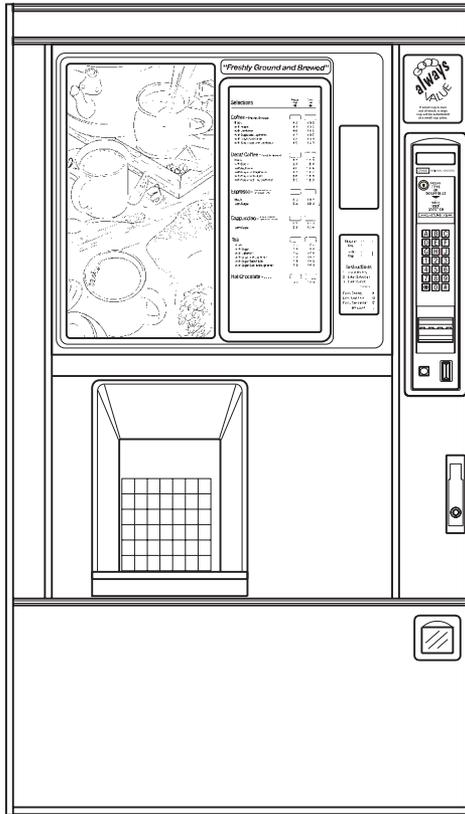


6530008

Model 653, 655, 657

Hot Drink Center



Programming Guide

CRANE MERCHANDISING SYSTEMS A Crane Company
NATIONAL VENDORS

12955 Enterprise Way
Bridgeton, Missouri 63044-1200
(314) 298-3500
www.nationalvendors.com

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6530008

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

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

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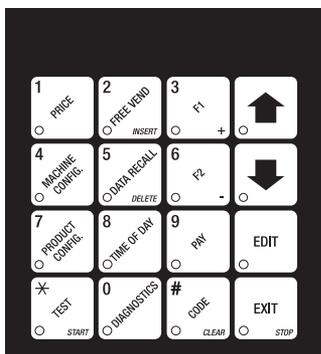
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PROGRAMMING THE HOT DRINK CENTER

I. GETTING AROUND

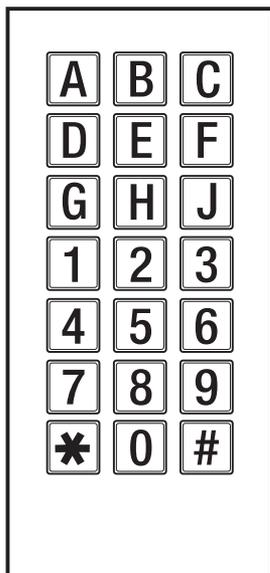
Getting around the Hot Drink Center software is pretty easy once you know the features that are available to you, and how to use them. The three main parts you will use are the SERVICE KEYPAD, the SELECTION SWITCH PANEL, and the DISPLAY.

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.

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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.

II. THE DISPLAYS

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

- a. 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.
- b. It provides information and feedback to the service person during maintenance.



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III. THE FUNCTION KEYS

The FUNCTION keys on the service keypad can be used for up to three things:

THE NUMBER

YOU MIGHT BE ASKED TO ENTER A NUMERICAL VALUE. YOU CAN DO THIS IN TWO WAYS: PRESSING THIS KEY IS THE SAME AS PRESSING THE "5" ON THE SELECTION SWITCH PANEL.



THE PRIMARY PURPOSE

THIS IS THE MAIN JOB OF THE KEY. FROM THE STANDBY MESSAGE, IT WILL ALLOW YOU TO ENTER A PROGRAMMING MODE. IN THIS EXAMPLE, YOU CAN VIEW STORED SALES DATA.

THE SECONDARY PURPOSE

THIS IS THE KEY'S "SECOND JOB". THIS KEY CAN BE USED TO DELETE A CHARACTER WHEN YOU ARE EDITING CUSTOM MESSAGES.

IV. OTHER KEYS

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



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



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



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



This key lets you start an action, such as a test.

V. CONTROL PANEL SWITCH FUNCTIONS EXPLAINED



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



Press this button to set up how the Free Vend mode will operate.



Press this button to view the water tank temperature, software version number, machine and accessory configuration, and active selection status.

Press this button to:

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



Press this button to:

- View total sales and vends by whole machine, selection, or drink size
- Clear resettable data
- View or set machine ID



Press this button to:

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



Press this button to:

- Set machine configuration
- Set which trays are active



Press this button to:

- Set time of day
- Set day, month, year
- Set up time of day intervals for inhibit, freevend, and discount vending
- Select display messages
- Edit messages
- Set message scrolling speed



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



Press this button to see any fault or condition that may place the machine out of service



Press this button to:

- Perform TEST VENDS
- Test machine functions
- Test displays
- Fill the water tank



Press this button to:

- Enter the SUPERVISOR mode
- Change the SUPERVISOR access code
- Lock and unlock access to functions
- Set free vend code

Hot Drink Center Programming Guide

VI. PROGRAMMING PROCEDURES

SOME CONVENTIONS:

The pages that follow contain all the programming procedures for the Hot Drink Center. If you need to do a specific task, you can find it immediately by using the Index. Most of the procedures have things in common, and here is a short guide to help you through these conventional presentations:

All programming procedures assume that you are starting with the standby message showing in the display. If not, just press  until you get there.

Each programming procedure is highlighted by a pointing hand:  so it will stand out.

To exit a mode (CONTINUE) at any time, press . Sometimes you may have to press the key more than once in order to exit all the way to the standby message.

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

VII. THE SUPERVISOR MODE

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
- Lock out any or all of the service keypad modes
- Set whether data is cleared with  or after being downloaded into a portable data collection device
- Grant or deny access to data items during **DATA RECALL**
- Modify the machine configuration



GAIN ACCESS TO THE SUPERVISOR MODE

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

NOTE

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

When you have entered the right code, you will hear two beeps and see *UNLOCKED* in the display.



ENTER A NEW SUPERVISOR CODE

1. Follow the steps in **GAIN ACCESS TO THE SUPERVISOR MODE**, page 7.
2. Press . The display shows *SUPER XXXX*. The X's represent the current supervisor code. Use the number keys to enter a new code.

IMPORTANT

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

3. CONTINUE.
-



ENTER A FREEVEND CODE

1. Follow the steps in **GAIN ACCESS TO THE SUPERVISOR MODE**, page 7.
2. Press , then  until the display shows *FREE XXXX*. The X's represent the current freevend code. Use the number keys to enter a new code. If the code is anything other than "0000", it must be entered after the key lock is turned in order to enable free vends.
3. CONTINUE.

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ENTER A NEW DATA RECALL CODE

If the proper non-zero code is entered, sales and non-resettable sales data can be viewed without opening the machine's door.

1. Follow the steps in **GAIN ACCESS TO THE SUPERVISOR MODE**, page 7
2. Press  until the display shows *NR XXXX*. The X's represent the currently entered code. Use the number keys to enter a new code, if desired.

NOTE

A code of 0000 disables this feature.

USAGE

With the machine in ready mode, enter the 4-digit code. When the correct code is entered, the non-resettable sales total is displayed. This display will remain active for 9 seconds, or until another key is pressed.

