

Vision 2000 Range



P R O G R A M M I N G M A N U A L

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Introduction

This manual is to be used by authorised personnel involved in programming the **Vision Range** of table-top beverage machines. The information contained within this document is for information only and may be changed without prior notice. Crane Merchandising Systems accepts no responsibility for any damage caused to the machine through misinterpretation or misuse of the information contained in this document.

Important Safeguards

When programming the **Vision** machine, always have this manual available for quick and easy reference and always follow these basic safety precautions:

1. Ensure that the machine is situated on a strong horizontal surface, at a convenient height and in a position where it is not likely to be knocked off.
2. The mains lead should never trail from the machine and should always be kept away from hot surfaces and sharp edges.
3. Allow the machine to cool before handling or moving.
4. Ensure that the mains electricity supply is isolated before removing any of the protective panels or undertaking any major servicing. Working on live equipment should only be undertaken when there is no practical alternative.
5. When servicing the heater tank. The water can reach a temperature of approximately 96° C. Water at this temperature can cause severe burns!
6. Never immerse the machine in water, or any other liquid. This machine must not be installed in an area where a water jet may be used. Never use a water jet to clean this machine.
7. In normal operating conditions the machine should not freeze-up. In the unlikely event of the machine freezing, turn off the mains water supply, disconnect the machine from the mains electricity supply and contact Crane Merchandising Systems for assistance.
8. Ensure that you are conversant with the 'Health and Safety at Work and Electricity at Work Regulations 1989'.

This machine is for indoor use only and because it is a food machine, should be situated in a clean, hygienic area.

Program Features and Programming

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Modes of Operation

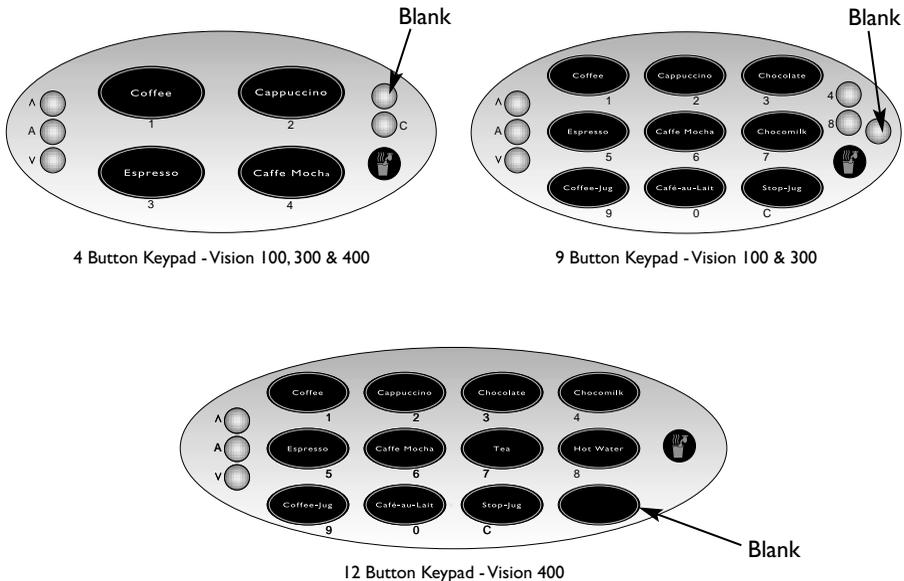
Vision machines have three operating modes:

1. **Standby Mode** - The machine is ready to dispense a vend and displays the time and type of credit input required. This is followed by the vend cycle and a return to the standby mode.
2. **Operators Program** - Accessed by pressing the program entry button (blank) twice - figure 1 and then entering the Operators code via the keypad. This enables the operator to access sub-programs in order to change information on time, drink and price periods. It is not possible to vend a drink from within the Operators program.
3. **Engineers Program** - Accessed by pressing the program entry button (blank) twice - figure 1 and then entering the Engineers code via the keypad. The engineer may then further access a number of sub-programs in order to alter the ingredient dispense and machine parameters or use the machine test facilities.

Programming

The layout of the programming overlays for 4, 9 and 12 button machines are illustrated below (figure 1):

Figure 1



During programming the keys are used as follows (figure 2):-

Figure 2

0 - 9	Used for data entry - 9 and 12 selection machines only
'C'	Used for correcting data
Blank	For moving to a higher program level
▲	For indexing up in a program, or incrementing data
A	For entering data in a program, or entering a lower program
▼	For indexing down in a program, or entering data

N.B. For 4 button machines, all data entry is carried out using the up (▲), down (▼) and (A) access keys.

In order to enter the Engineers or Operators programs, proceed as follows:-

1. Press the blank key twice. The LCD will display the data entry prompt:

PLEASE SELECT DRINK
> **TIME 10 : 30**

2. Enter the appropriate code. As each digit is entered, a star (*) is shown on the display to indicate the number of digits entered. After three digits of the code have been entered, the display will show:

PLEASE SELECT DRINK
> *** **TIME 10 : 30**

3. Any errors in code entry may be erased using the (C) cancel key to cancel the last digit entered. If a key is not pressed within five seconds, the data entry prompt will disappear and the machine will return to background mode.
4. With the correct code entered the title of the first sub-program will be displayed on the LCD. In the case of the operator's program and depending upon machine type, this will be:

**OPERATIONS
SUB PROGRAM**

Vision 100

**DRINK PRICE
SUB PROGRAM**

Vision 300/400

5. To proceed to the next or previous sub-program, the up or down arrows should be pressed as appropriate. Once the name of the required sub-program is

displayed, press the access key to enter into that sub-program. To return the main program, press the blank or cancel key.

