been filled.
3. Inspect the tubes for shingled coins and correct if necessary.



EMPTY THE BILL STACKER





INSTALL THE WATER FILTER CARTRIDGE

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

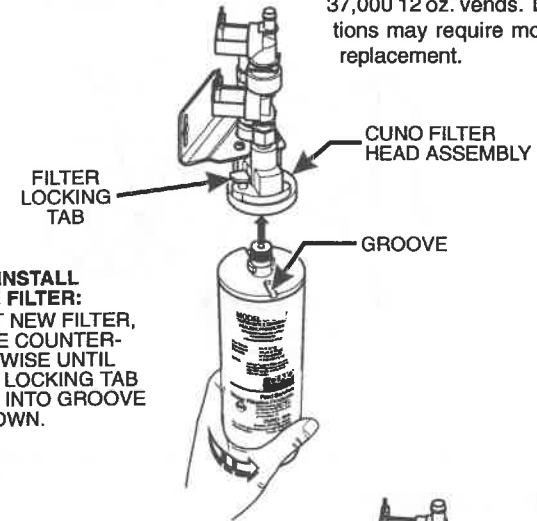
NOTE

Check the water filter installation record. There is a place to write the vend number on the cartridge. The cartridge is effective for a maximum of 64,000 7 oz. vends, 56,000 8 oz. vends, 50,000 9 oz. vends, or 37,000 12 oz. vends. Local conditions may require more frequent replacement.

CUNO BRAND ...

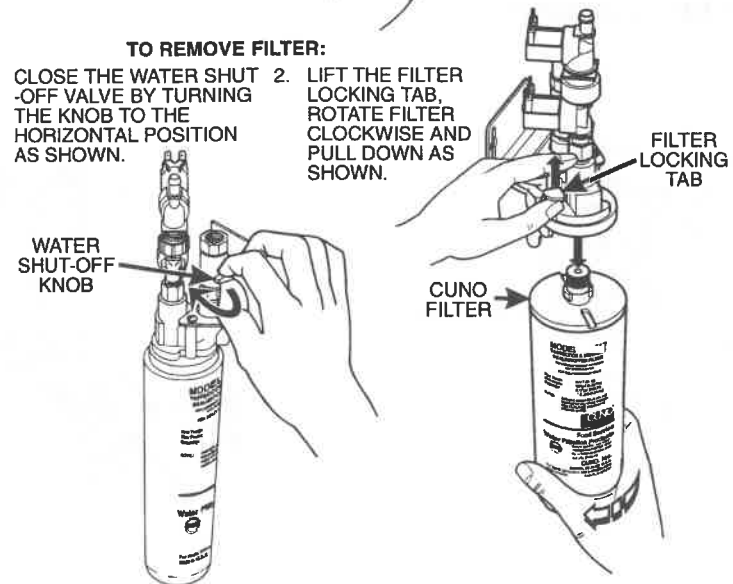
TO INSTALL THE FILTER:

1. INSERT NEW FILTER, ROTATE COUNTER-CLOCKWISE UNTIL FILTER LOCKING TAB SNAPS INTO GROOVE AS SHOWN.



TO REMOVE FILTER:

1. CLOSE THE WATER SHUT-OFF VALVE BY TURNING THE KNOB TO THE HORIZONTAL POSITION AS SHOWN.
2. LIFT THE FILTER LOCKING TAB, ROTATE FILTER CLOCKWISE AND PULL DOWN AS SHOWN.





EVERPURE BRAND ...

NOTE

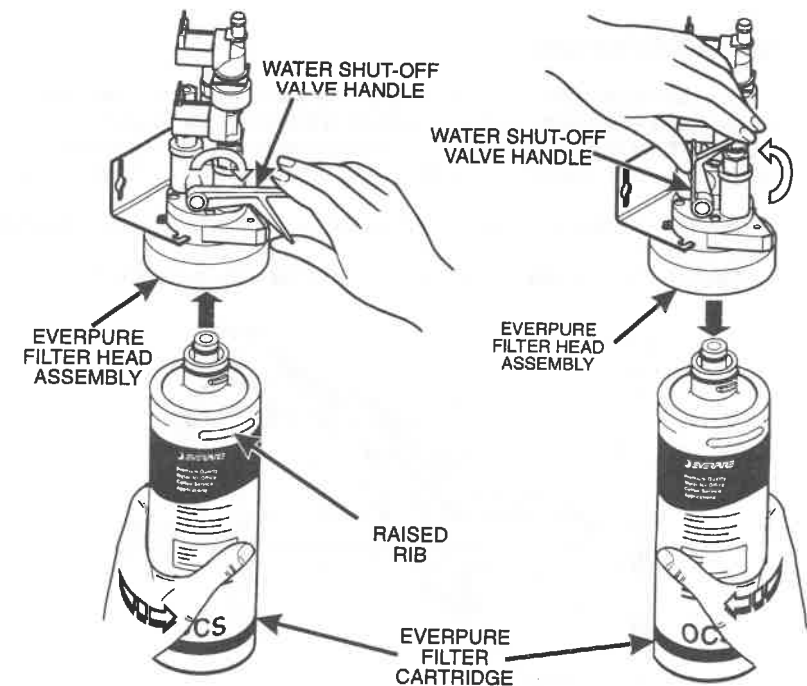
Check the water filter installation record. There is a place to write the vend number on the cartridge. The cartridge is effective for a maximum of 26,000 7 oz. vends, 22,000 8 oz. vends, 20,000 9 oz. vends, or 15,000 12 oz. vends. Local conditions may require more frequent replacement.

TO INSTALL FILTER:

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

TO REMOVE FILTER:

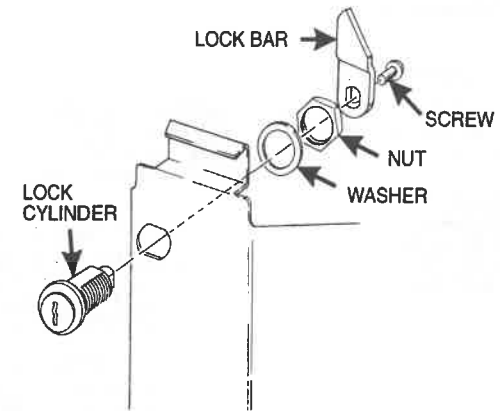
1. CLOSE THE WATER SHUT-OFF VALVE BY LIFTING THE HANDLE TO THE VERTICAL POSITION AS SHOWN BELOW.
2. ROTATE THE FILTER CLOCKWISE AND PULL DOWN AS SHOWN.





INSTALL THE OPTIONAL COIN BOX LOCK

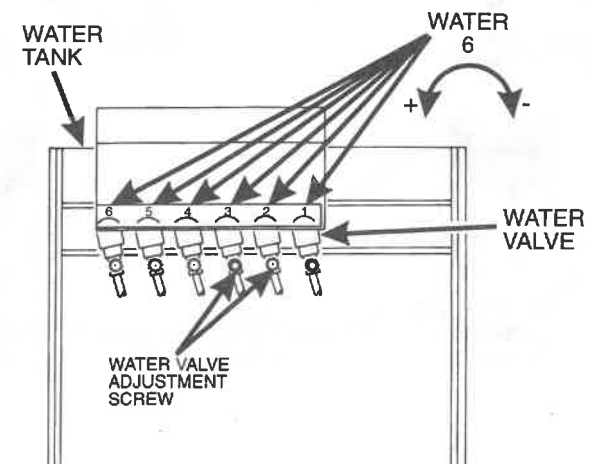
1. Install the lock cylinder, washer, and nut in the order shown.
2. Tighten the nut.
3. Install the lock bar as shown, and secure with the screw.



ADJUSTING WATER VALVES

Water valves do not usually require adjustment, but in some cases adequate water volume cannot be achieved by the throw time setting alone (see the programming section). **IF ABSOLUTELY NECESSARY**, adjust the valves in conjunction with setting the factory default timers during the Product Configuration programming mode.

1. Using a slotted screwdriver, turn the adjustment screw clockwise to decrease the water flow rate.
2. Turn the adjustment screw counterclockwise to increase the water flow rate.

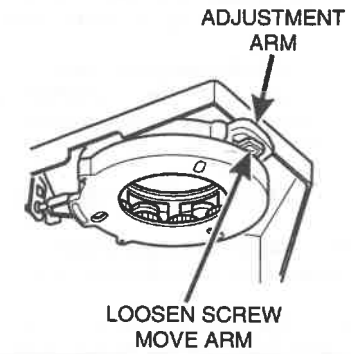




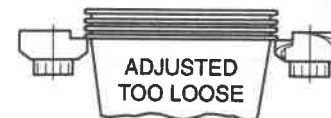
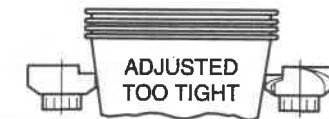
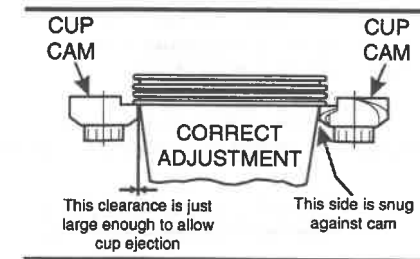
CUP MECHANISM ADJUSTMENT

1. Place seven cups in the cup ring.
2. Observe the clearance as shown in view B.
3. If necessary adjust by first loosening the adjustment arm screw (view A).
4. Move adjustment arm until correct clearance is achieved.
5. Hold adjustment arm in place and tighten adjustment arm screw.

View A



View B



**LOADING THE CUP MECHANISM****CAUTION**

Use only cups which have been designed for use in a hot beverage vending machine.

Normally, regular size cups are loaded in turrets 1A and 1B, and large cups are loaded in turret 2. You may change this, depending upon sales at your location. For example, if more people buy large drinks, then you should load turrets 1A and 1B with large cups. **The size of cup you load, and its location, must agree with the cup size that you select during programming. Refer to the programming section for more information.**

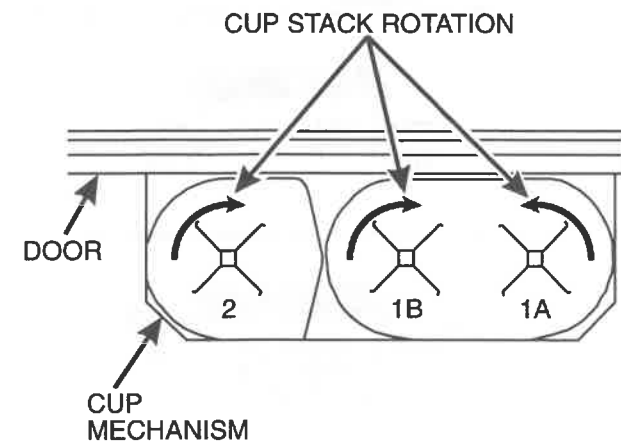
1. Support the cup mechanism in the upright position.
2. Push the latch forward to release the cup mechanism. Continue to support the cup mechanism while you lower it into the loading position.
3. Remove the turret cover.

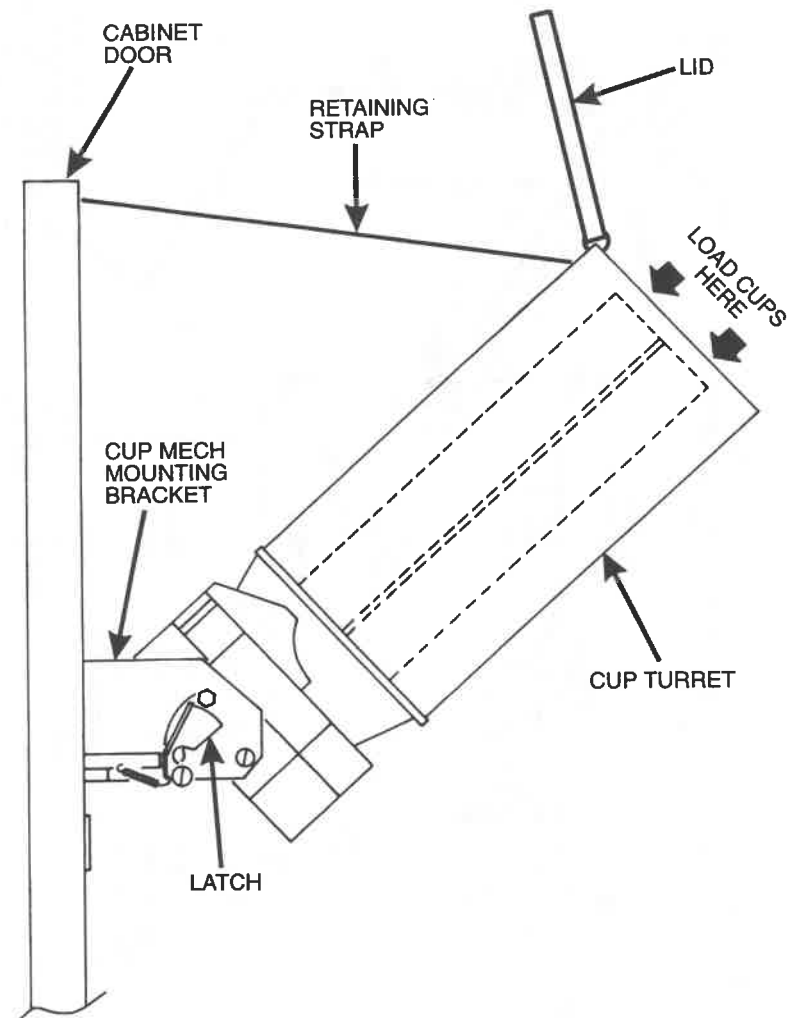
OBSERVE PROPER HYGIENE - DO NOT TOUCH THE CUPS!

4. Open the bottom of the wrapper on a stack of cups.
5. 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 HOT DRINK CUPS IN EACH TURRET; DO NOT INTERMIX!

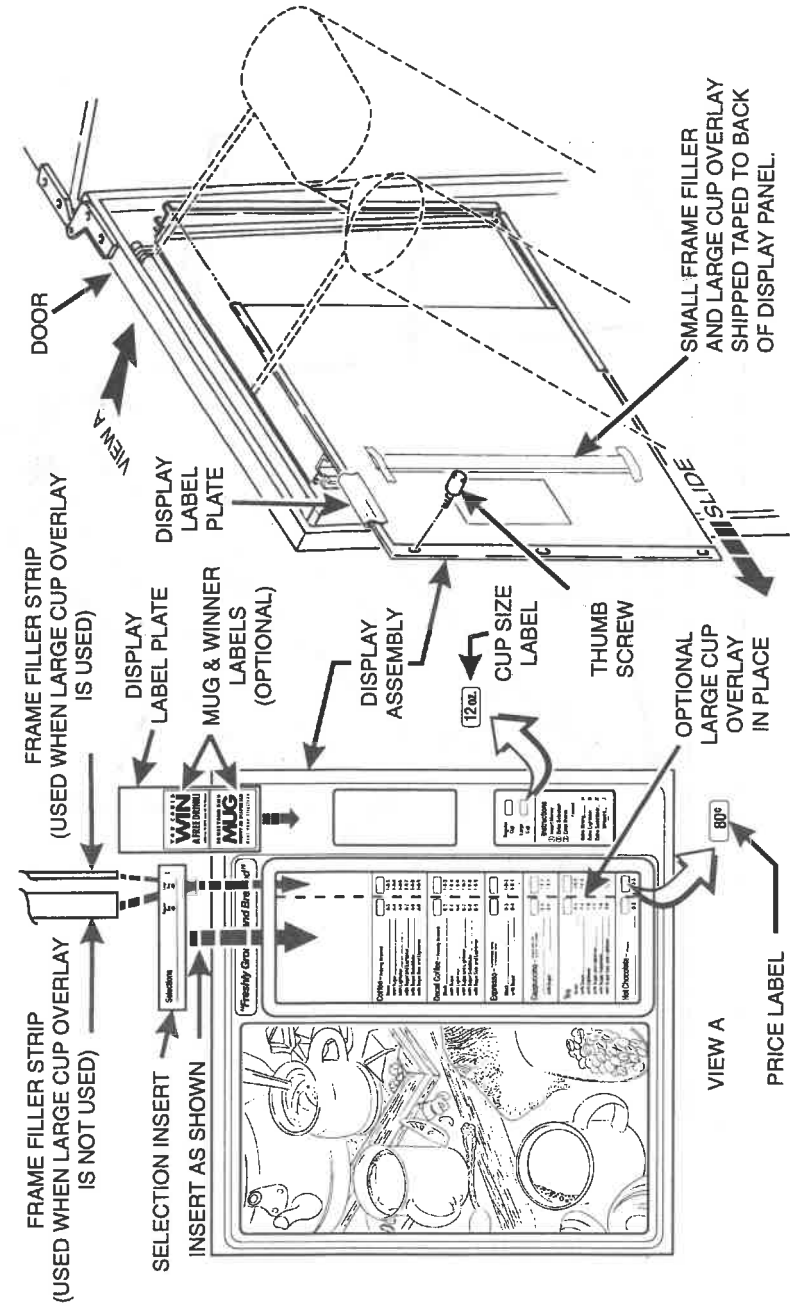
6. Replace the turret cover after the turrets have been loaded.
7. Be sure the cup mechanism is locked into the upright position.