3. CONTINUE.



LOCK OR UNLOCK MODE OR PAYOUT KEYS

1. Follow the steps in **GAIN ACCESS TO THE SUPERVISOR MODE**, page 7
2. Press  until the display shows either # *LOCKED* or # *UNLOCKED*. To see if a key is locked or unlocked, press that key.
3. Press  to change between locked and unlocked. When anyone other than the supervisor tries to enter a locked mode, the display shows *LOCKED*.

EXAMPLES: Press , then press  to lock the function. Now, non-supervisory users can NOT view any sales data.

If you want non-supervisory users to view data but not be able to clear data, leave the  key unlocked, but do lock .

NOTE

The following mode keys cannot be locked out:



4. CONTINUE.

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SET PRINTER OR DEX OPTIONS

1. Follow the steps in **GAIN ACCESS TO THE SUPERVISOR MODE**, page 7
 2. Press  until the display shows:
PRINTER - means that data will be sent directly to a printer,
- OR -
DEX ONLY means that data remains in memory after it is downloaded into a portable data collection device (PDCD),
- OR -
DEX+CLR means that resettable data is cleared after it is downloaded into a PDCD.
 3. Press  to change between the three choices.
 4. CONTINUE.
-



SELECT PRINTER BAUD RATE (PRINTER MODE ONLY)

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

1. Press . One of the following is displayed:
BAUD 1200 BAUD 2400 BAUD 4800 BAUD 9600
2. Press  until the correct baud rate for your printer is displayed.
3. CONTINUE.



SELECT DISPLAY LANGUAGE

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



to choose the desired language. Your choices are:

ENGLISH, DEUTSCH, FRANCAIS, ESPANOL, PORTUGUES, NEDERLANDS, or SWEDISH.

2. CONTINUE.
-



SELECT COIN MECHANISM

1. Press , then press  until the current **COIN MECHANISM** is

shown in the display. Press  to choose the desired coin mechanism.

Your choices are:

DUMB MECH, MDB MECH, NO MECH, or EXEC MECH

2. To set up options for your coin mechanism, see **SELECT MONETARY OPTIONS**, page 14.
3. CONTINUE.

Hot Drink Center Programming Guide



SELECT BILL VALIDATOR

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

1.

NO DBV

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

SER.1.2.5.10.20

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

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

MDB.1.2.5.10.20

- **BILL SELECTION METHOD:**

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

MDB. <*>

- An MDB bill validator which accepts non-standard bills or tokens

- is connected and operating. Press  to enter list of bills.

See **INITIAL SETUP OF NON-STANDARD BILL VALIDATOR** (page 13).

BILL LIST OPERATION:

Use  and  to scroll through the list of bills.

1.1.00 ON

- Use  to turn the bill acceptance ON or OFF.

Use  to move up to the top level screen.

1.= Bill validator channel 1, each bill has its own channel

1.1.00 ON

- 1.00=Bill value

ON = \$1.00 bill will be accepted

1.1.00 OFF

- OFF = \$1.00 bill will not be accepted

TKN

- Token bills (same as coupon bills)

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INITIAL SETUP OF NON-STANDARD BILL VALIDATOR:

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

PULSEDBV - The pulse bill validator will accept \$1 bills.

2. Press  to choose the desired option.
2. CONTINUE.



SELECT CARD READER

1. Press , then press  until one of the following is displayed:
NO CARD, DUMB CARD, or MOB CARD.
2. Press to choose the desired option.
3. To set up options for your card reader, see **SELECT MONETARY OPTIONS**, page 14.
4. CONTINUE.



SELECT MONETARY OPTIONS

NOTE

Your choices of coin mechanism, bill validator, and debit card will determine which of the following options appear. Obviously, if you do not have a card reader installed in your machine you will not see options for them.

1. Press , then press  until the display shows *CHANGE X.XX*.

Change will be given for coins or bills up to this amount without the customer having to make a selection. For example, if 1.00 is displayed, the machine will give a customer change for a dollar without making a selection. Entering **000** means that no change will be given.

2. Press . The display shows: *ACC<\$\$ X.XX*. The value of "X.XX"

tells the machine how big a bill or coin to accept even though there is not enough change in the coin mech to cover all possible paybacks.

- For example, enter 1.00. Therefore, the machine will take a dollar bill or coin even though there is less than \$1.00's worth of change. Entering 5.00 tells the machine to take a five even though there is less than \$5.00's worth of change, and so forth.

NOTE

This could cause a customer to be short-changed.

- Entering **000** means that bills or coins will only be accepted if there is enough change to cover them.

3. Press . The display shows (if validator is enabled): *LOWMSG X.XX*.

The display will show *USE EXACT CHANGE* when the amount of available change in the coin mechanism falls below the value of "X.XX". Enter a value with the number keys. For example, if *LOWMSG 1.00* is displayed, the *USE EXACT CHANGE* message is displayed when less than a dollar's worth of change is in the coin mechanism.

4. Press . One of the following is displayed:
DECLINE.ON - More than one vend is allowed, with a declining balance.
- OR -
DECLINE.OFF - A declining balance is not allowed.
- Press  to display the desired choice.
5. Press . One of the following is displayed:
REVALUE.ON - A credit can be added to the card.
- OR -
REVALUE.OFF - No credit can be added to the card.
6. CONTINUE.
-



SET UP WINNER MODE

WINNER At preselected intervals, a customer may receive a refund for a selection. You can select the interval and qualifying selections.

1. Press , then press  until one of the following is displayed:
WINNER OFF Winner function is disabled.
- OR -
WIN XXX Winners are allowed at certain intervals, represented by "XXX".
- Press  to display the desired choice.
- If you selected *WINNER OFF*, you can exit the function.

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- The display shows *WIN XXX*. XXX represents the number of vends which must occur per each winner vend. For example, an interval number of 50 means that a winner can happen any one time during the next 50 vends. Using the number keys, enter an interval number between 10 and 9999.
- Press . The display shows * - - - - - . The dashes in the display represent which selections are allowed winners. Press the appropriate letter key to enable a selection, press the key again to disable it. For example, pressing A, C, and E will cause the display to look like this: *A - C - E - - - -*, meaning that all A, C, and E selections can have a winner.

ADVANCED OPTIONS:

- Press  to enable all selections.
- Press  to deactivate all selections.
- Press **0** or **1** to set winner selections by cup size.

NOTE

If displaying WINNER by selection, press  once to redisplay wildcard (*, *ABC*....) selections.

AN EXAMPLE . . .

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

- Press . The letters *A* through *J* appear in the display instead of the dashes.
- Press "E" and "F". The letters *E* and *F* in the display are replaced by dashes.

NOTE

This is a two-part screen. Press  to display selections
X . . 2

- CONTINUE.



SET UP MUG DISCOUNT

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

1. Press , then press  until the display shows *MUG DSC .00*.

This example shows the existing discount amount is zero.

2. Enter a discount amount. This will be in cents, for example press
or **5** to enter a discount amount of 5 cents.
3. CONTINUE.



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SET THE MACHINE CONFIGURATION CODE (SUPERVISOR MODE ONLY)

Press , then press  until the display shows **D♦J♦ WXYZ**. “D” is the automatic delivery door status. A plus sign (+) means the door is on; a dash (-) means the door is off. Toggle this setting by pressing . “J” is the whipper setting. Toggle a plus sign (+) or a dash (-) with the **J** key. See **WHIPPER OPTIONS**, page 24 for more information. “WXYZ” is the machine configuration code. W represents the machine type, X is the 6th product configuration, Y is the brewer configuration, and Z is canister mapping. The following tables give the possible values for each of the four numbers. Enter the appropriate configuration code for your machine.