TURRET DESIGNATIONS





SETTING UP THE DISPLAY ASSEMBLY



TO REMOVE THE DISPLAY ASSEMBLY:

1. Tilt the cup turrets away from the door.
2. Remove three thumbscrews and slide the display assembly out of the door.
3. Install the selection inserts appropriate to your machine configuration and the products you are vending.
4. Attach price labels and cup size labels as applicable.
5. Reinstall the display assembly in the door, making sure the right side of the display assembly is fully seated in the right side vertical mounting channel. Secure with three thumbscrews.
6. Return the cup turrets to their upright position.



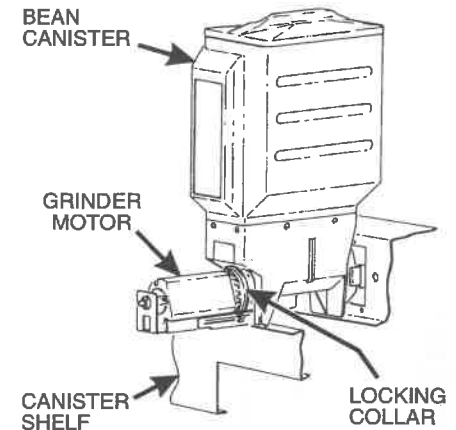


ADJUSTING THE GRIND

- A grind that is within the acceptable range will result in more controlled dispensing of grounds into the brew basket, and better extraction of coffee flavors. A grind that is too coarse results in poor extraction and spraying grounds in the brewer area. A grind that is too fine can overload the grinder motor as well as clog the screens in the brew basket and funnel.

- The degree-of-grind scale attached to the grinder motor represents an acceptable range of grinds. Do not set the grinder beyond the limits of this scale.

1. Push the locking collar toward the canister and turn the grinder motor.
2. Turn clockwise for a finer grind and counterclockwise for a coarser grind. A notch on the locking collar indicates the grind on the scale.



CAUTION

Do not turn the grinder motor too far in the clockwise direction. The grinder blades will come into contact and may be damaged.

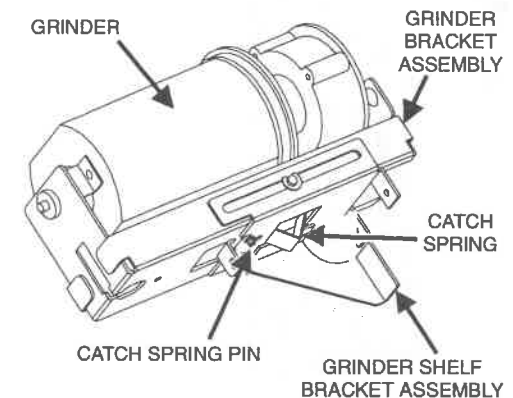
3. Adjusting the grind may make it necessary to readjust the throw time. Use the factory default times as a starting point and proceed according to the directions in the "COLLECTING DRY PRODUCT GRAM THROWS" section.

DISENGAGING THE GRINDER

At certain times, the bean grinder(s) need to be disengaged from the bean canister(s).

WARNING
Keep your fingers clear of all moving parts.

1. Using a screwdriver handle or other suitable tool, push up on the catch spring far enough to free the catch spring pin from the grinder shelf bracket assembly.





2. Pull the grinder and grinder bracket assembly towards you.
3. Pivot the grinder and grinder bracket assembly down.
4. Re-engage the grinder by pivoting it back up into position.

FILLING AND INSTALLING CANISTERS

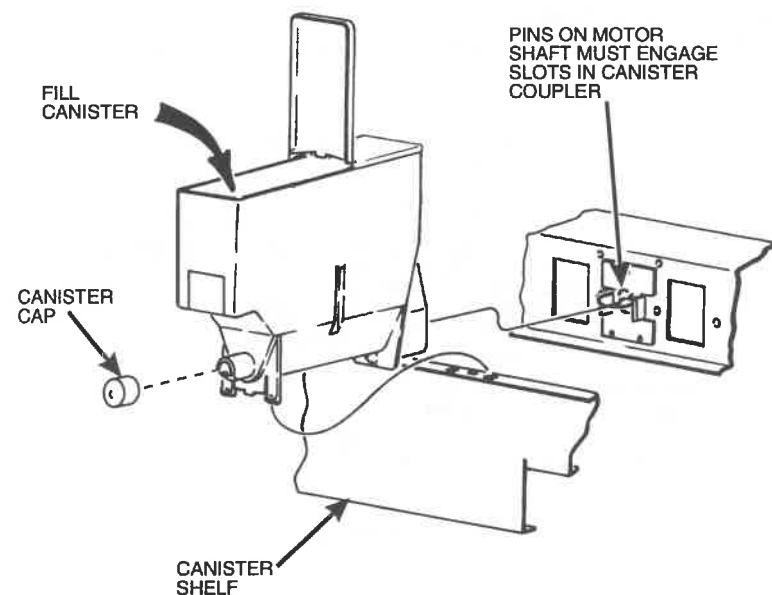
Filling:

Open the lid as shown, and carefully pour product into the canister.

Installing:

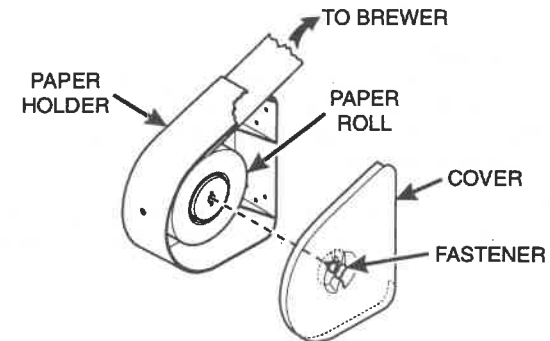
1. Place the canister in position as shown.
2. Engage the pins on the motor shaft with the slots in the canister coupler.
3. Fit tabs on canister into the slots on the canister shelf.
4. To ensure canister is correctly engaged with the rear mounting bracket, gently push down on the front edge of the canister lid.

Canister Caps. The parts bag contains a number of red vinyl caps. Place these caps over the canister nozzle as shown to avoid spilling product when removing and replacing the canisters.

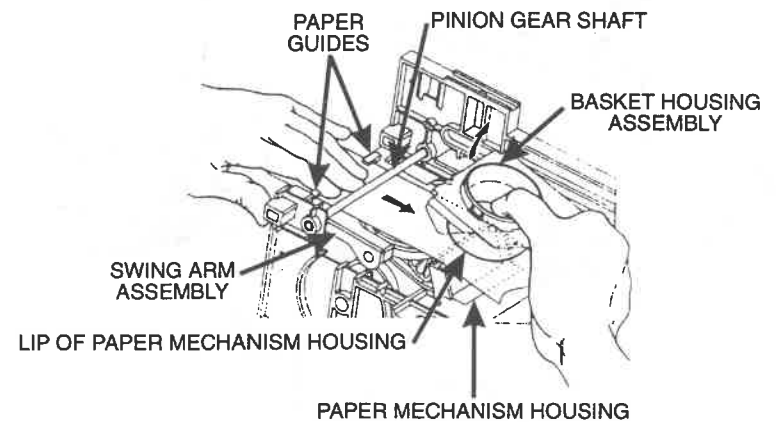


**LOADING OPTIONAL FILTER PAPER**

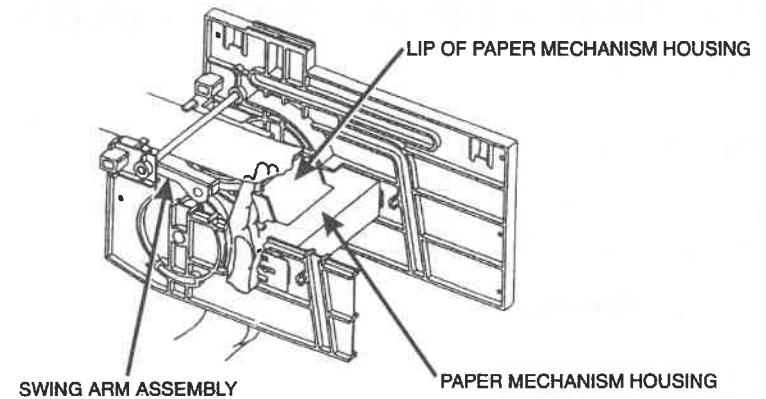
1. Turn the main power switch to the *OFF* position.
2. Remove the cup station and grounds bucket.
3. Remove the paper holder cover by turning the fastener a quarter turn to the left.
4. Insert a roll of paper into the paper holder. Route the free end of the paper to the brewer as shown.
5. Replace the cover on the paper holder. Secure it by turning the fastener a quarter turn to the right.
6. Feed paper over swing arm assembly and underneath pinion gear shaft.



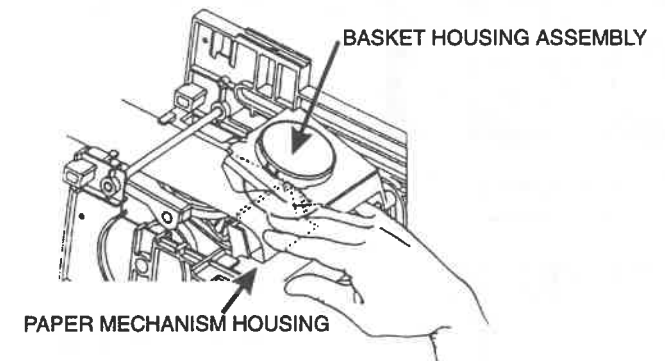
7. Feed paper through the paper guides.
8. Raise the basket housing assembly and feed paper over the lip of the paper mechanism housing.

**NOTE**

It may be necessary to reach underneath the brewer between the paper mechanism housing and swing arm assembly to push paper over the lip of the paper mechanism housing.

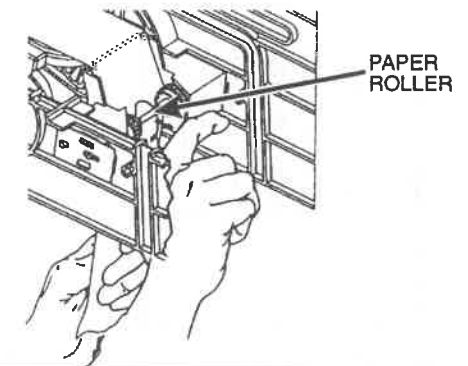


9. Reach underneath the brewer between the paper mechanism housing and basket housing assembly and push paper into the top of the paper mechanism housing between paper rollers.



10. Reach underneath the brewer and pull paper roller to the right.
11. Pull paper down between the paper rollers.
12. Release the paper roller.

13. Place the main power switch in the *ON* position.
14. Enter *BREW TEST* mode and cycle the brewer to observe that paper feeds properly.
15. Replace the cup station and grounds bucket.



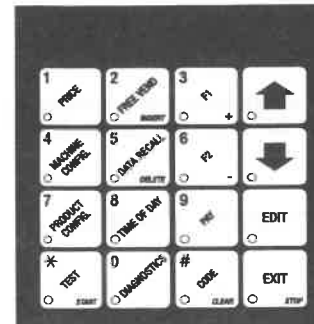


PROGRAMMING THE HOT DRINK CENTER ORIENTATION

Getting Around

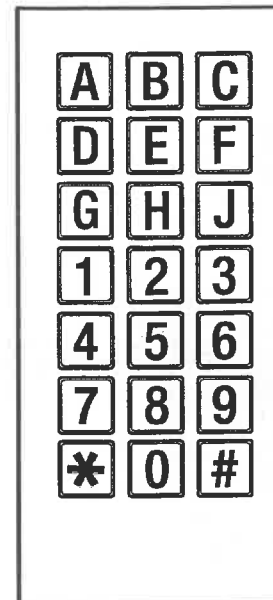
Getting around the Hot Drink Center software is pretty easy once you know the features that are available to you, and how to use them. The three main parts you will use are the SERVICE KEYPAD, the SELECTION SWITCH PANEL, and the DISPLAY.

The Service Keypad



For most of your programming jobs, you will be using the service keypad, conveniently located on the monetary panel. The service keypad has 16 keys. The three columns on the left are the MODE keys. The right hand column contains the MOVEMENT keys.

The Selection Switch Panel



The selection switch panel is also located on the monetary panel. Unlike the service keypad, it is accessible when the cabinet door is closed. These are the keys the customer will use to make selections. You can also use these keys during programming procedures.



The Display

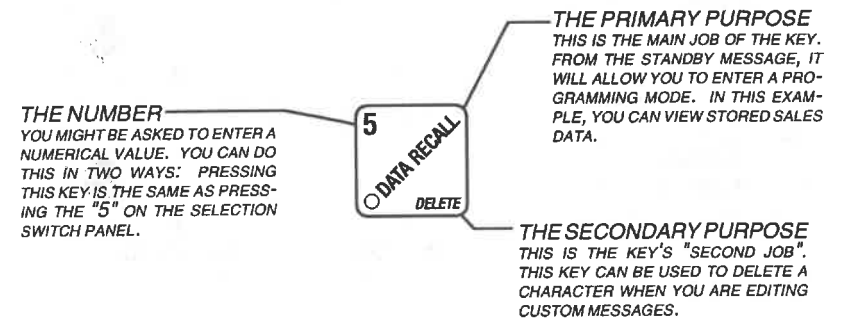
The 10-character display performs two functions:

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.

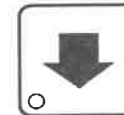


The Keys

The MODE and PAYOUT keys on the service keypad can be used for up to three things:



The MOVEMENT keys on the service keypad 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.



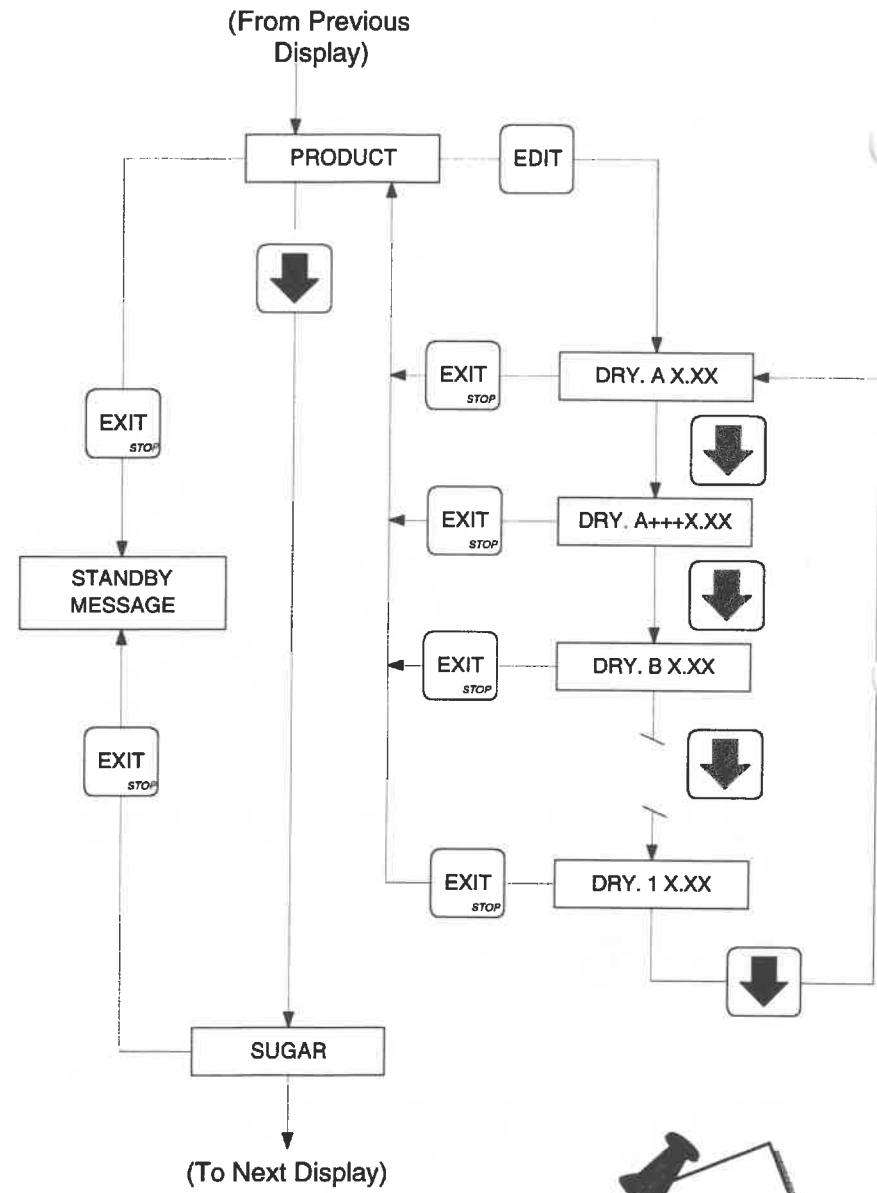
The up and down arrow keys are your "legs", which let you move up and down the list of tasks. These keys are what lets you continue from one step to the next in programming procedures.



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.



NOTE
Any place you can press the down arrow to move forward, you can press the up arrow to go backward!