1. CONTINUE.

Table D1 Machine Type Configuration

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

Table D2 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.
DUAL CONDIMENT	A machine with two separate sets of condiments (lightener/sugar) to avoid cross-flavoring. Normally used with a dual barrel brewer.

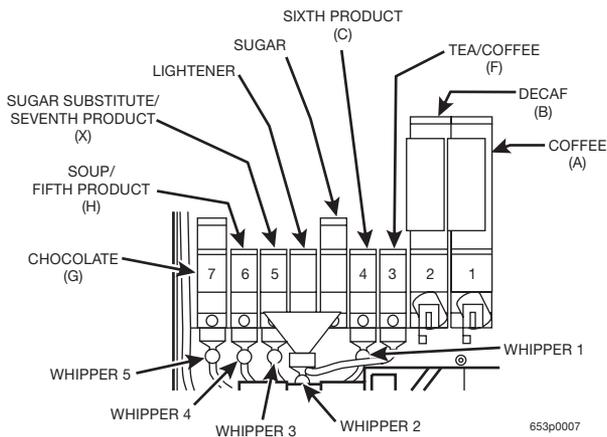
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Table D3 Brewer Configuration

Enter for (Y)	Coffee Mix	Number of Brewers	Condiment Sets
1	Single Brew	One	Single
2	Dual Brew	One	Single
3	Dual Brew	Two	Single
4	Single Brew	One	Dual
5	Dual Brew	Two	Dual
6	Freeze Dry	None	Single
7	Freeze Dry	None	Dual

Table D4 Canister Mapping (See figure below)

Enter for (Z)	Menu Selection Letters for Canister Numbers		
	3 (Single condiment only)	2	1
1	F	B	A
2	F	A	B
3	B	F	A
4	B	A	F
5	A	F	B
6	A	B	F



Canister Mapping

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DISABLE SELECTIONS IN THE MERCHANDISER

1. Press , then press  until the display shows something like

this:

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

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

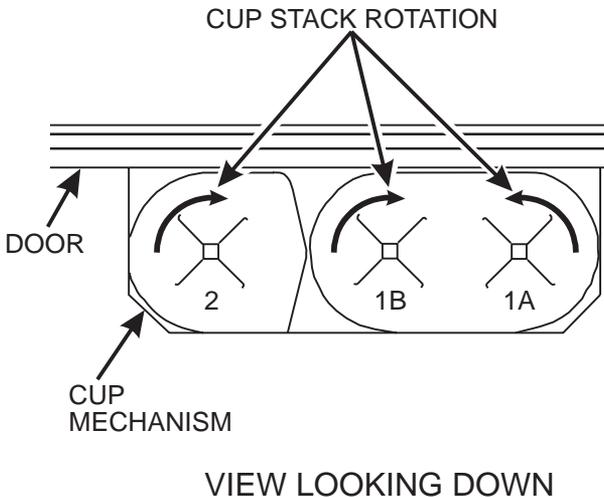
NOTE

Press  to lock all selections; press  to unlock all

selections. Press  to display the second screen.

3. CONTINUE.

TURRET DESIGNATIONS





SET UP CUP SIZES

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

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

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ASSIGN CUP SIZES TO SELECTIONS (SUPERVISOR MODE ONLY)

You can load up to two different sizes of cups in your machine (see **SET UP CUP SIZES**, page 21). You may not always want a certain selection to use all of the cup sizes in your machine. For example, espresso is normally served in regular cups, so you probably will not want it to be available in large or jumbo cups.

1. Press , then press  until the display shows something like

this:

0. ABCDEFGH. This display means that the smaller of the two cup sizes (0) is available for all selections (A - H).

NOTE

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

2. Press  to display remaining selections (*0 X-2- - -*). In this display, the “X” represents the 7th product, and the “2” represents the cup only selection.

NOTE

If you have only one cup size in your machine, you will not see the next display.

3. Press . The display shows something like this:
1. ABCDEFGH. This display means that the larger of the two cup sizes (1) is available for all selections (A - H).
4. Press the appropriate letter to toggle the display on or off. A selection that doesn't vend the displayed size cup has its letter replaced by a dash (-).

NOTE

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

5. Press  to display remaining selections (*1 X-2- - -*). In this display, the “X” represents the 7th product, and the “2” represents the cup only selection.

To vend a cup only, press 1, 2, 3 (large size) or 2, 3 (regular size).

6. CONTINUE.



SET UP A HOT DRINK

Be sure that the cup sizes you set in **SET UP CUP SIZES**, page 21, agree with the cup sizes actually in your machine. All procedures for setting up the hot drinks are similar, so this example will demonstrate how to set up the A selection, regular size fresh brew coffee.

1. Press , then press  until the display shows *SETUP - **. The star (*) represents the selection (A, B, etc.). The dash (-) represents the size of the selection.
2. Press **A**. (If you were setting up the A selection for the large size drink, you would press **1** first, then **A**.) The display shows *WAT. A 8.25*. This means that the currently set water throw time for the A selection is 8.25 seconds. Enter a new time if desired.
3. Press . The display shows *DRY. A .60*. This means that the currently set dry product throw time for the A selection is .60 seconds. Enter a new time if desired.
4. Pressing  after each display will cause the following screens to appear:

<i>DRY. A+</i>	View and change the settings for an extra strong drink
<i>SUG. A</i>	View and change the settings for the sugar throw time
<i>SUG. A+</i>	View and change the settings for extra sugar throw time
<i>LIT. A</i>	View and change the settings for the lightener throw time
<i>LIT. A+</i>	View and change the settings for extra lightener throw time
<i>SUB. A</i>	View and change the settings for the sugar sub throw time
<i>SUB. A+</i>	View and change the settings for extra sugar sub throw time
<i>STP. A</i>	View and change the steep time
<i>STP. A+</i>	View and change the steep time for an extra strong drink
<i>AIR. A</i>	View and change the air compressor running time

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Whipper Options

WHP. A XXX Press  to view and change the whipper settings as fol-

lows:

- ON-* The last 3 seconds of the drink is always whipped
- ON+* The whole drink is always whipped
- OFF* The drink is never whipped
- OPT* See below

- If *J+* is selected (see **SET THE MACHINE CONFIGURATION CODE**, page 18):
 - 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-* is selected (see **SET THE MACHINE CONFIGURATION CODE**, page 18):
 - 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

DIFFERENCES:

Some selections will not show all of these items. The E selection will have some additional selections:

WA.2 E View and set the water throw time for the cappuccino second product (chocolate)

DR.2 E View and set the chocolate throw time for cappuccino

PCT. E To automatically compute new times for cappuccino, enter a

percentage, then press . This percentage represents

the amount of chocolate product in cappuccino, versus that in a normal chocolate drink. This time and the normal coffee settings will compute the new cappuccino time.

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OPTIONS:

- a. At any of the preceding displays, you can press



to test throw

that item.

- b. At any of the preceding displays, you can press * or # (on the selection

switch panel) to step through a list of that item's throw times for other

selections where that item is active. For example, pressing # at the

WAT. A display will show the throw time for *WAT. B*. This is a handy way to move

from one selection to another without going to the *SETUP* screen first.

NOTE

If you try to set up a selection that is not configured, the *SETUP*

screen will remain in the display.

5. CONTINUE.

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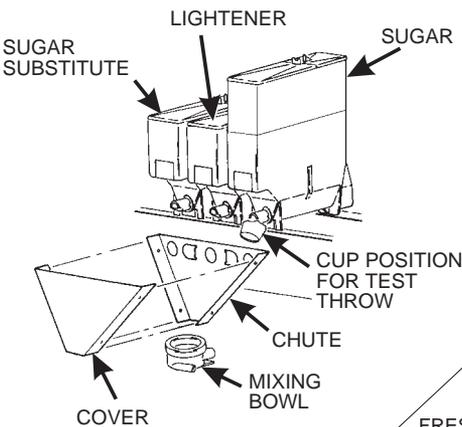


COLLECTING DRY PRODUCT GRAM THROWS

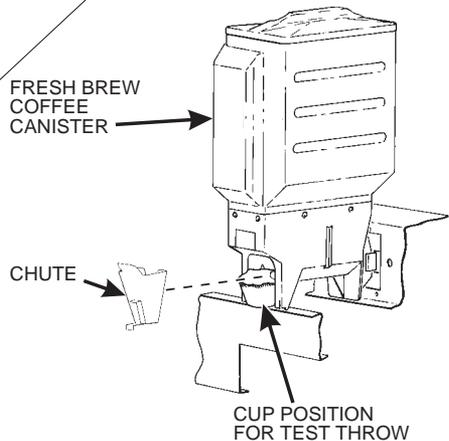
Measuring the gram throw allows you to get the right amount of dry product or condiment into your hot drink. To do this, you need a container to catch the product throw and an accurate gram scale to measure its weight.

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.
4. Weigh each test throw, then add all 5 weights together and divide by 5 to get an average weight.
5. If necessary, adjust the throw time and 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.



COLLECTING CONDIMENT THROWS



Hot Drink Center Programming Guide

Table D1 Dry Product Weight and Throw Time Factory Default Settings

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
		0.35	0.50	0.60	0.65	0.70	0.90
A	Strong freeze dry coffee	1.10	1.50	1.80	2.00	2.20	2.60
		0.65	0.90	1.10	1.20	1.35	1.60
B	Fresh brew decaf	5.70	8.00	9.00	10.00	11.00	13.00
		1.60	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
		0.35	0.50	0.60	0.65	0.70	0.90
B	Strong freeze dry decaf	1.10	1.50	1.80	2.00	2.20	2.60
		0.65	0.90	1.10	1.20	1.35	1.60
C	Soluble product	10.8	15.0	17.8	19.4	21.6	25.9
		2.45	3.35	4.00	4.35	4.85	5.80
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
		0.35	0.50	0.60	0.65	0.70	0.90
D	Strong freeze dry coffee ESPRESSO	1.05	1.50	1.80	2.00	2.20	2.60
		0.65	0.90	1.10	1.20	1.35	1.60
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
		0.35	0.50	0.60	0.65	0.70	0.90
E	Strong freeze dry coffee CAPPUCCINO	1.05	1.50	1.80	2.00	2.20	2.60
		0.65	0.90	1.10	1.20	1.35	1.60
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
		2.80	4.00	4.65	5.15	5.65	6.80
H	Soup	4.30	6.00	7.00	7.60	8.50	10.20
		0.70	1.00	1.15	1.25	1.35	1.65
H	Soluble product	10.80	15.00	17.80	19.40	21.60	25.90
		2.45	3.35	4.00	4.35	4.85	5.80
X	Soluble product	10.80	15.00	17.80	19.40	21.60	25.90
		2.45	3.35	4.00	4.35	4.85	5.80

Hot Drink Center Programming Guide

Table D1 Dry Product Weight and Throw Time Factory Default Settings

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 0.55	4.50 0.75	5.00 0.85	5.80 1.00	6.20 1.05	7.60 1.30
D	Sugar used in espresso	2.10 0.35	3.00 0.45	3.50 0.55	4.00 0.60	4.50 0.65	5.50 0.80
D	Extra sugar used in espresso	3.00 0.50	4.35 0.65	4.80 0.75	5.35 0.80	6.25 0.90	7.20 1.05
E	Sugar used in cappuccino	3.50 0.45	5.10 0.65	6.00 0.75	6.80 0.85	7.70 0.95	9.40 1.20
E	Extra sugar used in cappuccino	4.60 0.60	6.80 0.90	7.70 1.00	8.50 1.10	9.40 1.20	11.00 1.45
F	Sugar used in tea	4.20 0.55	6.00 0.75	7.00 0.90	8.00 1.00	9.00 1.15	11.00 1.40
F	Extra sugar used in tea	1.50 0.70	2.00 1.00	2.50 1.15	3.00 1.25	3.50 1.40	4.50 1.65
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 0.75	0.85 1.05	1.00 1.25	1.10 1.35	1.30 1.60	1.50 1.90
F	Extra sugar substitute used in tea	0.80 1.00	1.10 1.35	1.30 1.60	1.40 1.75	1.60 2.00	1.90 2.40
**	Sugar	4.20 0.55	6.00 0.75	7.00 0.90	8.00 1.00	9.00 1.15	11.00 1.40
**	Extra sugar	5.50 0.70	8.00 1.00	9.00 1.15	10.00 1.25	11.00 1.40	13.00 1.65
**	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 0.75	0.85 1.05	1.00 1.25	1.10 1.35	1.30 1.60	1.50 1.90
**	Extra sugar substitute	0.80 1.00	1.10 1.35	1.30 1.60	1.40 1.75	1.60 2.00	1.90 2.40

D = Espresso

I = Chocolate times for cappuccino

E = 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 on factory testing.

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



COLLECTING HOT WATER THROWS

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

WARNING
This water is *HOT!* Be careful.

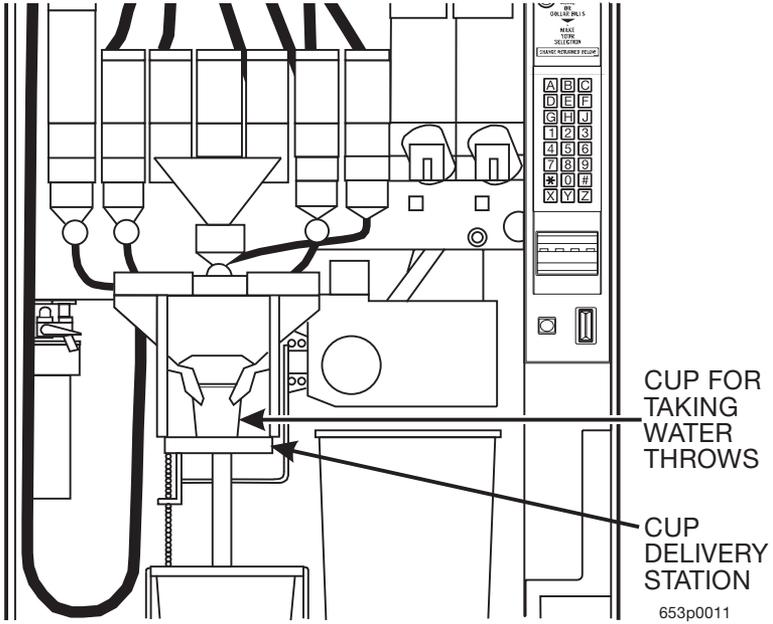
For a non-brewed selection, collect the water throws as follows:

1. Place a cup in the cup delivery station.
2. Ensure the merchandiser is using the factory defaults for the cup sizes (see **SET UP CUP SIZES**, page 21).
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 throw time for that selection (see **SET UP A HOT DRINK**, page 23) and repeat steps 3 through 5 until the correct volume of water is thrown.
7. If you are unable to get the desired amount of water, reset the throw time to the factory default, then adjust the water valves. You may then readjust the throw times to fine-tune your water throws.