The diagram on the left is a picture of your path through a single task within the **PRODUCT CONFIGURATION** programming mode. Think of the diagram as if it were a house, with each display representing a room in the house. The **EDIT** key is a one-way front door, and the **EXIT** key is just that - a one-way exit. The arrow keys are doorways between the rooms, and you can go either way between them.

Look at the example. From the **PRODUCT** display, you can press the down arrow key and set up the sugar throw. If you wanted to set up dry products, press the **EDIT** key. The first screen you see will let you adjust the throw time for the selection A dry product. Pressing the down arrow key takes you to the extra strong selection A dry product. Pressing the down arrow again takes you to the selection B product; pressing the up arrow key returns you to the previous display, and so forth. When you get to the last dry selection (in this case, it's I), pressing the down arrow moves you back to the top of the list. At any point, you can press the **EXIT** key and return to the **PRODUCT** display. Pressing the down arrow there takes you to the **SUGAR** display. From either **PRODUCT** or **SUGAR**, pressing **EXIT** gets you back to the standby message.

SHORTCUT:

When setting up selections, you can go directly to the selection you are interested in simply by pressing the appropriate letter key. Let's say you wanted to set up the throw time for the D selection dry product. Instead of repeatedly pressing the down arrow, you can press **D**, and you will immediately get the display for that selection.

SOME CONVENTIONS:

The pages that follow contain all the programming procedures for the Hot Drink Center merchandiser. The order they appear in is based upon the ones you would use to initially set up your machine. Most of the procedures have things in common, and here is a short guide to help you through these conventional presentations:

To begin each mode, press the key shown in the upper left corner of the procedure.

As mentioned earlier, you will normally use  to go from one step to another, so we don't tell you this each time.

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**



SUMMARY

Summary

This section lists all the major modes and all the procedures under them.



- Select the LANGUAGE shown in the display
- Select and set up options for the COIN MECHANISM
- Select CHANGE return options
- Select and set up options for the BILL VALIDATOR
- Set up the WINNER option
- Set up the MUG DISCOUNT option
- Set up PRINTER options



- Temporarily INHIBIT selections not available for vending
- Select desired CUP SIZE
- Alter the THROW TIMES of selections, condiments, and water
- Perform product TEST THROWS
- Set the delivery DOOR DELAY time
- Set WHIPPER options
- Set the RATIO of chocolate to coffee in a cappuccino drink
- Set the water tank TEMPERATURE
- Choose temperature units to display (F or C)
- Set BOWL RINSE cycles
- Set BREWER RINSE cycles (if so equipped)
- Set the basic machine CONFIGURATION
- Allow a customer to buy a CUP without buying a drink
- Set whether a drink will automatically be WHIPPed
- Disable the automatic delivery DOOR



- Set separate PRICES for each selection
- Set one PRICE for every selection in the machine
- Set one PRICE for all regular cups and one for all large cups
- Establish PRICE LINES



- Set the correct DAY and TIME
- Set the month, DATE, and year
- Establish up to four special VENDING PERIODS for:
 - Inhibited vending
 - Free vending
 - Discount vending
- Enter up to eight CUSTOM MESSAGES to be used for:
 - Standby (normal customer message)
 - Out of service
 - Machine-wide free vending
 - Free vending period
 - Discount vending period
 - Inhibited vending period
- Set the scrolling speed for your messages



- Start or stop FREE VENDING



- Perform TEST VENDS
- Fill water tank
- Test various machine functions:
 - Displays
 - Cup mechanism
 - Automatic delivery door
 - Whippers
 - Grinder(s) (if so equipped)
 - Air compressor (if so equipped)
 - Brewer (if so equipped)
 - Bowl rinse system
 - Brewer rinse system (if so equipped)
 - Mug sensor switch (if so equipped)
 - Freevend key switch
 - Water tank level switches
 - Waste pail switch
 - Cup ring switch



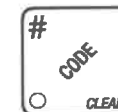
- Pays one or more coins



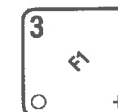
- View resettable and non-resettable VEND AND SALES TOTALS
- View or set MACHINE ID
- CLEAR resettable vend/sales counters
- View individual SELECTION data



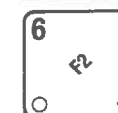
- Allows you to see any fault or condition that may place the machine out of service



- Enter code to start SUPERVISOR mode
- Set up SUPERVISOR options
 - Set SUPERVISOR code
 - Set FREE VEND code
 - LOCK/UNLOCK programming modes
 - Select whether to show or hide certain DATA items



- Displays the following information:
 - Current water tank temperature
 - Software version number
 - Machine configuration
 - Selection configuration
 - Cup only setup
 - Whipper configuration
 - Automatic vend door configuration

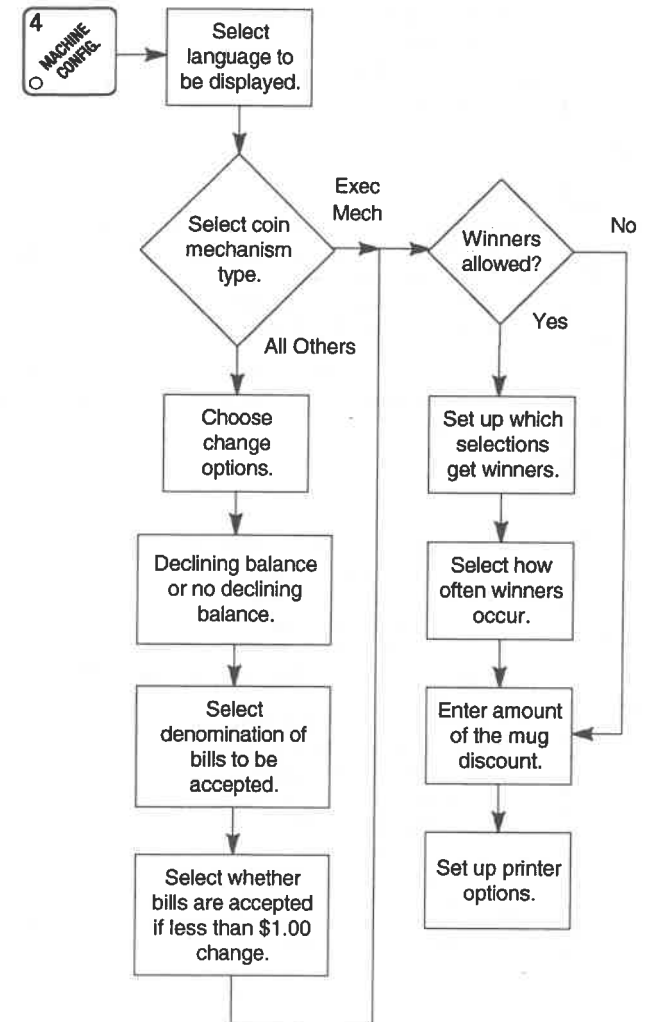


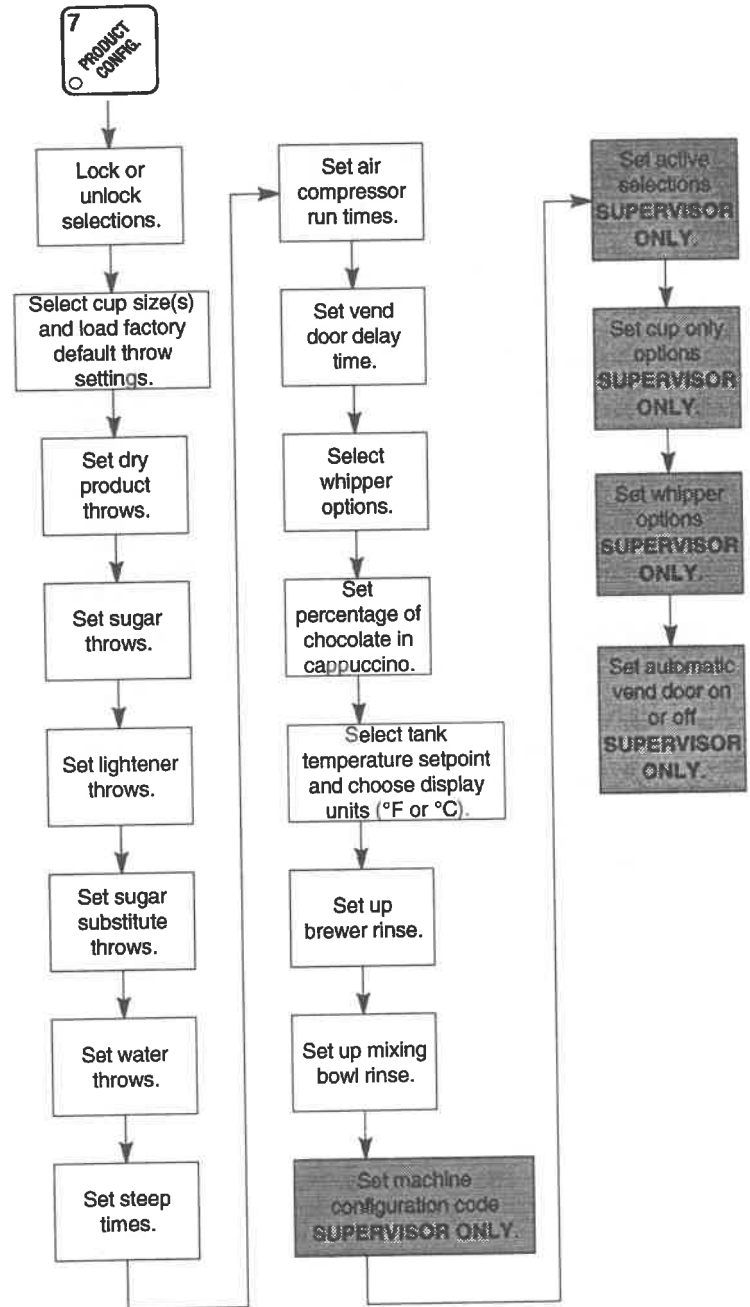
- Reserved for future use

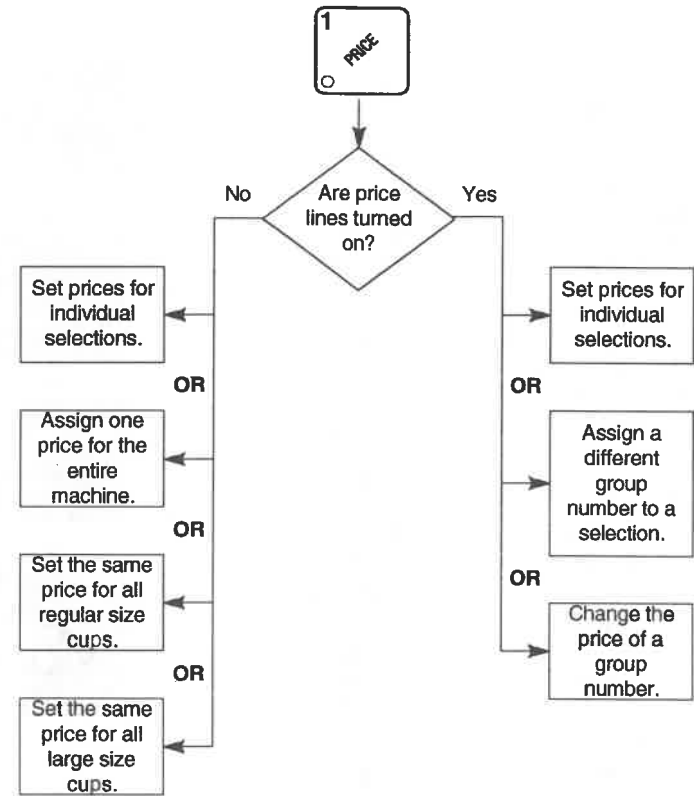


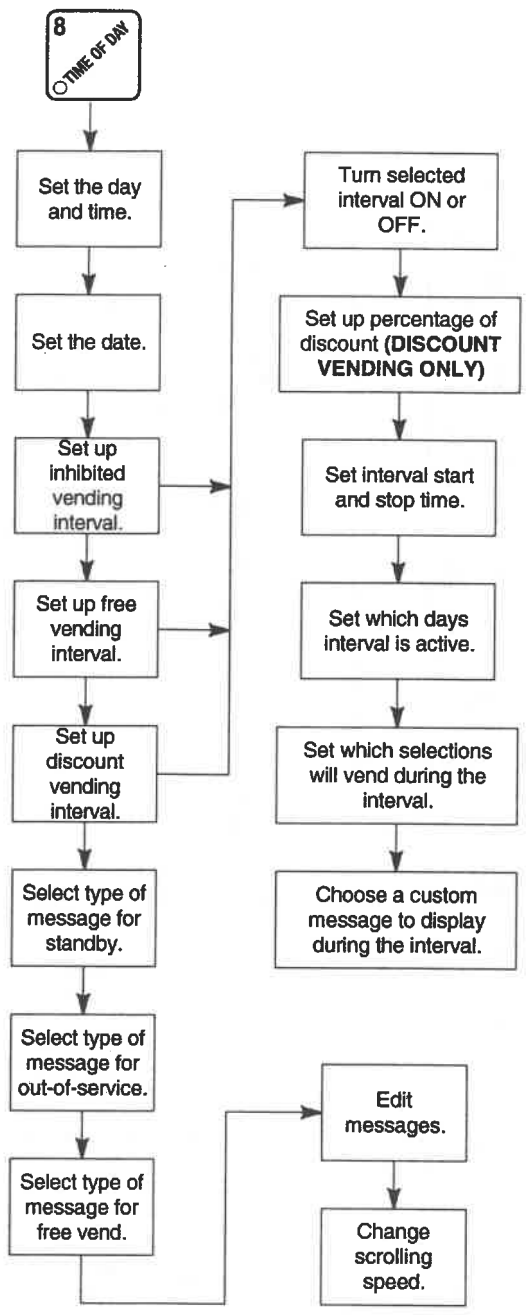
Programming Flowcharts

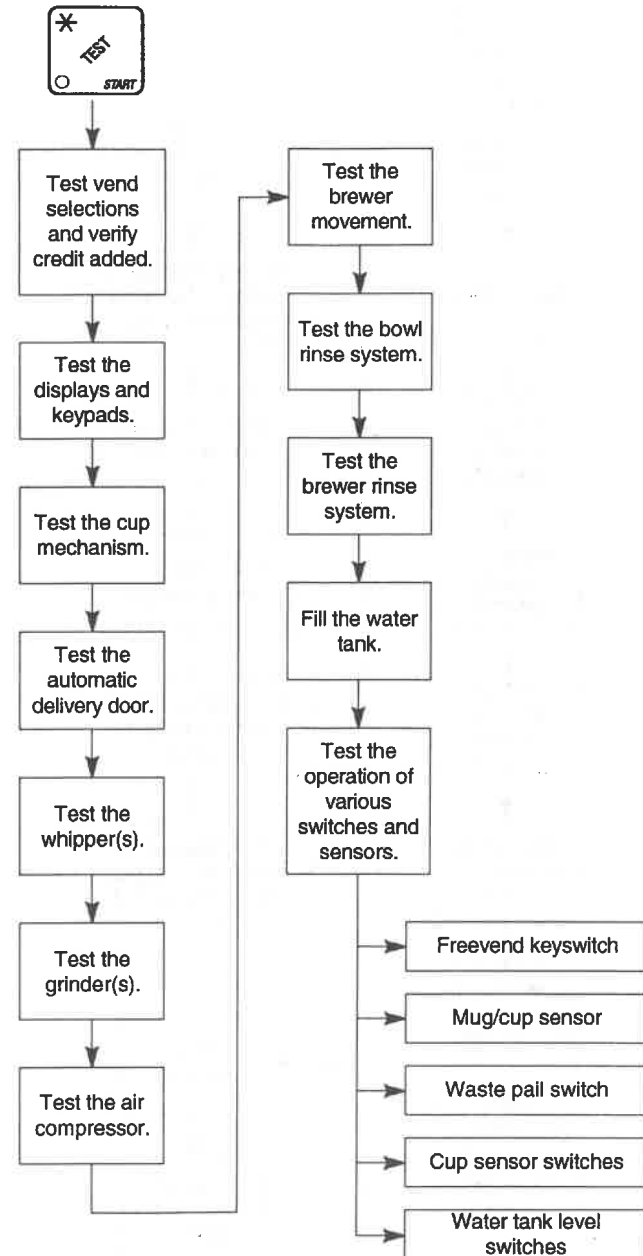
The flowcharts on the following pages will provide you with a "map" to the different programming features of your machine. Once you are familiar with the detailed programming steps given later in this section, you can use the flowcharts as a shortcut. Each chart begins with the key you will use to access those steps. Follow the lines and arrows from one step to another. A rectangular box contains the functions or tasks you will perform at that point. A diamond shaped box is a decision statement. For example, look at the MACHINE CONFIGURATION chart, below. At one point, you are asked to choose between an EXEC coin mechanism and all others. Depending upon your decision, you will take a different path. Note that choosing any mechanism except an EXEC gives you several more steps to perform before you get to the WINNER option.