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. 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 throw time for that selection (see **SET UP A HOT DRINK**, page 23) and repeat steps 3 through 5 until the correct volume of water is thrown.
7. If you are unable to get the desired amount of water, reset the throw time to the factory default, then adjust the water valves. You may then readjust the throw times to fine-tune your water throws.
8. Replace the water supply hose on the brewer.

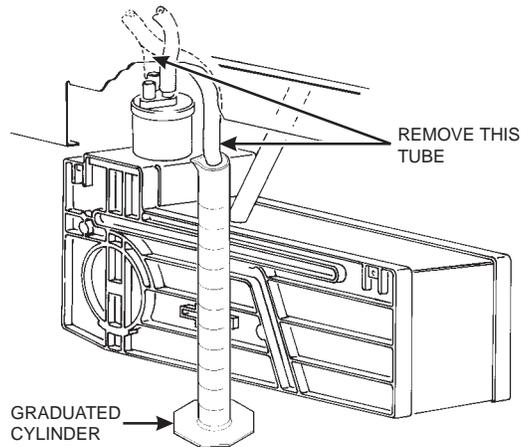
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Table W1 Water Throw Default Times and Volumes

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	4.50 130	6.40 190	7.50 220	8.20 240	9.00 265	11.00 315
B	Fresh brew decaf	4.50 130	6.40 190	7.50 220	8.20 240	9.00 265	11.00 315
A	Freeze dry coffee	4.95 120	7.00 170	8.25 200	8.65 210	9.90 240	12.60 305
B	Freeze dry decaf	4.95 120	7.00 170	8.25 200	8.65 210	9.90 240	12.60 305
C	6th Product	4.85 100	6.80 140	8.25 170	8.75 180	9.70 200	11.65 240
D	Espresso (FB)	2.25 65	3.20 95	3.75 110	4.10 120	4.50 133	5.50 158
D	Espresso (FD)	2.50 60	3.50 85	4.15 100	4.35 105	4.95 120	6.30 153
F	Tea	4.95 120	7.00 170	8.25 200	8.65 210	9.90 240	12.60 305
G	Chocolate	4.85 100	6.80 140	8.25 170	8.75 180	9.70 200	11.65 240
H	Soup	4.80 110	6.95 160	8.25 190	8.70 200	10.00 230	12.15 280
H	Soluble Product	4.85 100	6.80 140	8.25 170	8.75 180	9.70 200	11.65 240
X	Soluble Product	4.85 100	6.80 140	8.25 170	8.75 180	9.70 200	11.65 240



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RECIPES

1. 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 0.55 seconds, providing 15% of the normal chocolate throw (approximately 4.5 grams*).
- A water throw for the chocolate (water I) lasting 2.55 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.
- A water throw for the freeze dry coffee selection (water E) lasting for 4.35 seconds (101 ml).

- OR -

- A water throw for the fresh brew coffee selection (water E) lasting for 4.00 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 D1 Dry Product Settings for Cappuccino (5 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	3.10	0.40	52	2.50	85 (default)	57	2.50	85 (default)	58	2.25
20	4.10	0.55	54	2.60	80	54	2.35	80	55	2.15
25	5.00	0.65	56	2.70	75	52	2.25	75	53	2.05
30	5.80	0.75	59	2.85	70	49	2.10	70	49	1.90
35	6.70	0.85	61	2.95	65	47	2.00	65	47	1.80
40	7.60	0.95	63	3.05	60	44	1.85	60	45	1.70
45	8.40	1.05	66	3.20	55	41	1.70	55	41	1.55
50	9.30	1.15	68	3.30	50	38	1.60	50	38	1.45

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

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	4.50	0.55	56	2.55	85 (default)	101	4.35	85 (default)	115	4.00
20	5.80	0.70	59	2.70	80	97	4.20	80	110	3.85
25	7.10	0.85	63	2.90	75	92	4.00	75	104	3.65
30	8.00	0.95	65	3.00	70	90	3.90	70	102	3.60
35	9.30	1.10	69	3.20	65	86	3.75	65	96	3.40
40	10.50	1.25	72	3.35	60	81	3.55	60	92	3.25
45	11.80	1.40	76	3.55	55	77	3.35	55	87	3.05
50	13.10	1.55	79	3.70	50	72	3.15	50	83	2.90

Table D3 Dry Product Settings for Cappuccino (8 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	5.40	0.65	59	2.65	85 (default)	132	5.55	85 (default)	153	5.05
20	6.80	0.80	62	2.80	80	128	5.40	80	150	4.95
25	8.00	0.95	66	3.00	75	122	5.15	75	144	4.75
30	9.30	1.10	69	3.15	70	117	4.95	70	137	4.50
35	11.00	1.30	73	3.35	65	112	4.75	65	131	4.30
40	12.70	1.50	78	3.60	60	108	4.60	60	124	4.05
45	14.00	1.65	82	3.80	55	105	4.45	55	118	3.85
50	15.65	1.85	85	3.95	50	91	3.85	50	112	3.65

Table D4 Dry Product Settings for Cappuccino (9 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	5.8	0.75	60	2.75	85 (default)	140	5.90	85 (default)	172	5.60
20	7.6	1.00	64	2.95	80	134	5.65	80	155	5.05
25	8.8	1.15	68	3.15	75	130	5.50	75	152	4.95
30	10.5	1.35	72	3.35	70	125	5.30	70	144	4.70
35	12.3	1.60	77	3.60	65	119	5.05	65	138	4.50
40	13.9	1.80	82	3.85	60	113	4.80	60	133	4.35
45	15.3	2.00	85	4.00	55	109	4.65	55	126	4.10
50	17.1	2.25	90	4.25	50	105	4.50	50	124	4.05

Table D5 Dry Product Settings for Cappuccino (10 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	6.2	0.80	62	2.80	85 (default)	166	7.00	85 (default)	185	6.40
20	8.0	1.05	65	2.95	80	161	6.80	80	178	6.15
25	9.8	1.30	70	3.20	75	155	6.55	75	172	5.95
30	11.3	1.50	74	3.40	70	150	6.35	70	167	5.80
35	13.6	1.80	80	3.70	65	143	6.05	65	159	5.50
40	15.3	2.05	85	3.95	60	137	5.80	60	152	5.25
45	17.1	2.30	90	4.20	55	131	5.55	55	144	4.95
50	18.7	2.50	94	4.40	50	126	5.35	50	138	4.75

Table D6 Dry Product Settings for Cappuccino (12 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	7.6	1.00	64	3.00	85 (default)	223	9.35	85 (default)	231	8.15
20	9.8	1.30	70	3.30	80	215	9.00	80	223	7.85
25	11.8	1.55	76	3.60	75	208	8.70	75	215	7.55
30	13.9	1.85	82	3.90	70	201	8.40	70	207	7.25
35	16.1	2.15	87	4.15	65	193	8.05	65	201	7.05
40	18.2	2.45	93	4.45	60	185	7.70	60	193	6.75
45	20.4	2.75	99	4.75	55	178	7.40	55	185	6.45
50	22.3	3.00	105	5.05	50	171	7.10	50	178	6.20

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2. Caffé Latte

Caffé 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 *UNLOCKED* in the display.

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

NOTE

Ensure that your machine has been configured for two separate cup sizes, and that the larger size is 12 oz.. See **SET UP CUP SIZES**, page 21.

1. Press the following keys: , then  until the display shows *1. ABCDEFGH*. Make sure the "D" is displayed. If not, press "D" on the selection switch panel to display the "D".
2. Press  twice to return to the standby message.

SET UP YOUR SELECTION:

1. Set up the 1D selection as follows (see **SET UP A HOT DRINK**, page 23):
 - 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, see **COLLECTING DRY PRODUCT GRAM THROWS**, page 26, and perform test throws of the dry ingredients. See **COLLECTING HOT WATER THROWS**, page 29, and perform test water throws.

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3. European Cappuccino

Introducing a great new blended drink called *EUROPEAN CAPPUCCINO*: First, a portion of cappuccino topping mix (or lightener) is dispensed, then layered on top is a small serving of strong coffee.

1. Replace product in the the soup (or international coffee) canister with the lightener or cappuccino topping mix.
2. Press . The display shows: *ENTER CODE*. You must enter the four-digit supervisor code within 6 seconds to gain access.

NOTE

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

When you have entered the right code, you will hear two beeps and see

UNLOCKED in the display. Press



3. Reconfigure the machine:
 - a. Press , then press  until the display shows *D- J* WXYZ*.
 - b. *WXYZ* is the current configuration code, where W = the machine type, X = 6th product configuration, Y = brewer configuration, and Z = canister mapping. See "Set the Machine Configuration Code" on page 18. You will be changing the number represented by X. The only way to do that is to change all four numbers, so at this time write down your configuration code so you will know where to start if you make a mistake.
 - c. Replace "X" as follows:

If your current value of X is:	Change it to:
1	5
2	6
3	7
4	8

For example: If your current configuration code is *W 2 4 Z*, you will enter the numbers *W 6 4 Z*. Your new drink will be selected with the H key. Valid selections are H3 (black) and H4 (with sugar). After the reconfiguration, timers for the topping mix or lightener are under the H selection as *DR.2*, and the timers for the coffee serving are under the H selection. Now, you need to alter the water throw times for the two selections. Consult Table W1 on page 31 for suggestions for a starting point for your new drink.

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VIEW OR SET THE HOT WATER TANK TEMPERATURE

1. Press  then  until the display shows *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.
2. If desired, enter a new setpoint in the accepted range of 149° - 205° F (65° - 96° C).

NOTE

The lower limit for vending is 20° below setpoint, up to a maximum of 180° F (82° C).

3. To change display units (replace the "F" with a "C" for Celsius), press



4. CONTINUE.



SET THE AUTOMATIC BREWER RINSE TIME (BREWER EQUIPPED MACHINES ONLY)

The brewer will be automatically rinsed by one of two methods: You can specify a set time of day when the brewer is rinsed, or you can specify that rinsing takes place a set time after the last brewed selection is vended.

1. Press  then  until the display shows one of the following:

SAN.TIM 4.5 The time of day (in hours and tenths of hours) the machine rinses the brewer. In this example, brewer rinse takes place each day at 4:30 am. Range: 0.0 - 23.9 in .1 hour (6 minute) increments.

- OR -

SAN.HRS 2.5. In this example, brewer rinse takes place 2.5 hours after the last vend. Range: 2.0 - 12.5 hours, in .1 hour (6 minute) increments.

NOTE

If 24 hours passes without a vend, no rinsing will take place.

This eliminates unnecessary rinsing over a weekend or holiday.

2. Whichever one of the two choices is displayed is the method by which the brewer will be rinsed. Press



to switch between

these two displays. Enter a new time, if desired.

3. CONTINUE.

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SET THE BOWL RINSE TIME

Mixing bowl(s) can be automatically rinsed by one of two methods: You can specify a set time of day when the bowl is rinsed, or you can specify that rinsing takes place a set time after the last selection is vended.

1. Press  then  until the display shows one of the following:

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 (6 minute) increments.

- OR -

RIN.TIME 4.5 - The time of day (in hours and tenths of 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 (6 minute) increments.

NOTE

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

- OR -

RINSE OFF - No bowl rinse takes place.

2. Press  to switch between these options, and the number keys to enter new values.
3. CONTINUE.



VIEW SOFTWARE VERSION

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



SET THE TIME OF DAY

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

NOTE

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

3. CONTINUE.
-



SET THE DAY OF THE WEEK

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



SET MONTH, DATE, AND YEAR

1. Press , and press  until the display shows *MM/DD YY*. "MM" is the month, "DD" is the date, YY is the year.
2. Enter the current month, date, and year using the number keys.
For example, press the following keys to enter February 15, 2002: **0, 2, 1, 5, 0, 2**
3. Press  to switch between MM/DD and DD/MM formats
4. CONTINUE.

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SET TIME-OF-DAY INHIBIT VENDING

Vending can be inhibited up to four times a day.

1. Press , then press  until the display shows *INHIB* - - - -.
 2. See **TIME INTERVAL EDITING**, page 43 for an example of how to set up time-of-day inhibited vending.
-



SET TIME-OF-DAY FREE VENDING

1. Press , then press  until the display shows *FREEV* - - - -.
 2. See **TIME INTERVAL EDITING**, page 43 for an example of how to set up time-of-day free vending.
-



SET TIME-OF-DAY DISCOUNT VENDING

1. Press , then press  until the display shows *DISCT* - - - -.
2. See **TIME INTERVAL EDITING**, page 43 for an example of how to set up time-of-day discount vending.



TIME INTERVAL EDITING

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

NOTE

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

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

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

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

1. The display shows *DISCT - - - -*. Press the number of the time interval you want to edit, or  to edit time interval 1 (we'll use interval 1 for this example).
2. The display shows *1.DISCT ON* or *1.DISCT OFF*. This display tells you whether your time interval (represented by 1) is on or off. Press  to change the condition of the time interval.

NOTE

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

3. Press . The display shows *1.DISCT X*. "X" represents the discount percentage for this period. Enter a discount percentage of 25 with the number keys. (Discount percentages of from 0 to 99 are permitted.) The

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machine will apply a 25% discount to each price, rounding up to the nearest nickel (or whatever is the smallest coin accepted by the coin mechanism).

4. Press . The display shows *1.STRT X.XX*. X.XX is the currently set start time. Enter a new start time (24-hour format) for this interval. To enter the time for 3:30 pm, enter 1530.
5. Press . The display shows *1.STOP X.XX*. X.XX is the currently set stop time. Enter a new stop time (24-hour format) for this interval. To enter the time for 6:00 pm, enter 1800. You have now established a 25% discount that starts at 3:30 pm and ends at 6:00 pm.
6. Press . The display shows *1.@ - - - - -*. The dashes represent the days that this time interval is active. Pressing number keys 1 through 7 switches the days on/off. For example, press "2", "4", and "6". The display now shows *1.@ - M - W - F -*. This discount interval is only active on Monday, Wednesday, and Friday.
7. Press . The display shows ** - - - - -*. The dashes represent the trays affected by this time interval. Press the appropriate letter key to enable a tray, press the key again to disable it. For example, pressing A, C, and E will cause the display to look like this: *A - C - E - - - -*, meaning that all A, C, and E selections are affected by this interval.