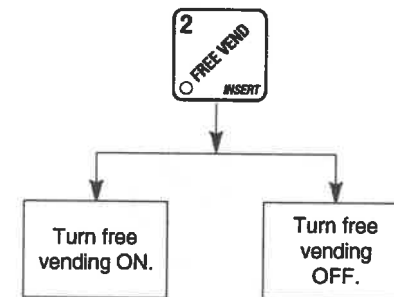
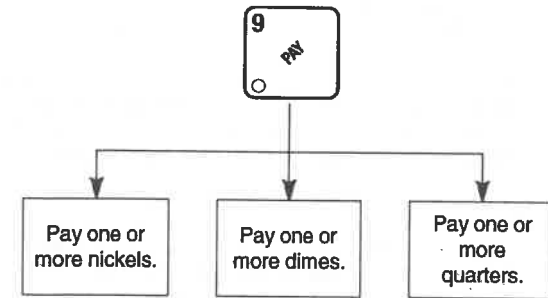


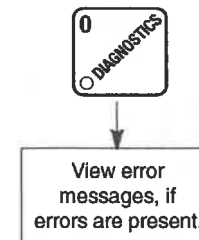
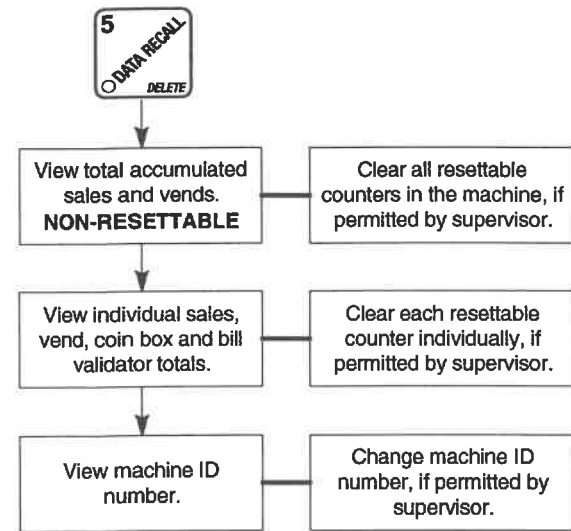


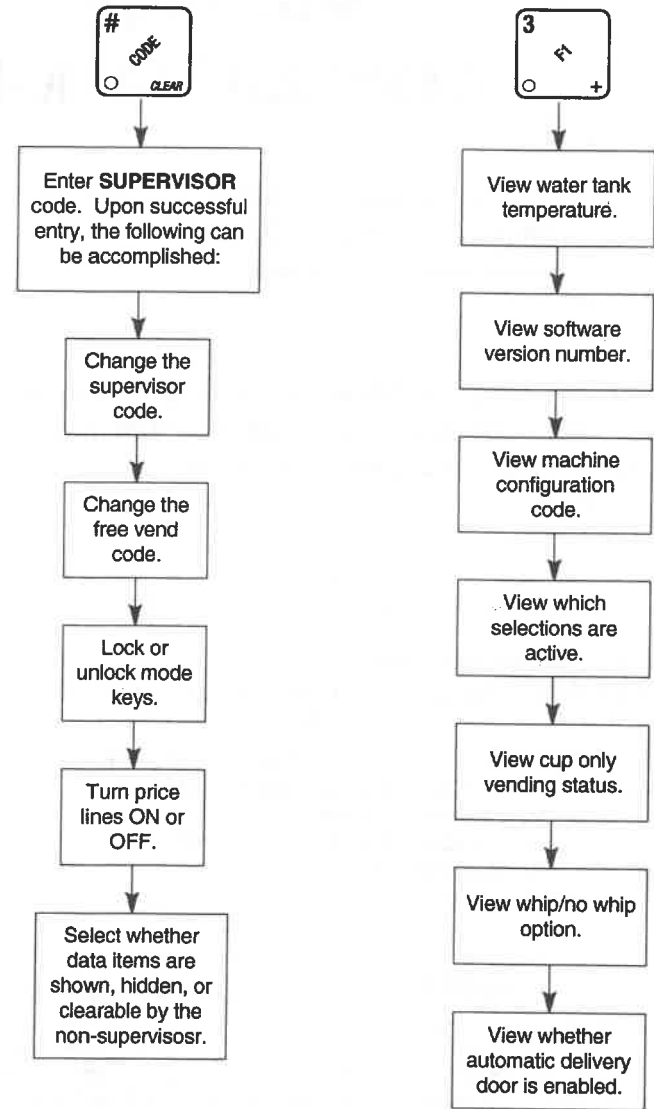


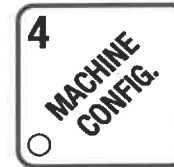














MACHINE CONFIGURATION

1. The current LANGUAGE is shown in the display. Your choices are: *ENGLISH, DEUTSCH, FRANCAIS, ESPANOL, or PORTUGUES.*

Press  to choose the desired language.

2. The current COIN MECHANISM is shown in the display. Your choices are: *DUMB MECH, DUMB/DEBIT, DEBIT ONLY, NO MECH, EXEC MECH.*

Press  to choose the desired coin mechanism.

NOTE

If you selected EXEC MECH in step 2, skip to step 7.

3. One of the following is displayed:

CHANGE.\$ 1.2.5 Change will be given for a \$1, \$2, or \$5 bill without a selection.

OR

NO CHANGE.\$ Depending upon the bill validator you have installed, one of two possibilities exist when the scavenger button is pressed:

1. The customer's bill is returned.
2. A selection must be made to receive change.

Press  to display the desired choice.

If you selected *CHANGE.\$ 1.2.5*, press the appropriate key(s) to display the bill(s) for which change will be given.

DECLINING BALANCE: Once credit is established, multiple vends may occur until the credit is depleted below the price of the least expensive selection.

4. One of the following is displayed:

DECLINE \$\$ More than one vend is allowed, with a declining balance.

OR

NO DECLINE A declining balance is not allowed.


Press  to display the desired choice.



5. One of the following is displayed:

OK. \$1.2.5.10.20 The bill validator will accept \$1, \$2, \$5, \$10, and \$20 bills.

OR

NOVALIDTR NO bills will be accepted, or there is no bill validator installed. (In that case, skip to step 8.) Press  to choose the desired option.

If you selected **OK. \$1.2.5.10.20**, press the 1, 2, 5, 6, or 7 key(s) to display the bill(s) which will be accepted.

6. One of the following is displayed (if validator is enabled):

\$1.ACC< 1.00 A \$1 bill will be accepted when there is less than a dollar's change available. NOTE: Selecting this could cause a customer to be shortchanged.

OR

\$1.INH< 1.00 Bills will not be accepted when less than a dollar's change is available.

Press  to display the desired choice.

WINNER: At pre-selected intervals, a customer may receive a refund for a selection. You can select the intervals and qualifying selections.

7. One of the following is displayed:

WINNER OFF Winner function is disabled.

OR

WINNER ON Winners are allowed at certain intervals.

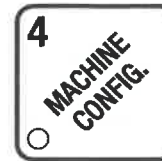
Press  to display the desired choice.

If you selected **WINNER OFF**, skip to step 10.

8. **W. ABCDEFGH** The display shows which selections are allowed winners. Press the appropriate letter key(s) to display winning product selections.

9. **WIN XX XX** 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.

10. **MUGDSC XX XX** represents the value of the discount customers will receive for using their own mugs or cups. Enter the amount with the number keys. Enter 0 for no discount.




...CONTINUED

11. **PRINTER** Press  to set up the printer function.

A. Your choices are: *BAUD 1200*, *BAUD 2400*, *BAUD 4800*, or *BAUD 9600*.



Press  to select the appropriate baud rate. NOTE: This baud rate must match that of your printer, or it won't work properly.

B. One of the following is displayed:

XX SHOW The printer will print basic information (where XX is the data item - see definitions below).

OR


XX SHOW+ The printer will print basic information PLUS information broken down by selection.

OR

XX HIDE The printer will not print this information.

Press  or  to scroll through the following list of data items:

- NR - Total accumulated sales and vends for the machine (not resettable).
- TOT - Total sales and vends since last reset.
- FRV - Total free vend sales and free vends since last reset.
- WIN - Total winner sales and winner vends since last reset.
- DSC - Total discount sales and discount vends since last reset.
- MUG - Total mug sales and mug vends since last reset.
- ALT - Total alternate sales and vends since last reset.
- TST - Total test vends since last reset.
- CBX - Total money in the cash box since last reset.
- DBV - Total money in the bill validator since last reset.

At each data item, press  to select its printing option. NOTE: In some cases, all options do not apply. For example, cash box information is no different for *SHOW* than for *SHOW+*.

PRESS  TO RETURN TO THE HIDE/SHOW/SHOW+ DISPLAY



7
PRODUCT
CONFIG.

PRODUCT CONFIGURATION

1. **LK.ABCDEFGH** This is a list of selections which are locked. Press the appropriate selection letter to switch from locked to unlocked and back again. (Unlocked selections are not displayed.) You can lock all selections at once by pressing



Unlock them all at once by pressing



2. The next two displays are: **CUP1 X OZ** and **CUP2 Y OZ**. Refer to the TURRET DESIGNATIONS figure to see where these cups normally go. This display indicates that the cups in turrets 1A and 1B (normally regular cups) are X ounces, and the cups in turret 2 (normally large cups) are Y ounces.



At each display, press  until the desired cup size is displayed.

CAUTION

Make sure that the two sizes you selected will actually be vended from in your machine.

TO LOAD THE FACTORY DEFAULT TIME SETTINGS ...

for your cup size, press . **CLEARING** is displayed; keep holding the key until you see **FINISHED** in the display.

3. The next seven displays are:
 - PRODUCT** View and change the settings for the dry product throw times
 - SUGAR** View and change the settings for the sugar throw times
 - LIGHTENER** View and change the settings for the lightener throw times
 - SUGAR SUB** View and change the settings for the sugar substitute throw times (if present)
 - WATER** View and change the settings for the water throw times
 - STEEP** View and change the settings for the steep times
 - AIR** View and change the settings for the air compressor running times

At any of those displays, you can press  to alter the settings for that item. See

SETTING THROWS.





... CONTINUED

4. **DELAY** This setting can delay the end of the vend (*THANK YOU* message and delivery door opening) to compensate for increased liquid flow times inside the machine. If you don't want to change the delay time, continue.

Press  to change the delay time:

DLY.A X "X" is the delay time (in seconds) for the **A** selection. Enter a new value, if desired, between 1 and 99. Repeatedly pressing the down arrow will display the delay times for all selections.

5. **WHIPPERS** If you don't want to change the whipper options, continue. Press  to change the whipper options:

WHP.A XXX "XXX" represents the whipper options as listed below. Press  to change:

ON- The last 3 seconds of the drink is always whipped

ON+ The whole drink is always whipped

OFF The drink is never whipped

If J WHIP is selected (see VIEW MACHINE OPTIONS):

OPT- The last 3 seconds of the drink is whipped only when the **J** key is pressed

OPT+ The whole drink is whipped only when the **J** key is pressed

If J NO WHIP is selected (see VIEW MACHINE OPTIONS):

OPT- The last 3 seconds of the drink is whipped unless the **J** key is pressed

OPT+ The whole drink is whipped unless the **J** key is pressed

Repeatedly pressing the down arrow will display the whipper options for all selections.

6. **RATIO XX** "XX" is the percentage of chocolate contained in a cappuccino drink.

OR


RATIO OFF No ratio is selected. Pressing  switches between these two

displays. This is a quick way to set up your cappuccino drinks. See table D2 to see the actual throw times/amounts for certain preset ratios. You can set a ratio close to your taste, turn ratio OFF, then alter the product throw.



NOTE

Leaving this step with **RATIO OFF** displayed does not alter any previous settings for **E** and **I** selections. Leaving this step with a ratio set will alter those settings. The ratio automatically selects the times for water and dry product throw. The **E** and **I** selections no longer appear in the displays for those steps. If you desire greater control over your cappuccino drinks, leave ratio OFF.

- 7. **SET 202° F** In this example, 202° is the water tank temperature setpoint in degrees Fahrenheit. If a decimal point appears next to the "F", the heater is on. If desired, enter a new setpoint. Accepted range: 149° - 205° F (65° - 96° C). The lower limit for vending is 10° below setpoint, up to a maximum of 180° F (82° C). To change units (replace the "F" with a "C" for Celsius), press 

- 8. **SAN.HRS 2.5**. This is how soon the machine rinses the brewer after the last brewed selection. In this example, brewer rinse takes place 2.5 hours after the last vend. Range: 2.0 - 12.5 hours, in .1 hour increments.

OR


SAN.TIM 4.5 The time of day (in hours and half hours) the machine rinses the brewer. In this example, brewer rinse takes place at 4:30 am. Range: 0.0 - 23.9 in .1 hour increments.

- 9. **RIN.HRS 2.5** This is how soon the machine rinses the bowls after a vend. In this example, bowl rinse takes place 2.5 hours after the last vend. Range: 2.0 - 12.5 hours, in .1 hour increments.

OR

RIN.TIM 4.5 The time of day (in hours and half hours) the machine rinses the bowls. In this example, bowl rinse takes place at 4:30 am. Range: 0.0 - 23.9 in .1 hour increments.

OR

RINSE OFF No bowl rinse takes place. Press  to switch between these options, and the number keys to enter new values.

NOTE

If 24 hours passes without a vend, no rinsing will take place. This eliminates unnecessary rinsing over a weekend or holiday.

WILL STOP IF YOU DONT PUT IN TIMES. TO GET CONFIG NO UP ARROW AFTER ENTERING CODE



... CONTINUED

10. **CONFIGURE** This display only appears if you had entered the supervisor code. If you do not want to edit configuration options, this mode is completed.

Press  to edit configuration options.

A. **CONF WXYZ** "WXYZ" is the machine configuration code as explained below.

Machine Type Configuration

Enter for (W)	Definition
1	Hot Drink Center
2	Reserved for alternate use.

6th Product (Selection C) Configuration

Enter for (X)	Definition
1	No 6th product
2	6th product present, but receives no condiments
3	6th product present, may receive condiments
4	Water only


SINGLE BREW A machine with only one brewed selection (the second selection is freeze dried). Uses a single barrel brewer.
DUAL BREW A machine with two brewed selections. Uses either a dual or single barrel brewer.

*6 - all freeze dried
 config no.
 1 2 6 1*



... CONTINUED

- C. **CUPVND -/1** This allows you to set whether a customer can buy a cup only (no drink), and which types of cups will be vended. The example shows that the

machine is set to vend a large cup only. Press  to switch between the


following screens:

- /- = Cup only not allowed
- 0/- = Regular cup only vended
- /1 = Large cup only vended
- 0/1 = Both cup sizes vended

- D. **J WHIP** Optionally whipped selections will be whipped when J is pressed.

OR

J NO WHIP Optionally whipped selections will be whipped unless J is pressed.

Press  to switch between these two displays.

- E. **DOOR ON** or **DOOR OFF** You can disable the automatic delivery door (if so

equipped). Press  to switch between these two displays.

NOTE

DOOR OFF must be selected if your machine does not have an automatic delivery door.



SETTING THROWS

Except for where indicated, the procedures for setting dry product, sugar, lightener, sugar substitute, and water throws are identical. This example will take you through setting the throw for a dry product. The illustration shows a typical display with all possible elements present:

THE "1" MEANS THAT THIS SELECTION IS IN THE ALTERNATE SIZE CUP (CUP1) FROM STEP 2 OF THE PRODUCT CONFIGURATION PROCEDURE. REMEMBER WHAT YOU SELECTED IN STEP 2 OF PRODUCT CONFIGURATION. IF BOTH CUP SIZES ARE THE SAME, THIS "1" WILL NEVER APPEAR.

THE PLUS SIGN SHOWS THAT THIS IS FOR A STRONG DRINK.

DRY.1B+ 1.75

THIS INDICATES WHICH ITEM IS BEING EDITED. THE CHOICES ARE: DRY, SUG, LIT, SUB, OR WAT.

THIS IS THE SELECTION LETTER.

THIS IS THE ACTUAL THROW TIME, SHOWN IN SECONDS AND 100THS OF A SECOND.

1. **DRY. A X.XX** Enter a new throw time (represented by XXX) for the dry selection A product.
2. Subsequent displays will contain the various elements as shown above, depending upon your machine configuration.

SOME DIFFERENCES . . .

- Sugar, lightener, and sugar substitute will be used for both **A** and **B** (coffee) selections. Therefore, the **A** and **B** will not appear in the displays. The coffee selections are represented by *****.
- Subsequent displays will show selection letters for all the remaining selections containing those items.
- All timers except DELAY timers are entered in .05 second increments. DELAY timers are entered in whole second increments.



COLLECTING DRY PRODUCT GRAM THROWS

COLLECTING DRY PRODUCT GRAM THROWS

Measuring the gram throw allows you to get the right amount of dry product or condiment into your hot drink. To do this, you need a container to catch the product throw and an accurate gram scale to measure its weight.

1. Make a measuring container by cutting down a paper cup until it fits under the canister spout as shown.
2. Weigh the measuring cup and zero the gram scale accordingly.
3. Make 5 test throws as instructed in the programming steps, then average the results.
4. Weigh the test throw.
5. Repeat steps 3 and 4 until you get the correct product or condiment weight.

Tables D1 and D2 show the factory default settings for the various dry products sold by the merchandiser. They are good starting points for you to use in setting up your machine. In the end, the amount of dry product or condiments you use in your drinks depends upon taste and manufacturers' recommendations. Recommended weights and times are for guidance only, and you do not have to adhere to them.