Press  to turn on all levels; press  to turn all levels off.
8. Press . The display shows *1. MESSG OFF* or *1. MESSG X*. "OFF" means there is no custom message selected, and "X" represents the custom message number set for this interval. Press the number key of the message (1 through 8) you want displayed. To edit this message, press  and follow the procedure given in **EDIT CUSTOM MESSAGE**, page 47. Press **0** to turn the message OFF for this time interval.
9. CONTINUE.

STANDBY MESSAGE

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



SELECT A STANDBY MESSAGE

1. Press , then press  until the display shows *STANDBY XX*.
"XX" represents the current message number selected for the standby message. Two dashes mean that the factory-set message is selected.
2. To select a message, just press the corresponding number (1 through 8). To display the factory-set message, press 0.
3. The selected message (except the factory-set message) can be edited. To do this, press  and follow the procedure given in **EDIT CUSTOM MESSAGE**, page 47.
4. CONTINUE.



SELECT AN OUT-OF-SERVICE MESSAGE

1. Press , then press  until the display shows *SERVICE XX*.
"XX" represents the current message number selected to display when the machine is out-of-service. Two dashes mean that the factory-set message is selected.
2. To select a message, just press the corresponding number (1 through 8). To display the factory-set message, press 0.
3. The selected message (except the factory-set message) can be edited. To do this, press  and follow the procedure given in **EDIT CUSTOM MESSAGE**, page 47.
4. CONTINUE.

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SELECT A FREEVEND MESSAGE

1. Press , then press  until the display shows *FREEV XX*. "XX" represents the current message number selected for the message that displays when the machine is in the freevend mode. Two dashes mean that the factory-set message is selected.
2. To select a message, just press the corresponding number (1 through 8). To display the factory-set message, press 0.
3. The selected message (except the factory-set message) can be edited. To do this, press  and follow the procedure given in **EDIT CUSTOM MESSAGE**, page 47
4. CONTINUE.



EDIT CUSTOM MESSAGE

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

SHORTCUT

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

step to it. Example: If you want to enter an **L**, first press ,

then press  six times. Your **L** should now be displayed.

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 **ENTERING YOUR MESSAGE**, page 48).



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ENTERING YOUR MESSAGE

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



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



Inserts a space at the flashing character.



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



Deletes the current character and closes up the space.



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



Deletes the current character and leaves the space.



Repeats the letter to the left of the flashing character.



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



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



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



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

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



VIEW WATER TANK TEMPERATURE

1. Press . The display shows *XXX °F*. "XXX" is the current water tank temperature. "° F" means that the temperature is displayed in degrees Fahrenheit (may be shown in degrees Celsius, depending upon your choice. See **VIEW OR SET THE HOT WATER TANK TEMPERATURE**, page 38). A decimal point shown in the display indicates that the tank heater is operating.
2. CONTINUE.



VIEW MACHINE CONFIGURATION SETTING

1. Press , then press  until the display shows *0- J- PQRS. P, Q, R, and S* represent settings specific to your machine. See **SET THE MACHINE CONFIGURATION CODE**, page 18 for an explanation of this display.
2. Press . The display shows *0. ABCDEFGH*. This shows the active selections for the regular size drink (*0*).

NOTE

Press  to display the remaining selections: *0 X - - - 2 - - -*

NOTE

If you have only one cup size in your machine, you will not see the next display.

3. Press . The display shows *1. ABCDEFGH*. This shows the active selections for the large size drink (*1*).

NOTE

Press  to display the remaining selections: *1 X - - - 2 - - -*

4. CONTINUE.

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VIEW CUP SIZES ASSIGNED TO SELECTIONS

1. Press , then press  until the display shows *C - - C - - - C -*.
This example shows that regular size cups are assigned to selections C and G.

NOTE

If you have only one cup size in your machine, you will not see the next display.

2. Press . The display shows *1. ABC - - FGH*. This example shows that large size cups are assigned to selections A thru C and F thru H.
3. CONTINUE.



PAYOUT COINS

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



SET PRICES

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

SET ENTIRE MACHINE TO ONE PRICE . . .

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

SET THE PRICE OF AN INDIVIDUAL SELECTION:

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



VIEW NONRESETTABLE SALES AND VEND DATA

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

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VIEW DATA THREE DIFFERENT WAYS

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

- To view the data by selection, press the letter of the selection you want to see. You can then press  and  to see data for all the active selections.
- To view the data by drink size:
 - Press **0** for regular size drinks or **1** for large size drinks.
 - Press the letter of the selection you want to see.

FOR EXAMPLE:

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

- You can then press  and  to see data for all the active selections of that size.



VIEW TOTAL PAID SALES

- Press , then press  until the display shows ****\$ XX.XX**.
"XX.XX" is a dollar and cents figure showing the total of all PAID sales in the machine (as opposed to unpaid sales like winner and free vends). This is the total since the last time it was cleared.
- If desired, view this data by individual selection or drink size.
- CONTINUE.



VIEW TOTAL PAID VENDS

- Press , then press  until the display shows **** XX**. "XX" is the total number of paid vends for the entire machine.
- If desired, view this data by individual selection or drink size.
- CONTINUE.

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CLEAR ALL RESETTABLE DATA

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



CLEAR PAID SALES DATA ONLY

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



VIEW AMOUNT IN COIN BOX (NOT SHOWN IF ZERO)

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

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VIEW AMOUNT IN VALIDATOR (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *DBV XX.XX*.
"XX.XX" is the dollar amount in the bill stacker.
2. Press  to show the quantities of bills in the stacker. For example, the display shows *\$0120*, meaning that there are 20 dollar bills in the bill stacker. Press  again to show the quantities of other bills, such as \$5s, \$10s, or \$20s.
3. CONTINUE.



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

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



VIEW DISCOUNT SALES BY TIME INTERVAL (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows ****\$ XX.XX**.
2. Press . The display shows **1.DSC .00**. This is the total sales for discount interval 1.
3. Press  to view intervals 2 through 4.
4. CONTINUE.



VIEW FREE VENDS

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



VIEW WINNERS

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

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VIEW TIME DATA

1. Press , then press  until the display shows *TIME DATA*.

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

MAIN.1 237M 01/30 10.13

This example shows the latest time interval the main (machine) door was open (1). It was open for 237 minutes, and was opened on January 30 (01/30) at 10:13 am (10.13). Press . If applicable, similar displays will appear for intervals 2, 3, and 4. Otherwise, go to the next step.

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

LAST POWER 01/30 13.51 FOR 00. 0.23

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

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

LONGS.T POWER 01/30 10.58 FOR 00. 2.47

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

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

FULL CLEAR 01/30 8.58

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

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

TIME SET 01/30 9.15

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

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

PRICE SET 01/30 9:42

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

8. CONTINUE.

NOTE

Refer to **VIEW DATA THREE DIFFERENT WAYS**, page 52, to view the date and time of the last vend of that selection.