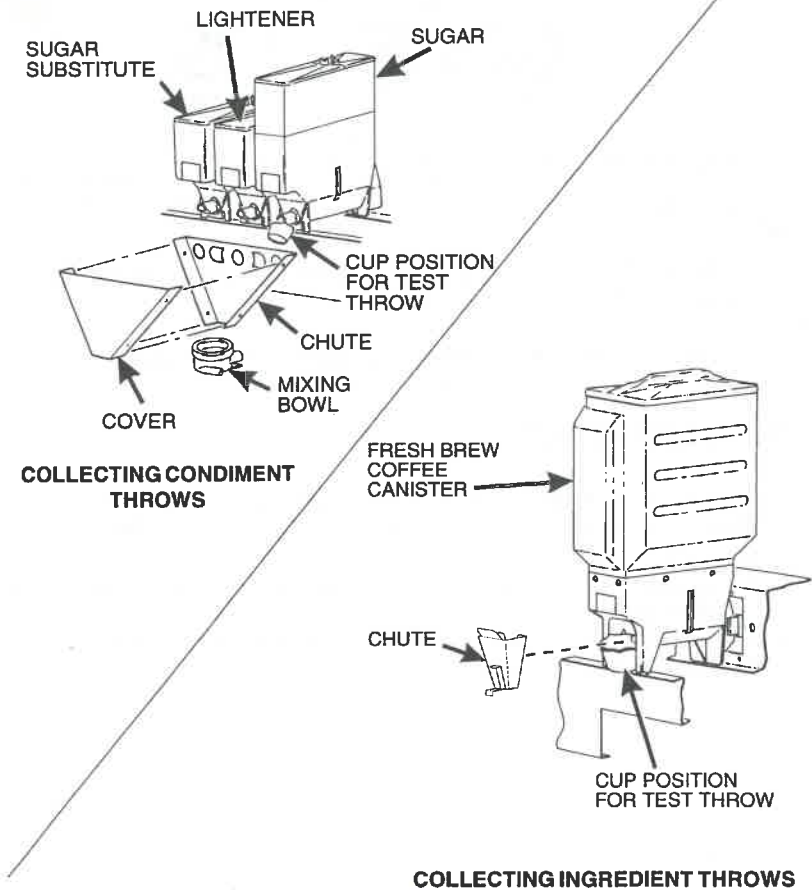




Table D1. Dry Product Weight and Throw Time Factory Default Settings
Weight (in grams) per size cup

Selection	Weight (in grams) per size cup					
	Throw times (in seconds) per size cup					
	5 oz	7 oz	8 oz	9 oz	10 oz	12 oz
A Fresh brew coffee	5.70	8.00	9.00	10.00	11.00	13.00
	1.60	2.20	2.50	2.80	3.10	3.65
A Freeze dry coffee	0.90	1.20	1.50	1.60	1.80	2.20
	0.20	0.30	0.40	0.50	0.55	0.70
A Strong freeze dry coffee	1.10	1.50	1.80	2.00	2.20	2.60
	0.25	0.40	0.55	0.65	0.70	0.90
B Fresh brew decaf	5.70	8.00	9.00	10.00	11.00	13.00
	1.6	2.20	2.50	2.80	3.10	3.65
B Freeze dry decaf	0.90	1.20	1.50	1.60	1.80	2.20
	0.15	0.25	0.35	0.40	0.45	0.60
B Strong freeze dry decaf	1.10	1.50	1.80	2.00	2.20	2.60
	0.20	0.35	0.45	0.50	0.60	0.75
C Soluble Product	10.0	13.5	16.2	17.8	19.7	23.7
	2.55	3.40	4.10	4.50	5.00	6.00
D Fresh brew coffee ESPRESSO	5.70	8.00	9.00	10.00	11.00	13.00
	1.60	2.20	2.50	2.80	3.10	3.65
D Freeze dry coffee ESPRESSO	0.90	1.20	1.50	1.60	1.80	2.20
	0.20	0.30	0.40	0.50	0.55	0.70
D Strong freeze dry coffee ESPRESSO	1.05	1.50	1.80	2.00	2.20	2.60
	0.25	0.40	0.55	0.65	0.70	0.90
E Fresh brew coffee CAPPUCCINO	5.70	8.00	9.00	10.00	11.00	13.00
	1.60	2.20	2.50	2.80	3.10	3.65
E Freeze dry coffee CAPPUCCINO	0.90	1.20	1.50	1.60	1.80	2.20
	0.20	0.30	0.40	0.50	0.55	0.70
E Strong freeze dry coffee CAPPUCCINO	1.05	1.50	1.80	2.00	2.20	2.60
	0.25	0.40	0.55	0.65	0.70	0.90
F Instant tea	0.90	1.20	1.50	1.60	1.80	2.20
	0.70	1.00	1.25	1.30	1.60	1.85
F Strong instant tea	1.10	1.50	1.80	2.00	2.20	2.60
	0.90	1.25	1.60	1.75	1.85	2.10
G Chocolate	17.00	24.00	28.00	31.00	34.00	41.00
	3.25	4.60	5.40	5.90	6.50	7.80
H Soup	4.30	6.00	7.00	7.60	8.50	10.20
	0.80	1.15	1.30	1.40	1.60	1.90

DRY PRODUCT WEIGHT AND THROW TIME FACTORY DEFAULT SETTINGS



Table D1. Dry Product Weight and Throw Time Factory Default Settings (Continued)

Selection	Weight (in grams) per size cup*					
	Throw times (in seconds) per size cup					
	5 oz	7 oz	8 oz	9 oz	10 oz	12 oz
I Chocolate used in cappuccino	3.10 0.45	4.50 0.65	5.00 0.80	5.80 0.85	6.20 0.95	7.60 1.15
D Sugar used in espresso	2.10 0.20	3.00 0.25	3.50 0.30	4.00 0.35	4.50 0.40	5.50 0.50
D Extra sugar used in espresso	3.00 0.25	4.00 0.35	4.50 0.40	5.00 0.45	5.50 0.50	6.50 0.60
E Sugar used in cappuccino	3.50 0.30	5.10 0.40	6.00 0.50	6.80 0.55	7.70 0.65	9.40 0.85
E Extra sugar used in cappuccino	4.60 0.35	6.80 0.55	7.70 0.65	8.50 0.75	9.40 0.85	11.00 1.00
F Sugar used in tea	4.20 0.40	6.00 0.50	7.00 0.60	8.00 0.70	9.00 0.80	11.00 1.00
F Extra sugar used in tea	5.50 0.50	8.00 0.70	9.00 0.80	10.00 0.90	11.00 1.00	13.00 1.20
F Lightener used in tea	1.20 0.70	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	4.00 2.25
F Extra lightener used in tea	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	3.50 2.00	4.50 2.60
F Sugar substitute used in tea	0.60 0.30	0.85 0.40	1.00 0.50	1.10 0.55	1.30 0.65	1.50 0.75
F Extra sugar substitute used in tea	0.80 0.40	1.10 0.55	1.30 0.65	1.40 0.70	1.60 0.80	1.90 0.95
** Sugar	4.20 0.40	6.00 0.50	7.00 0.60	8.00 0.70	9.00 0.80	11.00 1.00
** Extra sugar	5.50 0.50	8.00 0.70	9.00 0.80	10.00 0.90	11.00 1.00	13.00 1.20
** Lightener	1.20 0.70	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	4.00 2.25
** Extra lightener	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	3.50 2.00	4.50 2.60
** Sugar substitute	0.60 0.30	0.85 0.40	1.00 0.50	1.10 0.55	1.30 0.65	1.50 0.75
** Extra sugar substitute	0.80 0.40	1.10 0.55	1.30 0.65	1.40 0.70	1.60 0.80	1.90 0.95

D = Espresso
E = Cappuccino

I = Chocolate times for cappuccino

* The actual gram weight of a product or condiment throw will vary depending upon the type of product or condiment used. The weights given are approximate based upon factory testing.

** Separate sugar, lightener, and sugar substitute timers are available for selections A/B/C, D, E, and F.



CAPPUCCINO

Cappuccino is made with various ratios of chocolate to coffee, according to taste. Lightener (E timer) is also used for cappuccino. Table D2 shows numerous different ways to make cappuccino for each size of cup in your machine. For example, the default chocolate-to-coffee ratio of 15/85 in a 7 oz. cup consists of the following:

- A chocolate throw (product I) lasting 0.65 seconds, providing 15% of the normal chocolate throw (approximately 4.5 grams*).
 - A water throw for the chocolate (water I) lasting 2.65 seconds (chocolate product throw plus 2 seconds to ensure the mixing bowl is fully rinsed). The volume is about 56 ml, depending upon how the flow rate is adjusted.
 - A throw for cappuccino coffee (product E) equal to a normal coffee (product A) throw.
- OR
- A water throw for the freeze dry coffee selection (water E) lasting for 5.50 seconds (101 ml).
 - A water throw for the fresh brew coffee selection (water E) lasting for 2.00 seconds (115 ml). **In either case the water volume is enough to fill the remainder of the cup.**

The actual mixing sequence is as follows:

1. The coffee portion of cappuccino is made using the same canister/valve combination as the normal (A) coffee.
2. After the coffee is completely in the cup, the chocolate portion is made with the selection G canister/valve combination. This gives the drink its traditional "layering".

*** Chocolate weights will vary with different products.**

HINTS:

To "fine tune" your Cappuccino drink to your exact taste, set a ratio close to what you like (between 5% and 50%), then turn ratio OFF. Adjust the individual timers until you are satisfied. You may find it necessary to cut down on the amount of sweetener available to a cappuccino drink with a high ratio of chocolate, as the chocolate contains sweetener of its own.

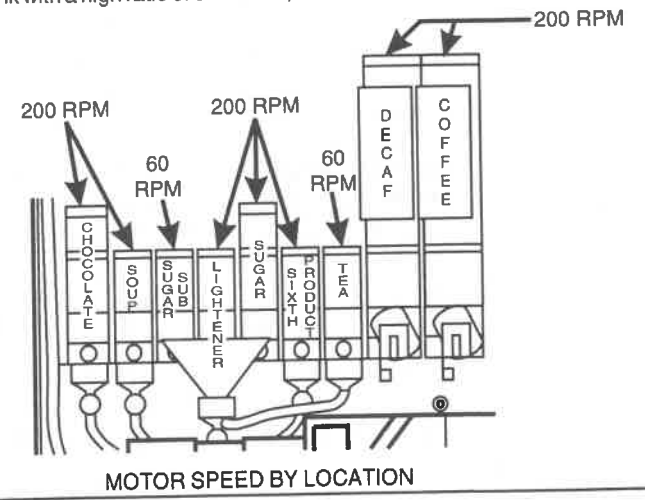




Table D2. Dry Product Settings for Cappuccino (5 oz. cup)

Percent	CHOCOLATE			FREEZE DRY COFFEE			FRESH BREW COFFEE		
	Weight (gm)	Timing (sec)	Water Settings Volume (ml) Timing (sec)	Percent	Volume (ml)	Timing (sec)	Percent	Volume (ml)	Timing (sec)
15 (default)	3.10	0.45	52 2.45	85 (default)	57	3.40	85 (default)	58	1.25
20	4.10	0.65	54 2.65	80	54	3.20	80	55	1.15
25	5.00	0.80	56 2.80	75	52	3.05	75	53	1.10
30	5.80	0.95	59 2.95	70	49	2.95	70	49	1.05
35	6.70	1.10	61 3.10	65	47	2.75	65	47	1.00
40	7.60	1.30	63 3.30	60	44	2.55	60	45	0.90
45	8.40	1.45	66 3.45	55	41	2.40	55	41	0.85
50	9.30	1.60	68 3.60	50	38	2.25	50	38	0.80

Table D2. Dry Product Settings for Cappuccino (7 oz. cup)

Percent	CHOCOLATE			FREEZE DRY COFFEE			FRESH BREW COFFEE		
	Weight (gm)	Timing (sec)	Water Settings Volume (ml) Timing (sec)	Percent	Volume (ml)	Timing (sec)	Percent	Volume (ml)	Timing (sec)
15 (default)	4.50	0.65	56 2.65	85 (default)	101	5.50	85 (default)	115	2.00
20	5.80	0.90	59 2.90	80	97	5.25	80	110	1.90
25	7.10	1.15	63 3.15	75	92	5.00	75	104	1.80
30	8.00	1.35	65 3.35	70	90	4.80	70	102	1.75
35	9.30	1.60	69 3.60	65	86	4.55	65	96	1.65
40	10.50	1.80	72 3.80	60	81	4.35	60	92	1.60
45	11.80	2.05	76 4.05	55	77	4.10	55	87	1.50
50	13.10	2.30	79 4.30	50	72	3.85	50	83	1.40



Table D2. Dry Product Settings for Cappuccino (8 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE					FRESH BREW COFFEE				
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Volume (ml)	Timing (sec)	Water Settings		Percent	Volume (ml)	Timing (sec)	Water Settings	
			Volume (ml)	Timing (sec)				Volume (ml)	Timing (sec)				Volume (ml)	Timing (sec)
15 (default)	3.10	0.80	52	2.80	85 (default)	57	6.80	58	2.40	85 (default)	58	2.40	58	2.40
20	4.10	1.05	54	3.05	80	54	6.55	55	2.35	80	55	2.35	55	2.35
25	5.00	1.35	56	3.35	75	52	6.25	53	2.25	75	53	2.25	53	2.25
30	5.80	1.60	59	3.60	70	49	6.00	49	2.15	70	49	2.15	49	2.15
35	6.70	1.85	61	3.85	65	47	5.75	47	2.05	65	47	2.05	47	2.05
40	7.60	2.15	63	4.15	60	44	5.45	45	1.95	60	45	1.95	45	1.95
45	8.40	2.40	66	4.40	55	41	5.20	41	1.85	55	41	1.85	41	1.85
50	9.30	2.70	68	4.70	50	38	4.90	38	1.75	50	38	1.75	38	1.75

Table D2. Dry Product Settings for Cappuccino (9 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE					FRESH BREW COFFEE				
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Volume (ml)	Timing (sec)	Water Settings		Percent	Volume (ml)	Timing (sec)	Water Settings	
			Volume (ml)	Timing (sec)				Volume (ml)	Timing (sec)				Volume (ml)	Timing (sec)
15 (default)	5.8	0.85	60	2.85	85 (default)	140	7.30	140	2.70	85 (default)	250	2.70	250	2.70
20	7.6	1.15	64	3.15	80	134	7.00	134	2.60	80	155	2.60	155	2.60
25	8.8	1.45	68	3.45	75	130	6.70	130	2.50	75	152	2.50	152	2.50
30	10.5	1.75	72	3.75	70	125	6.40	125	2.35	70	144	2.35	144	2.35
35	12.3	2.05	77	4.05	65	119	6.10	119	2.25	65	138	2.25	138	2.25
40	13.9	2.35	82	4.35	60	113	5.80	113	2.15	60	133	2.15	133	2.15
45	15.3	2.65	85	4.65	55	109	5.50	109	2.05	55	126	2.05	126	2.05
50	17.1	2.95	90	4.95	50	105	5.20	105	1.90	50	124	1.90	124	1.90



Table D2. Dry Product Settings for Cappuccino (10 oz. cup)

Percent	CHOCOLATE			FREEZE DRY COFFEE			FRESH BREW COFFEE			
	Weight (gm)	Timing (sec)	Water Settings		Percent	Volume (ml)	Timing (sec)	Percent	Water Settings	
			Volume (ml)	Timing (sec)					Volume (ml)	Timing (sec)
15 (default)	6.2	0.95	60	2.95	85 (default)	166	8.70	85 (default)	185	3.05
20	8.0	1.30	65	3.30	80	161	8.35	80	178	2.90
25	9.8	1.60	70	3.60	75	155	8.05	75	172	2.80
30	11.3	1.95	74	3.95	70	150	7.70	70	167	2.70
35	13.6	2.25	80	4.25	65	143	7.40	65	159	2.60
40	15.3	2.60	85	4.60	60	137	7.05	60	152	2.45
45	17.1	2.90	90	4.90	55	131	6.75	55	144	2.35
50	18.7	3.25	94	5.25	50	126	6.40	50	138	2.25

Table D2. Dry Product Settings for Cappuccino (12 oz. cup)


Percent	CHOCOLATE			FREEZE DRY COFFEE			FRESH BREW COFFEE			
	Weight (gm)	Timing (sec)	Water Settings		Percent	Volume (ml)	Timing (sec)	Percent	Water Settings	
			Volume (ml)	Timing (sec)					Volume (ml)	Timing (sec)
15 (default)	7.6	1.15	64	3.15	85 (default)	223	11.20	85 (default)	231	3.80
20	9.8	1.55	70	3.55	80	215	10.80	80	223	3.70
25	11.8	1.95	76	3.95	75	208	10.40	75	215	3.55
30	13.9	2.30	82	4.30	70	201	10.10	70	207	3.45
35	16.1	2.70	87	4.70	65	193	9.70	65	201	3.30
40	18.2	3.10	93	5.10	60	185	9.30	60	193	3.15
45	20.4	3.50	99	5.50	55	178	8.90	55	185	3.05
50	22.3	3.90	105	5.90	50	171	8.50	50	178	2.90



CAFFÉ LATTE RECIPE

Caffe Latte has a rich, robust coffee flavor. It is a full-bodied hot beverage with extra creamer, whipped to frothy perfection, with sugar optional. Try this recipe to expand your gourmet product selections and increase premium pricing opportunities.

ENTER THE SUPERVISOR CODE:






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 **SUPERVISOR** in the display.

SET THE MACHINE TO VEND A LARGE "D" SELECTION:

1. Press the following keys: , , and . The CONFIGURE screen is displayed.
2. Press  twice. The display should look something like this:
 1. **ABCDEFGH**. Make sure the "D" is displayed. If not, press "D" on the selection switch panel to display the "D".
3. Press  twice to return to the standby message.

SET UP YOUR SELECTION:

Follow the instructions in the **PRODUCT CONFIGURATION** section of the *Hot Drink Center Operator's Guide*.

1. Make sure the machine is configured to use 12 oz. cups.
2. Set up the 1D selection as follows:
 - a. Coffee: 17 grams
 - b. Sugar: 2.5 grams
 - c. Lightener: 5 grams
 - d. Water: 6 ounces (about 177 ml)
 - e. Steep time: 12.5 seconds
 - f. Whip: ON +

To get these measurements, refer to **PRODUCT CONFIGURATION**. See **COLLECTING DRY PRODUCT GRAM THROWS**, and perform test throws of the dry ingredients. See **COLLECTING WATER THROWS**, and perform test water throws.



COLLECTING WATER THROWS

COLLECTING WATER THROWS

National Vendors recommends the factory default times be used for water throws to ensure proper mixing. Table W1 gives the factory default water throw times for the various size cups and product selections.

WARNING
Water is **HOT!** Be careful.

For a non-brewed selection, collect the water throws as follows:

1. Place a cup in the cup delivery station.
2. Ensure the merchandiser is using the factory defaults for the cup sizes (refer to PRODUCT CONFIGURATION).
3. Initiate the water throw for a selection.
4. Remove the cup and pour the water into a graduated cylinder.
5. Refer to table W1 for the correct volume of water.
6. Adjust the water valve for that selection and repeat steps 3 through 5 until the correct volume of water is thrown.

For a brewed selection, collect the water throws as follows:

1. Remove water supply hose from the brewer as shown on the next page.
2. Place the end of the hose in a graduated cylinder.
3. Ensure the merchandiser is using the factory defaults per table W1 for the cup sizes (refer to PRODUCT CONFIGURATION).
4. Initiate the water throw for a selection.
5. Refer to table W1 for the correct volume of water.
6. Adjust the water valve for that selection and repeat steps 3 through 5 until the correct volume of water is thrown.

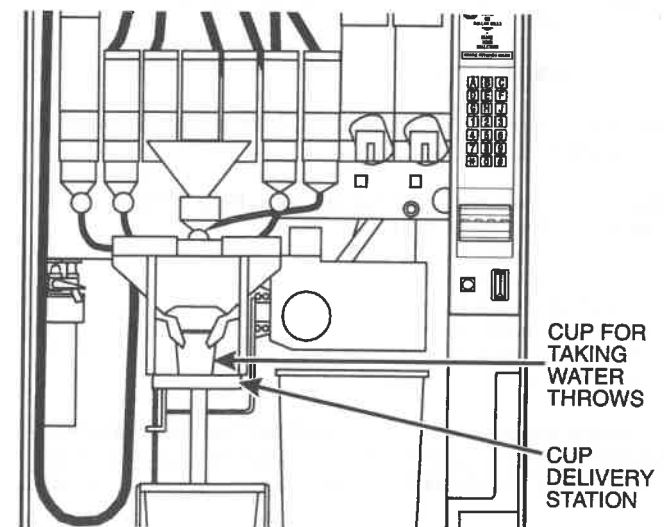
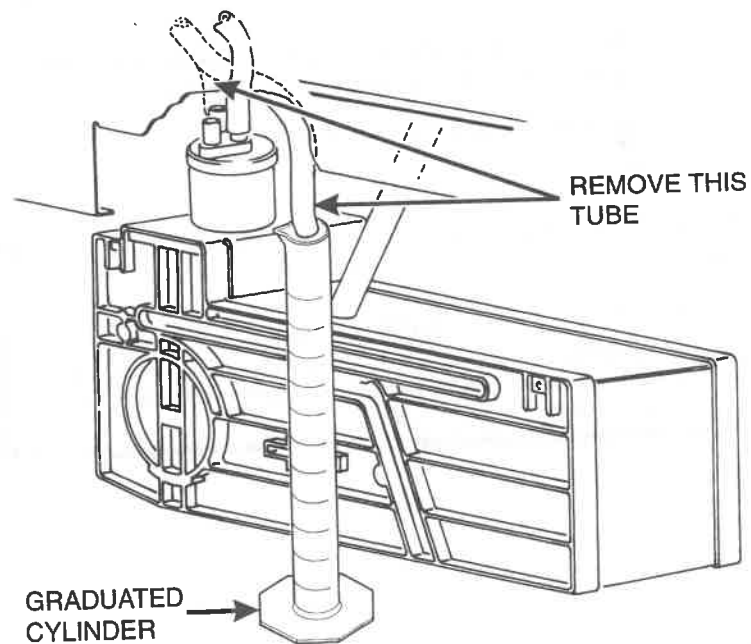




Table W1. Water Throw Default Times and Volumes

Selection	Time (in seconds) per size cup					
	Volume (in ml) per size cup					
	5 oz	7 oz	8 oz	9 oz	10 oz	12 oz
A Fresh brew coffee	2.15 130	3.00 190	3.45 220	3.80 240	4.10 265	4.90 315
B Fresh brew decaf	2.15 130	3.00 190	3.45 220	3.80 240	4.10 265	4.90 315
A Freeze dry coffee	5.90 120	8.20 170	9.65 200	10.20 210	11.70 240	14.80 305
B Freeze dry decaf	5.90 120	8.20 170	9.65 200	10.20 210	11.70 240	14.80 305
C 6th Product	5.90 100	8.20 140	9.65 170	10.20 180	11.70 200	14.80 240
D Espresso	2.95 60	4.10 85	4.85 100	5.10 105	5.85 120	7.40 153
F Tea	5.90 120	8.20 170	9.65 200	10.20 210	11.70 240	14.80 305
G Chocolate	5.90 100	8.20 140	9.65 170	10.20 180	11.70 200	14.80 240
H Soup	5.90 110	8.20 160	9.65 190	10.20 200	11.70 230	14.80 280






WATER THROW DEFAULT TIMES AND VOLUMES



PRICE SET PRICES FOR INDIVIDUAL SELECTIONS

For this procedure, we will assume that the merchandiser is set up to vend two different VOLUMES of drink. (The same size cup is used for both, but one is not as full.) Also, the machine is configured to allow customers to vend a cup only (no drink). Here is an example of how to set prices for several different selections in this machine:

1. **SET PRICE** Press  to scroll through the selection list, or go directly to the desired selection by pressing its letter. In this example, we will first set the price for the **C** selection. Press **C**, or scroll to the selection.
2. **PRC. C .55** The price for the **C** selection is currently at \$0.55. Enter the new price using the number keys. Press **D**, or scroll to the selection.
3. **PRC. D .75** This is the **D** selection price, using the standard volume. We are going to set the price for the alternate volume for the **D** selection. Press .
4. **PRC. 1D .45** The price for the **1D** selection (the "1" denotes the alternate volume) is currently at \$0.45. Enter the new price using the number keys.
Press  until you see the following display:
5. **PRC. 2 .10** The price for a cup only is \$0.10. Enter the new price using the number keys.

HELPFUL HINT

If most of the prices in your machine will be the same, set all the prices the same, then return to this procedure to set those prices which will be different.



SET ONE PRICE FOR THE ENTIRE MACHINE

1. SET PRICE Press

2. ** .95 .45 The display shows the maximum (\$0.95) and minimum (\$0.45) prices currently set in the machine.

CAUTION

Setting all prices in the machine will **ERASE** currently set prices. If you are sure you want to do this, continue.

3. Press The display shows ** 0.00 Enter a new price.

SET ONE PRICE FOR THE ENTIRE MACHINE




SET PRICES FOR ALL REGULAR CUPS

SET PRICES
FOR ALL REGULAR CUPS

1. **SET PRICE** Press 0 on the selection switch panel.
2. **0* .95 .45** The display shows the maximum (\$0.95) and minimum (\$0.45) prices currently set for regular cups.

CAUTION

Setting all regular cup prices will **ERASE** currently set prices. If you are sure you want to do this, continue.

3. Press . The display shows **0* 0.00** Enter a new price.



SET PRICES FOR ALL LARGE CUPS

1. **SET PRICE** Press 1 on the selection switch panel.
2. **1* .95 .45** The display shows the maximum (\$0.95) and minimum (\$0.45) prices currently set for large cups.

CAUTION

Setting all large cup prices will **ERASE** currently set prices. If you are sure you want to do this, continue.

3. Press . The display shows **1* 0.00** Enter a new price.

SET PRICES FOR ALL LARGE CUPS



SET PRICES USING PRICE LINES




SET PRICES USING PRICE LINES

PRICE Groupings of selections with identical prices. Using price lines can save you time when there is a price change affecting several items that are the same price. For example, the **A**, **B**, and **C** selections are all assigned to a **GROUP NUMBER** that is priced at \$0.45. Now the price goes up to \$0.50. Instead of changing each individual price, you just change the price of the **GROUP NUMBER** assigned to those three selections. In addition, **PRICE LINES** provides you an easy way to group common items for sales and vend totals. See **DATA RECALL** for more information.

NOTE

The **PRICE LINES** function is only active if you have selected it through the **SUPERVISOR** mode. See **SETTING THE SUPERVISOR OPTIONS** for more information.

1. **SET PRICE** Press  to scroll through the selection list, or go directly to the desired selection by pressing its letter. In this example, we will first set up the **C** selection. Press **C**, or the down arrow until **C** is displayed.

2. **C P2 .85** This shows that selection **C** is assigned **GROUP NUMBER P2**, for a price of **\$0.85**.

ASSIGN A DIFFERENT GROUP NUMBER TO THE SELECTION:



Press  until the group number you want is displayed (valid numbers are **P2** through **P9**).

CHANGE THE GROUP NUMBER'S PRICE:

Enter a new price using the number keys. The decimal point is automatically placed.


NOTE

Changing a group number's price will affect all selections using that group number



TIME OF DAY

1. **TUES 9.13** The current day of the week and time of day.
(This example is Tuesday at 9:13 am.)


To change the day, press  until the desired day is displayed. To change the time, just enter the time with the number keys (use a 24-hour format).

NOTE

The new day/time will be displayed, but not updated in the system

until you press an arrow key or .

2. **JUNE 21-93** The month, date, and year. (This example is June 21, 1993.)

To change the month, press  until the desired month is displayed. To change the date and year, just enter them with the number keys. Be sure to use two digits for each entry: June 3, 1993 would be entered as June 03 93.

CUSTOM TIME INTERVALS: Times when normal vending is suspended in favor of special cases. For example, coffee could be discounted before working hours in the morning to favor early-arriving employees.

3. The next three displays show time intervals when custom vending can take place:

INHIB 1234 Inhibited vending

FREEV 1234 Free vending

DISCT 1234 Discount vending

You can turn these custom vending time intervals on and off any time of day. If an interval is not turned on, its number is replaced by a dash (-). The time intervals are all handled the same way. To edit a time interval, either press its number or



to edit interval 1. See the time interval editing procedure.



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

4. The next three displays allow you to choose either a custom message or the standard factory-set message for certain conditions:



STANDBY M1 This means that custom message number 1 is the standby message.

SERVICE M2 This means that message number 2 is the out-of-service message.

FREEVEND -- This means that the factory-set message will display when freevend is selected by the freevend key, or the freevend keyswitch.

There are up to eight messages that you can enter, and any of the eight may be used by these three conditions. To select a message, just press the corresponding number. To display the factory-set message, press 0.

5. **EDIT MSG'S** This is where you can create and/or edit custom messages. See the Message Editing Procedure.

6. **PRESS +/- TO CHANGE SPEED** scrolls across the display. Press  to increase the message scrolling speed; press  to decrease it.



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:

1. INHIBIT
2. FREEVEND
3. DISCOUNT

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

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.

1. *DISCT 1234* 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. *1.DISCT ON* or *1.DISCT OFF* This display tells you whether your time interval (represented by X) 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 later.

3. *1.DSCT 25* This is the discount percentage for this period (25% for this example).
4. *1.STRT 15.30* Enter a start time (24-hour format) for this interval. The time (3:30 pm) is displayed.
5. *1.STOP 18.00* Enter a stop time (24-hour format) for this interval. The time (6:00 pm) is displayed. You have now established a 25% discount that starts at 3:30 and ends at 6:00.








6. **1.@ -M-W-F-** These are the days that this time interval is active. Pressing number keys 1 through 7 switches the days on/off. The discount interval is only active on Monday, Wednesday, and Friday.
7. **1. AB---F-H** These are the selections affected by this time interval. Press the appropriate letter key to turn the selections on/off. NOTE Selections not vended by your machine will not be displayed. Selections **A, B, F, and H** are available for discounts.
8. **1. MSG 3** This means that custom message 3 will be displayed during this time interval. Press the number key of the message (1 through 8) you want displayed. Pressing 0 turns the message OFF for this time interval. (You can also press  to scroll through the message list.)






CUSTOM MESSAGE EDITING

1. **EDIT MSG'S** Press the number of the message you want to edit. *MESSAGE X* 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 **J** on the selection switch panel. Then press  twice.

Your L should now be displayed.

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 (see the next page).



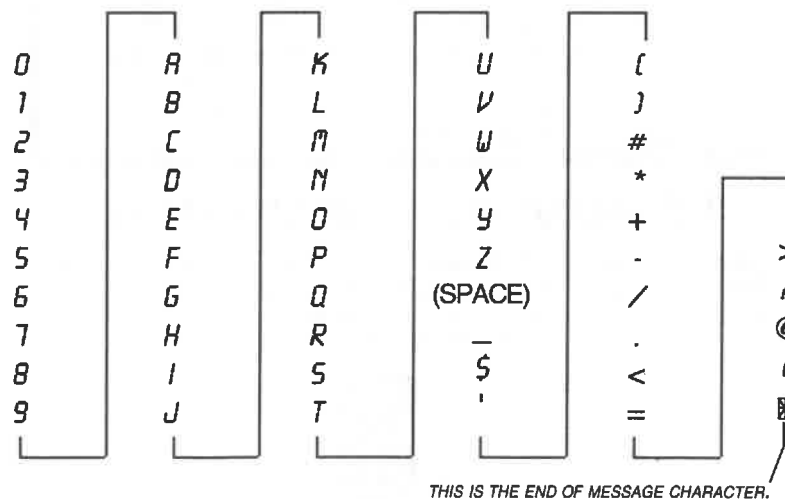


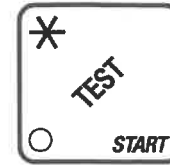
ENTERING YOUR MESSAGE

You will be using a combination of special keys and the keys on the selection switch panel to enter your message. Pressing the keys on the selection switch panel will enter the character shown on that key. Most of the keys on the service keypad have a special purpose to help you create and edit your messages:

- | | | | |
|---|---|--|--|
| <p>1
PRICE</p> <p>4
MACHINE COMPLETE</p> <p>7
PRODUCT COMPLETE</p> <p>8
TIME OF DAY</p> <p>EDIT</p> <p>↓</p> <p>↑</p> <p>3
←</p> <p>6
→</p> | <p>Inserts an R at the flashing character.</p> <p>Inserts an S at the flashing character.</p> <p>Inserts a T at the flashing character.</p> <p>Repeats the letter to the left of the flashing character.</p> <p>"Pages" through the message, ten characters (one screen) at a time.</p> <p>Steps forward and backward through the message, one character at a time.</p> <p>Steps forward and backward through the character list, one character at a time.</p> | <p>2
FREE VEND
INSERT</p> <p>5
DATA RECALL
DELETE</p> <p>#
CODE
CLEAN</p> <p>9
PRT</p> | <p>Inserts a space at the flashing character.</p> <p>Deletes the current character and closes up the space.</p> <p>Deletes the current character and leaves the space.</p> <p>Enters the special "end of message" character, which denotes the end of the message.</p> |
|---|---|--|--|


THE CHARACTER SET







TEST MACHINE FUNCTIONS

1. **TEST .00** You can test vend selections and verify credit added.

To test vend selections without a cup, press . The display shows *TEST.NC*.
.00 No cups will drop during the rest of your test vend session. If desired, you may place money in the machine. The zeros in the display will be replaced with the amount of the credit.


NOTE


You may make one more test vend if you close the door while still in TEST VEND mode.

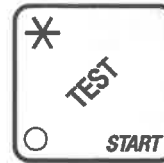
2. **DSPLY TEST** Press  to light all display segments. Press  to turn them off. Pressing a number key on the maintenance keypad, or any key on the selection switch panel causes all segments to display that character.

NOTE

To help differentiate the two keypads, a number from the maintenance keypad has an apostrophe after it: 7'. A number from the selection switch panel has a period after it: 7..