VIEW TOTAL UNPAID SALES (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *.0\$ XX.XX*.
"XX.XX" is the total unpaid sales (free vends, winner vends, 100% discounts, zero price vends) for the entire machine.
2. If desired, view this data by tray and individual selection.
3. CONTINUE.
-



VIEW TOTAL UNPAID VENDS

1. Press , then press  until the display shows *.0 XX*. "XX" is the total number of unpaid vends for the entire machine.
2. If desired, view this data by tray and individual selection.
3. CONTINUE.
-



VIEW NUMBER OF TEST VENDS (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *TST X*. "X" is the number of test vends.
2. If desired, view this data by tray and individual selection.
3. CONTINUE.
-

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VIEW NUMBER OF MUG VENDS (NOT SHOWN IF ZERO)

1. Press , then press  until the display shows *MUG X*. "X" is the number of mug vends.
 2. If desired, view this data by tray and individual selection.
 3. CONTINUE.
-



VIEW MACHINE ID NUMBER

1. Press , then press  or  until the display shows *ID. XXXXXX*. The X's represent the 6-digit machine ID number.
 2. You can edit the machine ID number if the supervisor access code has been previously entered (see **GAIN ACCESS TO THE SUPERVISOR MODE**, page 7).
 3. CONTINUE.
-



TEST VEND SELECTIONS AND VERIFY CREDIT ADDED

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

NOTE

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

2. CONTINUE.

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TEST THE DISPLAY

1. Press , then press  until the display shows *DSPLY TEST*. The "DRINK BEING SERVED" lamp is lighted (if so equipped), and remains lighted until you leave this function.
 2. Press  to light all display segments; press  to turn them off.
 3. Pressing a **NUMBER KEY** on the control panel causes all segments to display that character.
 4. CONTINUE.
-



TEST DROP A CUP

1. Press , then press  until the display shows *CUP TEST*.
 2. Press  to drop a cup.
 3. CONTINUE.
-



TEST THE WHIPPER(S)

1. Press , then press  until the display shows *WHIP TEST*.
 2. Press the number key that corresponds to the whipper you want to test. It will run for one cycle.
 3. CONTINUE.
-



TEST THE GRINDER(S)

1. Press , then press  until the display shows *GRIND TEST*.
 2. Press the number key that corresponds to the grinder you want to test. It will run for one cycle.
 3. CONTINUE.
-

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TEST THE AUTOMATIC DELIVERY DOOR

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



TEST THE AIR COMPRESSOR

1. Press , then press  until the display shows *AIR TEST*.
2. Press  to run the air compressor.
3. CONTINUE.



TEST THE BREWER

1. Press , then press  until the display shows *BREW TEST*.

NOTE

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

2. Press to test each brewer position:
BREW'R BREW = The brewer is in the BREW POSITION.
BREW'R FLIP = The brewer is in the FLIP position.
BREW'R HOME = The brewer is in the HOME position.
3. CONTINUE.



RINSE THE MIXING BOWLS

1. Press , then press  until the display shows *BOWL RINSE*.
2. Press  to rinse the mixing bowls. The display shows *RINSING* until the operation is complete.
3. CONTINUE.



RINSE THE BREWER

1. Press , then press  until the display shows *BREW RINSE*.
2. Press  to rinse the brewer. The display shows *RINSING* until the operation is complete.
3. CONTINUE.



TEST SWITCHES OR SENSORS

1. Press , then press  until the display shows *IN.MKPHL 12*.
2. Actuate each switch or sensor to test its function:

M = mug/cup sensor (if equipped)	K = freevend keyswitch
P = waste pail switch	H = high water tank level switch
L = low water tank level switch	1 = ring 1 cup sensor switch
2 = ring 2 empty	

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

3. CONTINUE.

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CLEAR TANK ERRORS AND FILL THE TANK

1. Press , then press  until the display shows *TANK FILL*.
2. 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.
3. CONTINUE.



VIEW DIAGNOSTIC MESSAGES

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

<i>NO ERRORS</i>	None of the following errors are detected:
<i>KEYPAD XY</i>	Key(s) x, y stuck.
<i>ROM ERROR</i>	Error in the programming EPROM. Machine will not operate.
<i>RAM ERROR</i>	RAM is not initialized or is not compatible with the currently loaded software. If this message appears, initialize your RAM by performing the following procedure:

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

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

<i>KEYSWITCH</i>	The keyswitch input is active and configured as an inhibit.
<i>D+J+WXYZ</i>	Configuration error; displays the machine configuration screen. NOTE: this is the actual config screen. You may enter the correct config number directly on this screen without further action.
<i>TANK ERR</i>	Tank failed to fill or refill.
<i>RING 1, 2</i>	The cup ring is jammed.
<i>MTR 1A1B2X</i>	Cup turrets are jammed

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<i>NO CUPS 1, 2</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 WATER</i>	Water in the tank is too cold to vend.
<i>NO SENSOR</i>	Temperature sensor failed or missing.
<i>NO FLOAT</i>	Float sensor failed or missing.
<i>WHIP 1 2 3 4 5</i>	Whipper motor failure (motor 1, 2, 3, 4, 5).
<i>DOOR JAM</i>	The automatic delivery door is jammed.
<i>NO MECH</i>	Coin mech not detected - machine will not operate if configured for coin mech.
<i>MECH COMM</i>	Incomplete coin mech communications — check harness.
<i>MECH.SENSOR</i>	Coin mech reporting a bad tube sensor — replace mech.
<i>MECH ROM</i>	Replace the coin mechanism.
<i>MECH.ACCEPT</i>	Coin mechanism acceptor section is unplugged from the main body of the coin mech. Connect the cable and cycle machine power OFF and then ON.
<i>MECH JAM</i>	One or more coin tubes are jammed. Pay a coin from each tube until the jam is cleared.
<i>DEBIT CARD</i>	Card reader reporting error — machine will not operate if configured for DEBIT ONLY.
<i>CHECK DBV</i>	Bill validator reporting error — machine will not operate. Empty stacker, clear jams, etc.
<i>DBV COMM</i>	Incomplete bill validator communications — check harness.
<i>DBV MOTOR</i>	One of the motors has failed. The unit will disable itself until the error is corrected. Check for bill stuck in the acceptance path. If no bill is present, replace the validator. Cycle machine power OFF and then ON.
<i>DBV SENSOR</i>	One of the sensors in the bill validator has failed. The unit will disable itself until the error is corrected. Check for bill stuck in the acceptance path. If no bill is present, replace the validator. Cycle machine power OFF and then ON.
<i>DBV JAM</i>	A bill is jammed in the acceptance path. The unit will disable itself until the error is corrected. Remove bill stuck in the acceptance path. Cycle machine power OFF and then ON.
<i>DBV STACKR</i>	The stacker is open or removed. The unit will disable itself until the error is corrected. Install the stacker correctly.
<i>CHK PRICE</i>	Price error detected and changed to maximum - check prices.
<i>NONE READY</i>	all selections are reported out of service.

Hot Drink Center Programming Guide



DOWNLOAD DATA TO A PDCD

1. Connect your portable data collection device (PDCD) in accordance with its operating instructions.
2. Press . Data is downloaded into your PDCD.

NOTE

Depending upon the setting selected in **SET PRINTER OR DEX OPTIONS**, page 10, data may be cleared after the download is complete.

3. CONTINUE.
-



SET FREEVEND OPTIONS

1. Press  until one of the following is displayed:

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

- OR -

FREE ON - All items are on freevend. The credit display shows
NO MONEY REQUIRED

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

- OR -

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

- OR -

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

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

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

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

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

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

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NATIONAL VENDORS SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL OR PUNITIVE DAMAGES. National Vendors neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of said equipment or any part thereof.

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