3. **CUP TEST**
 - a. Press 1. A cup is dispensed from ring 1.
 - b. Press 2. A cup is dispensed from ring 2.
 - c. Press . One cup is dispensed from ring 1 and one from ring 2.

4. **DOOR TEST** Press  to test the automatic delivery door (if so equipped). The door will open, then close after one second.
5. **WHIP TEST** Press the whipper number (1=whipper below main condiment mixing bowl, 2=soup whipper, or 3=chocolate whipper) you want to test. **OR** Press the letter of a selection containing a whipper. *WHIP X* is displayed ("X" is the number of the tested whipper).



... CONTINUED

6. **GRIND TEST** Test all grinders installed in your machine.

WARNING

Keep away from the grinder during this test. Do not test a grinder that is not mounted on its canister. Otherwise, you could be hurt.

- a. Press the grinder number on the selection switch panel or the service keypad
- OR -
- b. Press a selection letter (a number is not needed) on the selection switch panel. The grinder associated with that selection will run.

In either case the display shows: **GRIND X** (X = grinder number) while the grinder is running.

7. **AIR TEST** Press  to test the air compressor.

NOTE

If the brewer is in the BREW position at the start of this test, the compressor runs for 18 seconds. This allows you to evacuate a full brewer barrel. Otherwise, it runs for 2 seconds.

8. **BREW TEST** Press  to test each brewer position:

WARNING

Keep away from the brewer mechanism while it is operating. Coming into contact with moving parts could injure you.


- a. **BREW'R BREW** The brewer is in the BREW position.
- b. **BREW'R FLIP** The brewer is in the FLIP position.
- c. **BREW'R HOME** The brewer is in the HOME position.



WARNING

Very hot water will be dispensed in the next two tests. Coming into contact with hot water will HURT!

9. **BOWL RINSE** Press  to rinse all bowls. **RINSING** is displayed.



10. **BREW RINSE** Press  to rinse the brewer. The brewer cycles, and **CLEANING** is displayed.

11. **TANK FILL**. Press . This clears any tank error and starts filling the tank, if necessary. If it is taking a long time to fill the tank **AND THERE ARE NO LEAKS**, you may see **TANK ERR** in the diagnostic list again. Just press  again after making sure there are no other problems, such as a restriction in the water inlet line or a clogged water filter.

12. **IN.MKPHL12** Actuate each switch or sensor to test its function:

M = mug/cup sensor (if equipped)
P = waste pail switch
L = low water tank level switch
2 = ring 2 cup sensor switch

K = freevend keyswitch
H = high water tank level switch
1 = ring 1 cup sensor switch




As you actuate each input, the display element representing that switch blinks on. Releasing the switch causes that element to blink off again.



PAYOUT COINS




PAYOUT COINS

1. *NDQ 123*. This means that pressing  causes the coin mech to pay out a *Nickel*, pressing  pays out a *Dime*, and  pays out a *Quarter*.
Continuously pay out coins by holding down the appropriate key.



FREE VEND

FREE VEND

1. To enter the free vend mode, press . *FREE ON* is displayed for a short time, then the free vend message is displayed. All selections are free.
2. To leave the free vend mode, press *FREE OFF*. *FREE OFF* is displayed for a short time, then the normal message is displayed. All selections revert to their previous pricing.



DATA

DATA AVAILABLE FOR VIEWING

1. *NR\$.XX* "XX" is the accumulated value of sales for the entire machine.
NR X "X" is the accumulated number of sales for the entire machine. **THESE COUNTERS ARE NOT RESETTABLE.**

OPTION

At this point, you can clear all resettable data at one time. Make sure one of the two previous displays is showing, then see **CLEARING DATA.**

The following displays appear in the order shown. *SOME DATA ITEMS MAY NOT APPEAR IF THEY WERE SET TO HIDE BY THE SUPERVISOR (See SETTING SUPERVISOR OPTIONS.)* Each data item can be cleared when its display is shown. See **CLEARING DATA.** Individual selection data is not visible for some items. See **VIEWING INDIVIDUAL DATA.**

DISPLAY	DEFINITION	VIEW INDIVIDUAL DATA?
<i>TOT\$.XX</i>	"XX" is the total of machine sales since last reset.	Yes
<i>TOT X</i>	"X" is the total of vends since last reset.	Yes
<i>CBX\$.XX</i>	"XX" is the money present in the coin box since last reset.	No
<i>DBV\$.XX</i>	"XX" is the money present in the bill validator since last reset.	No
NOTE		
To help you in better record keeping, don't forget to clear these totals every time you remove the money from the coin box or bill validator!		
<i>FRV\$.XX</i>	"XX" is the total of free vend "sales" since last reset.	Yes
<i>FRV X</i>	"X" is the total of free vends since last reset.	Yes
<i>WIN\$.XX</i>	"XX" is the total of winner "sales" since last reset.	Yes
<i>WIN X</i>	"X" is the total of winner vends since last reset.	Yes
<i>DSC\$.XX</i>	"XX" is the total of discount sales since last reset.	Yes
<i>DSC X</i>	"X" is the total of discount vends since last reset.	Yes




DISPLAY	DEFINITION	VIEW INDIVIDUAL DATA?
<i>MUG\$.XX</i>	"XX" is the total of mug sales since last reset.	Yes
<i>ALT\$.XX</i>	"XX" is the total of alternate vend sales since last reset	Yes
<i>ALT X</i>	"X" is the total number of alternate vends since last reset	Yes
<i>TST X</i>	"X" is the total test vends since last reset	Yes

2. *I.D. XXXXXX* This is the 6-digit machine ID number. **SUPERVISOR ONLY:** Enter a new ID number if you desire.



VIEWING DATA ITEMS

Beginning at the first screen of the data item, you may view the individual selection data one of two ways:

1. Press . Data for the **A** selection is displayed. You may then scroll up and down the list of data for each selection by pressing the arrow keys.
2. A more direct approach is to press the letter key that corresponds to the data item you are interested in. That data is displayed without having to scroll through the whole list.

NOTE

If **PRICE LINES** are enabled, you will see individual data by price line instead of by selection.



CLEARING DATA


CAUTION

If you are keeping records, make sure you have recorded all values before you clear them! Therefore, you might want to view all the data prior to clearing.

NOTE


You may not be able to clear some or all of these counters if they were "hidden" by the supervisor. See **SETTING SUPERVISOR OPTIONS**.

CLEARING ALL DATA COUNTERS AT ONCE . . .

From the machine total display (*NR\$.XX* or *NR X*), press and hold . The display shows *CLEARING* for about one second, then *FINISHED*. All resettable data have been cleared.

CLEARING DATA COUNTERS . . .

In most cases, data is kept for individual selection transactions. See **VIEWING INDIVIDUAL DATA**. This subtotal data is available for view, but cannot be cleared individually.

From the main display of each counter, press . The display shows *CLEARING* for about one second, then *FINISHED*. All data have been cleared from that counter.



DIAGNOSTICS



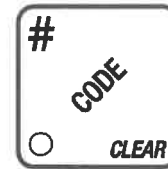
DIAGNOSTICS

1. If faults are not present on your machine, *NO ERRORS* is displayed.
2. The following displays will appear when the appropriate fault condition exists:

<i>KEYPAD XY</i>	Key(s) "X" and "Y" are stuck. Try unsticking keycaps or replacing key membrane.
<i>ROM ERROR</i>	ROM checksum error. Replace EPROM or main controller assembly.
<i>RAM ERROR</i>	RAM addressing error. Replace RAM or main controller assembly.
<i>CONFIG ERR</i>	Configuration error. Recheck configuration settings.
<i>TANK ERR</i>	Tank failed to be filled or refilled.
<i>RING 1,2</i>	The cup ring is jammed (ring 1 and/or 2)
<i>MOTR 1A 1B</i>	Cup turret motor 1A or 1B is jammed. Remove all cups and close door. Perform the cup test.
<i>NO CUPS 1</i>	Out of cups.
<i>BREW JAM</i>	The brewer is jammed.
<i>WASTE PAIL</i>	The waste pail is full.
<i>LOW WATER</i>	The water level in the tank is low.
<i>COLD TANK</i>	Water is too cold to vend.
<i>NO SENSOR</i>	Illegal temperature reading. Check tank sensor. Check harnessing for broken or bad connections.
<i>WHIP 123</i>	Whipper motor failure (motor 1, 2 or 3)
<i>MECH COMM</i>	Coin mechanism detected, but no communication established.
<i>MECH.SENSOR</i>	Coin mechanism sensor error.
<i>CHECK DBV</i>	Bill jam or full bill validator stacker. Empty stacker.
<i>DBV COMM</i>	Bill validator communication not established.




DOOR JAM	The automatic delivery door is jammed.
DEBIT CARD	Error in the debit card unit.
CHK PRICES	Illegal price detected.
BAD CLOCK	The real-time clock is not running.
LOCKS SET	All selections are locked (see PRODUCT CONFIGURATION).



SETTING THE SUPERVISOR OPTIONS

The supervisor is allowed to do things that a normal user cannot, like controlling access to certain modes. The supervisor can lock out any of the programming modes to anyone who does not have the right "key". Once a supervisor enters the proper code, he or she will be able to:



- Change the supervisor access code
- Change the freevend keyswitch access code
- Lock out any or all of the service keypad modes
- Grant or deny access to data items during **DATA RECALL**
- Modify the machine configuration

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 *SUPERVISOR* in the display.

2. If the standby message returns, press , then .
3. The display shows *SUPER XXXX*. The X's represent the current supervisor code. Enter a new code, if desired.

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.

4. The display shows *FREEV XXXX*. This is the current freevend code, and is treated just like the supervisor code.
5. The display shows either *X. LOCKED* or *X. UNLOCKED*. "X" refers to the number or character shown on the mode or payout key in question (1 through 9, # and *). To see if a key is locked or unlocked, press that key.

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:



- 6. **P.LINE ON** or **P.LINE OFF** You can turn PRICE LINES on or off with

Depending upon which you select, you will either be using PRICE mode or PRICE mode with PRICE LINES.

- 7. **NR\$ HIDE** (NR\$ is the code for the nonresettable machine sales total.) In this example, that total is hidden from the non-supervisor.

NR\$ SHOW The non-supervisor can view the nonresettable sales total.

NR\$ CLEAR The non-supervisor can view the nonresettable sales total. (Since it is **NONRESETTABLE** data, it cannot be cleared. However, other data is clearable, and this option will enable the non-supervisor to clear it.)

Press to change the display. Press the up/down arrows to scroll through the following list of data items:

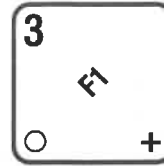
CODE	DEFINITION
NR\$	Total accumulated dollar sales for the machine (nonresettable)
NR	Total accumulated vends for the machine (nonresettable)
TOT\$	Total dollar sales since last reset
TOT	Total vends since last reset
CBX\$	Total money in the cash box since last reset
DBV\$	Total money in the bill stacker since last reset
FRV\$	Total free vend "sales" since last reset
FRV	Total free vends since last reset
WIN\$	Total winner "sales" since last reset
WIN	Total winners since last reset
DSC\$	Total discounted vend sales since last reset
DSC	Total discounted vends since last reset
MUG\$	Total mug vend sales since last reset
MUG	Total mug vends since last reset
TST	Total test vends since last reset

WATCH OUT !

Selecting **CLEAR** for either NR\$ or NR will allow the non-supervisor to clear ALL DATA, including items that are hidden! See DATA for more information.



VIEW MACHINE INFORMATION

VIEW MACHINE
INFORMATION

<i>TEMP XX F</i>	The current water tank temperature (in degrees F or C, depending upon your choices).
<i>VER HDX.X</i>	The current software version number.
<i>CONF WXYZ</i>	The machine configuration. (See PRODUCT CONFIGURATION for an explanation of "W", "X", "Y", and "Z".)
<i>0.ABCDEFGH</i> <i>1.ABCDEFGH</i>	This is the selection configuration. It shows which selections are available for sale and setup.
<i>CUPVND -/-</i>	Shows status of cup only selection: -/- = Cup only not allowed 0/- = Regular cup only vended -/1 = Large cup only vended 0/1 = Both cup sizes vended
<i>J WHIP</i>	Selections programmed for optional whipping will be whipped only if J is pressed.
<i>J NO WHIP</i>	OR
	Selections programmed for optional whipping will be whipped only if J is pressed.
<i>DOOR ON</i> <i>DOOR OFF</i>	This shows whether or not the optional automatic delivery door is enabled.



SANITATION

Basics

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, Federal and State Health Departments require regular cleaning and sanitizing procedures for food contact parts.

The information in this section will explain how to clean and sanitize the merchandiser on a day to day 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 also 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 A GOOD CLEANING

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 high enough to kill bacteria. Water must be at least 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.

Turn the machine off before using water on the machine.

In either case, the object 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 it. In order to properly do this, you need to have a complete set of the right tools. In addition to the screwdrivers, pliers, and test equipment necessary to repair a machine, you need to have the tools to clean the machine.

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.



SANITATION PROCEDURES

Refer to the recommended cleaning and sanitation interval table on the final page of this section. For each item, complete the procedure as outlined here.

Food-Contact Parts

NOTE

All food-contact parts must be cleaned and sanitized. Air dry, do not wipe dry.

Ingredient Canisters - Empty and wash the canisters, augers, and spouts. Sanitize with hot water and allow to air dry completely before returning to cabinet.

Mixing Bowls - The inside of all mixing bowls can be rinsed by performing the "Bowl Rinse" operation as outlined in the Programming section of this manual.

If needed, remove mixing bowls from the dry ingredient shelf. Wash the mixing bowl lids and sanitize with hot water. Allow to completely air dry before reassembling.

Whipper Lids and Impellers - Remove lids and impellers from the whipper housings, wash the lids and impeller housing. Sanitize with hot water and allow to air dry before reassembling.

Beverage Discharge Nozzles - Disconnect the beverage dispensing tube from the nozzles. Remove the nozzles from the mounting bracket. Remove the cap from the nozzle, wash clean and sanitize the nozzles and cap. Refer to the tubing connection diagram for proper routing.

Brewer, Brewer Basket, and Brewer Funnel - The tubing and brewer may be sanitized by performing the BREW RINSE operation as outlined in the programming section. The machine features an automatic brewer sanitizing feature also described in the programming section.

At times, it may be necessary to wash and sanitize the individual brewer parts. If so, disconnect the tubes from the brewer manifold. Remove the brewer barrel and manifold assembly from its support. Remove the brewer basket and funnel assemblies.

Thoroughly wash all parts using soap and water. Sanitize by rinsing thoroughly with hot water.

Coffee Chutes - Remove the metal chute(s), wash clean, and sanitize by rinsing with hot water. Air dry before reinstalling.

Condiment Chute Assembly - Remove the condiment chute and cover from the condiment canisters. Thoroughly wash all parts using soap and water. Sanitize by rinsing thoroughly with hot water.



Non Food-Contact Parts

Cup Delivery Compartment - Remove the compartment from the merchandiser. Wash clean and rinse with hot water.

Exhaust Fan Filter - Remove the filter from its housing. Wash with soap and water, rinse, wring dry, and replace into housing.

Waste Pail - Empty, wash, and rinse with hot water. Sprinkle detergent powder in the bottom of the pail to help control odors.

Ingredient/Rinse Tray - Remove product canisters. Wash and rinse with hot water. Allow to air dry.

OVERALL CLEANING

Inspect your merchandiser both inside and out. Be sure to check corners and all less visible parts of the merchandiser.

Clean where needed.

Allow the inside of the cabinet to dry thoroughly before you close the door.

National Vendors recommends using the following supplies:

A commercial glass cleaner on the glass in the cabinet door.

A mild detergent and warm water on the cabinet, brewer, and other NON ELECTRICAL components.

CAUTION

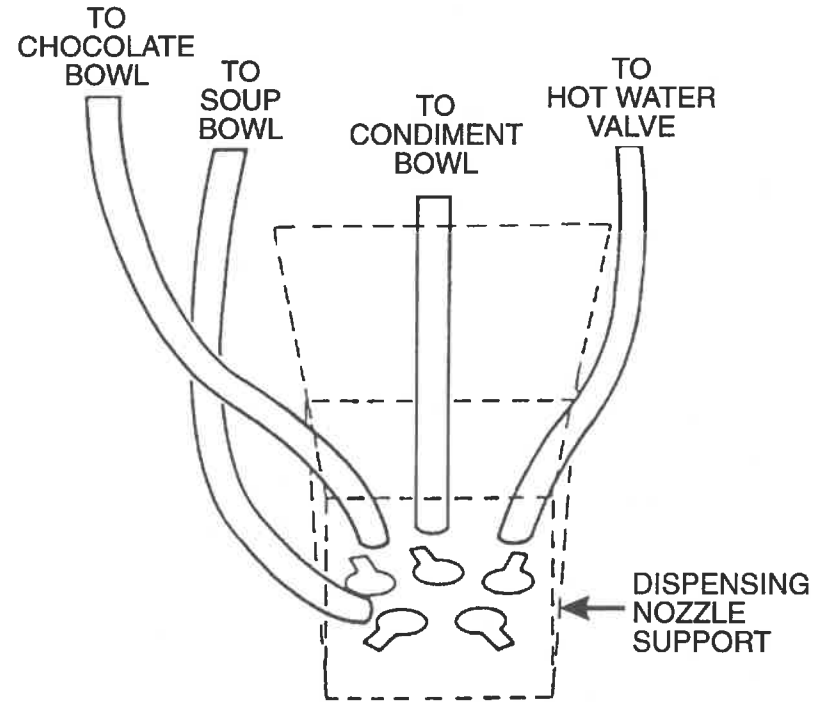
The plastic parts in your merchandiser should be cleaned with mild detergent and warm water. The use of other cleaning agents may damage the material, and should be avoided.

PREVENTIVE MAINTENANCE CLEANING

Periodically, you should visually inspect your merchandiser's hot water tank for excessive lime and scale buildup. This buildup on the tank walls, water valves, and heater element will vary dramatically, depending upon water quality. You should develop a cleaning and deliming schedule based on the apparent local water quality.

NOTE

To aid in removing scale from your merchandiser, National Vendors has a service kit available: part number 6400080. In addition, if your machine has the Everpure water inlet filter system option, a second kit (part number 6400086) is also available.



TUBE ROUTING DIAGRAM



RECOMMENDED CLEANING AND SANITATION INTERVALS

ITEM	DAILY	WEEKLY	MONTHLY	QUARTERLY	SEMI-ANNUALLY
Ingredient Canisters	C		S		
Mixing Bowls	C	S			
Whipper Funnels and Impellers	C	S			
Beverage Discharge Nozzles	C	S			
Brewer, Brewer Basket and Brewer Funnel	C	S			
Bean Grinder Coffee Chutes	C	S			
Bean Grinder Housing		S			
Brewer Mechanism		C			
Cup Delivery Compartment	C				
Exhaust Fan Filter		C			
Grounds Pail	C				
Waste Pail	C				

S = Sanitize at this interval

C = Clean only at this interval



APPENDIX A. INITIAL SET-UP GUIDE

This guide will help you install your merchandiser, complete any final assembly, and supply it with water and electricity. Consult the set-up manual for your specific machine for programming, configuration, and product loading instructions. Keep this guide for later reference.

I. POWER REQUIREMENTS

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

Power Requirements			
Country	Volts	Frequency (Hz)	Current (Amps)
Canada	115	60	15
France	230	50	10
Germany	230	50	10
Mexico	108 - 135	60	15
United Kingdom	230	50	10
United States	115	60	15

SPECIAL INSTRUCTIONS FOR MEXICO ONLY:

WARNING

Do not connect the merchandiser to a power source before completing these steps. If it is already plugged in, disconnect it before proceeding.

1. Remove the screw at the top of the power control panel.
2. Lower the power control panel to the service position.
3. Locate the three free leads marked A, B, and C.
4. Measure the line voltage at your location. Connect the leads as required:

Line Voltage Measurement	Connect Lead Wire A to:
108 - 116 VAC	B
117 - 135 VAC	C

II. WATER REQUIREMENTS

The best type of water for coffee brewing is normal hard water. 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 Hot 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.

APPENDIX A. INITIAL SET-UP GUIDE



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 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.

III. 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 ALLOW WARM MOIST AIR TO BE VENTED OUT OF THE MACHINE'S INTERIOR.

WARNING:

THIS MACHINE IS ONLY RATED FOR INSTALLATION IN AN INDOOR LOCATION.

IV. 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 fitting
- 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. LEVEL THE MACHINE

- a. Place a spirit level on the top front edge of the cabinet with the door fully closed. Adjust the front legs only until the cabinet is reasonably level (figure 1).
- b. Hold the door open about 4 inches.

WARNING:

HAVE AN ASSISTANT HOLD THE MERCHANDISER WHILE YOU ADJUST THE LEG LEVELERS.

- c. Adjust the back legs so that the back leg leveler on the hinge side is off the floor just enough so a piece of paper can slide under it with only a bit of resistance (figure 2).
- d. For proper weight distribution on all four legs, raise the back leg on the hinge side by unscrewing the leveler 1½ turns (figure 2).

NOTE

You may need to use pliers or channel locks to loosen the leg levelers.

4. MOUNT THE BASE PLATE BRACKETS

Secure a base plate bracket at each of the remaining pairs of holes with two of the hex head screws.

5. 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 slide.

6. FILL THE TANK

If you **DO NOT** have the optional water filter, turn on the water at its source, and allow the tank to fill.

If you **DO** have the optional water filter, National Vendors recommends that you do the following procedure the first time you fill the tank in your Hot Drink Center:

- a. Remove the small inner "O" ring from the filter cartridge.
- b. Install the filter cartridge.
- c. Turn on the water at its source, and allow the tank to fill.
- d. Remove the filter cartridge and replace the "O" ring.
- e. Install the filter cartridge.



MACHINE LEVELING

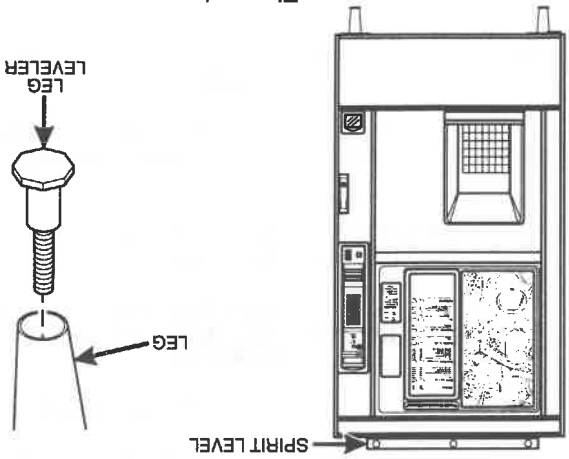


Figure 1

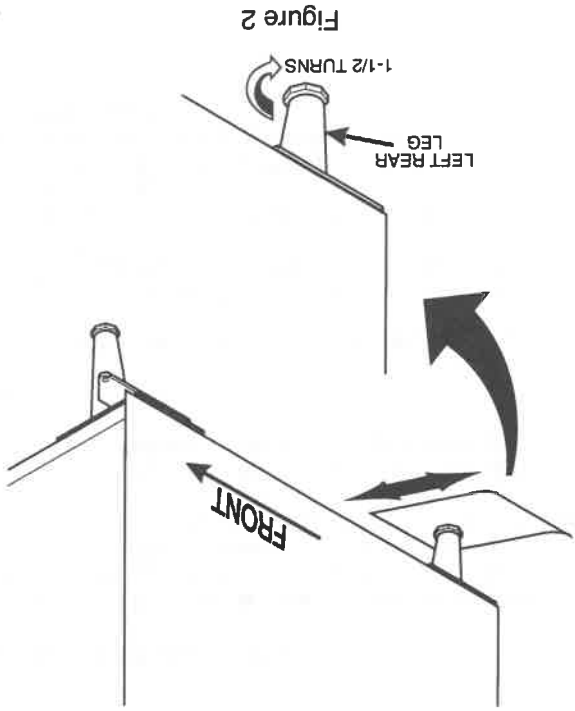
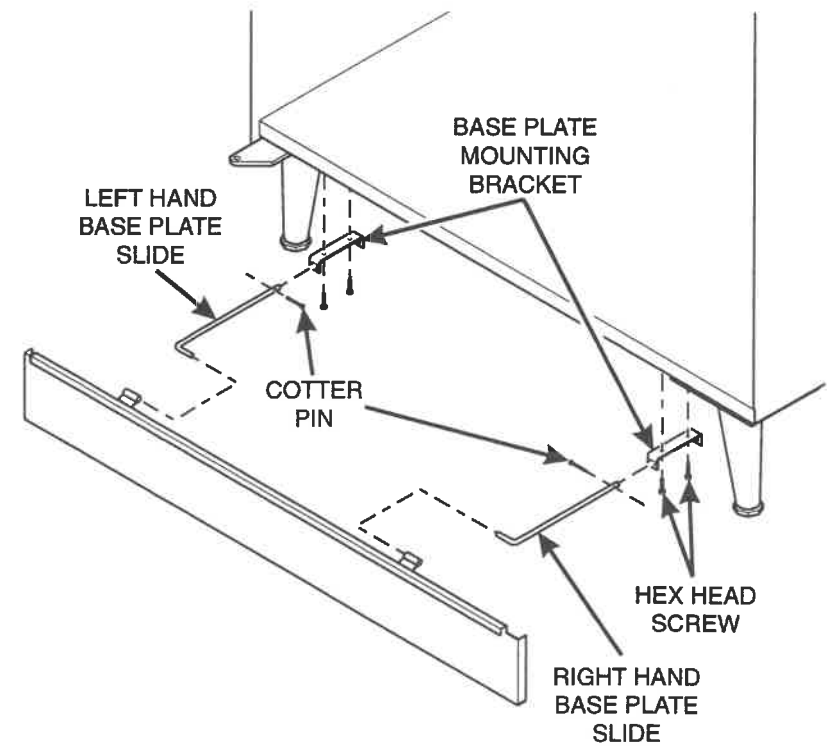


Figure 2



TYPICAL BASEPLATE INSTALLATION



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.



APPENDIX B. THE FREE VEND KEYSWITCH OPTION

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

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.

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.

NOTE THAT NO CODE IS NECESSARY TO REMOVE THE MACHINE FROM FREE VEND.



APPENDIX C. 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 "**A MUG**" 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.



Calibration

1. Remove the plastic cap in the rear of the sensing unit, exposing the potentiometer adjusting screw, as shown in figure C1.

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 5/8" target.

NOTE

IT IS VERY IMPORTANT THAT THIS MATERIAL BE WHITE.

b. Place the target in the cup station just beyond the cup deflector (see figure C-2). 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.

4. Replace the plastic cap.

5. Insert a mug into the cup station in the vending position and check to see that the red indicator light is ON.

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

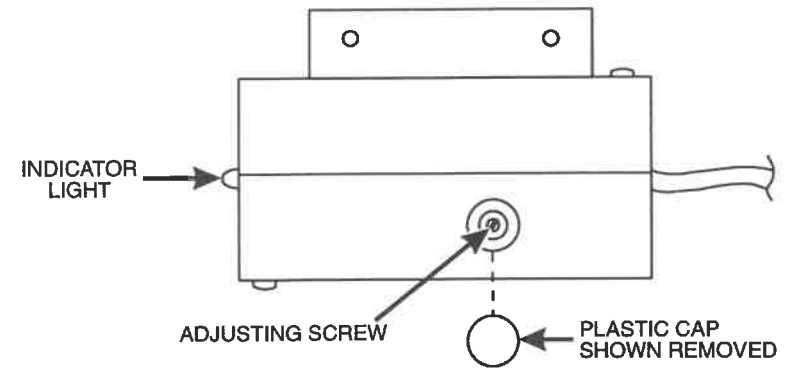


Figure C1

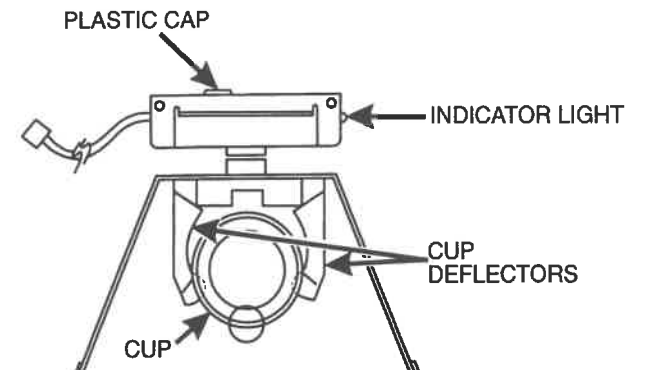


Figure C2



INDEX

A

Adjustments 17
 Cup Mechanism 21
 Grind 26
 Water Valves 20

B

Base Plate Brackets, Mount A3
 Base Plate, Mount A3
 Basket, Brewer 91
 Beverage Discharge Nozzles 91
 Bill
 Acceptor 15
 Stacker, Empty 17
 Bowls, Mixing 91
 Brewer 91
 Basket 91
 Funnel 91
 Button, Coin Return 15

C

Calibration, Infrared Mug/Cup Sensor C2
 Canisters
 Filling and Installing 27
 Ingredient 91
 Cartridge, Water Filter, Install 18
 Cash Box Lock Install 20
 Character Set 74
 Chute
 Condiment 91
 Coffee 91
 Circuit Breakers 10
 Cleaning
 Infrared Mug/Cup Sensor C1
 Overall 92
 Preventive Maintenance 92
 Clearing Data 83
 Coffee Chutes 91
 Coin Mechanism
 Loading 17
 Set up 17
 Coin Return Button 15
 Coins, Payout 78
 Condiment Chute Assembly 91
 Configuration
 Machine 44
 Product 47
 Controls 10
 Pressure Adjust 16
 Controller PCB Display 13
 Cup Delivery Compartment 92
 Cup Mechanism Adjustment 21
 Custom Message Editing 73

**D**

Data	
Available for Viewing	80
Clearing	83
Viewing Individual	82
Diagnostics	84
Display	31
Main Controller PCB	13
Message	15
Setting up	24
Dry Product Gram Throws	54

E

Editing	
Custom Message	73
Time Interval	71
Empty the Bill Stacker	17
End of Message Character	73
Entering Your Message	74
Exhaust Fan Filter	92

F

Fill	
Canisters	27
Tank	A3
Filter	
Cartridge, Water, Install	18
Exhaust Fan	92
Paper Loading	28
Flowcharts, Programming	36
Flushing Water Supply Line	A2
Food-Contact Parts	91
Free Vend	79
Keyswitch	15, B1
Funnel, Brewer	91
Fuses	10

G

Gauge, Pressure	16
Getting Around	30
Gram Throws, Dry Product	54
Grind, Adjusting	26
Group Number	
Assign to Selection	68
Change Price	68

H

Hot Drink Center Programming	30
------------------------------------	----

I

Impellers	91
Indicators	10
Light, Infrared Mug/Cup Sensor	C1
Individual Data, Viewing	82
Information, Machine, View	88
Infrared Mug/Cup Sensor	C1
Cleaning	C1
Indicator Light	C1



Ingredient	
Canisters	91
Rinse Tray	92
Initial Setup	4
Guide	A1
Install	
Canisters	27
Cash Box Lock	20
Water Filter Cartridge	18
Interlock Switch	
International	15
U.S./ Canada	15
J	
Keypad, Service	15
Keys	31
Keyswitch, Free Vend	15, B1
L	
Large Cups, Set Prices for	67
Level the Machine	A3
Loading	
Coin Mechanism	17
Cup Mechanism	22
Filter Paper	28
Lock, Cash Box, Install	20
Low Voltage Switch	15
M	
Machine	
Configuration	44
Functions, Test	75
Information, View	88
Level	A3
Set One Price for	65
Main Controller PCB Display	13
Major Parts	6
Merchandiser	
Connect to Power Source	A2
Connect to Water Supply	A2
Positioning	A2
Message	
Display	15
Editing	73
Entering	74
Minor Maintenance	17
Mixing Bowls	91
Mounting	
Base Plate Brackets	A3
Base Plate and Slides	A3
Mug/Cup Sensor, Infrared	C1
Calibration	C2
Cleaning	C1
Indicator Light	C1



	N	
Non Food-Contact Parts		92
Nozzles, Beverage Discharge		91
	O	
Overall Cleaning		92
	P	
Pail, Waste		92
Panel, Power		10
Paper, Filter, Loading		28
Parts		
Food-Contact		91
Major		6
Non Food-Contact		92
Payout Coins		78
Positioning the Merchandiser		A2
Power Panel		10
Back Side		10
Power		
Requirements		A1
Source, Connect the Merchandiser		A2
Switch, Main		10
Pressure		
Adjust Control		16
Gauge		16
Water		A2
Preventive Maintenance Cleaning		92
Price, Change Group Number's		68
Price Lines, Set Prices Using		68
Procedures, Sanitation		91
Product Configuration		47
Programming		
Flowcharts		36
Hot Drink Center		30
	Q	
Quarter Switch, Setting		17
	R	
Regular Cups, Set Prices for		66
Requirements		
Power		A1
Supply Line		A2
Water		A1
Rinse Tray, Ingredient		92
	S	
Sanitation		89
Procedures		91
Selection, Assign a Different Group Number		68
Selection Switch Panel		15, 30
Selections, Set Prices for		64
Service Keypad		15



Set

- Coin Mechanism 17
- Display Assembly 24
- One Price for the Entire Machine 65
- Prices for All Large Cups 67
- Prices for All Regular Cups 66
- Prices for Individual Selections 64
- Prices Using Price Lines 68
- Supervisor Options 86
- Throws 53

Slides, Mount A3

Supervisor Options, Setting 86

Supply Line Requirements A2

Switch

- Interlock (International) 15
- Interlock (U.S./ Canada) 15
- Low Voltage 15
- Main Power 10
- Panel, Selection 15, 30

T

Tank, Fill A3

Test Machine Functions 75

Throws

- Dry Product 54
- Setting 53
- Water 62

Time Interval Editing 71

Time of Day 69

V

View

- Available Data 80
- Individual Data 82
- Machine Information 88

W

Waste Pail 92

Water

- Filter Cartridge, Install 18
- Pressure A2
- Requirements A1
- Supply, Connect the Merchandiser A2
- Supply Line, Flushing A2
- Throws 62
- Valves, Adjusting 20

Whipper Lids 91