6. Using the time/date sub-program as an example, the LCD will display the message:



TIME = ??:??

- where “?:?” is the current time held in controller memory. If the time is correct, pressing the up or down keys displays the day and date.

7. When a parameter is displayed which requires changing, press the access key. The display will now show:



TIME = ??:??
SET TIME > 00:00

Note: The ‘right arrow’ sign (>) indicates that it is possible to update the display. It is not possible to update the display when the equals (=) sign is displayed.

8. The time may now be entered as a four digit number with any leading zeros included (see page 12-15 - ‘Time/Date Sub-Program’ for full description).
9. If any numerical data parameter is entered other than time, it may be changed in one of two different ways:
- (a) Pressing the ‘up’ or ‘down’ arrows increases or decreases the number on each key press.
 - (b) Keying in the actual digits of the number required (9 & 12 button machines only). Using this method, the number will be displayed in place of the current parameter. If a number greater than 255 is entered, the display will erase the most significant digit and display a number made up of the least two significant digits; e.g. if the numbers 713 are entered, “7” will be displayed first, followed by “71”, but 713 is greater than 255, so “13” will be displayed.
10. Once the correct number has been entered, press the access key to overwrite the old parameter with the new number. To retain the old parameter press either the ‘blank’ or ‘cancel’ key.
11. Assuming a time of “15.35” was entered, the display will now show the message:



TIME = 15:35

Summary

All programming operates on this same principle with only a few minor variations. These variations are outlined as the separate sub-programs are described in the following section.

The main points to remember when programming are:-

ACCESS: Takes the program down to the next level of operation or enters the displayed data parameter.

CANCEL: Returns the program to its previous level if applicable or cancels the displayed data parameter.

BLANK: Performs the same function as the cancel key except where outlined.

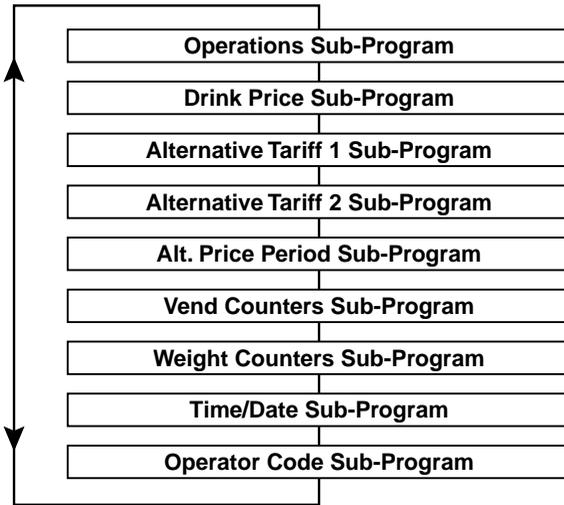
▲ : Used for increasing data or numbers.

▼ : Used for decreasing data or numbers.

Data parameters may only be entered when the ">" prompt is displayed.

Operators Program

The nine sub-programs within the Operators program are as follows:-



Vision 100



Vision 300/400

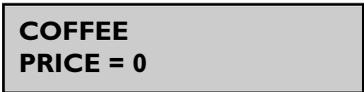
1. **Operations Sub-Program - Vision 100 Models**

This sub-program allows access to the following functions:

- (a) **Service:** When accessed, this function allows the operator to test vend each drink selection, for example after carrying out the cleaning procedure.
- (b) **Self Clean:** This function allows the operator to flush the entire mixing system.
- (c) **Counter Reset:** Pressing the 'reset counters' switch enables the operator to reset all vend/weight counters to zero.

2. **Drink Price Sub-Program (Default = 0)**

- 1. The drink price sub-program allows the normal tariff prices to be individually set for each drink.
- 2. Upon entry into this sub-program, the name of the first drink (Coffee) is displayed, followed by its price. The LCD will display the following message:



- 3. The prices for each drink can now be set following the sequence described in the previous "programming " section.

3. **Alternative Tariff 1 Sub-Program (Default = 10)**

This sub-program works in exactly the same way as the drink price sub program and has the same appearance. The prices set in this program will be in force during tariff 1 periods.

4. **Alternative Tariff 2 Sub-Program (Default = 20)**

This is identical to the alternative tariff 1 sub-program except that the prices set here will be in force during tariff 2 periods.

5. **Alternative Price Period Sub-Program**

This sub-program enables the times to be specified when each of the above tariffs should be in force. There is a four level tariff structure available:

1. **Normal Tariff:**

Prices set in the drink price sub-program and in force when no alternative price period is currently applicable.

2. **Tariff 1:**

Prices set in the tariff 1 price sub-program.

3. Tariff 2:

Prices set in the tariff 2 price sub-program.

4. Tariff 0:

Sets the machine into free vend.

The machine is factory set so that no alternative prices are available (i.e. the normal tariff is permanently in force). To change the tariff period for Vision 300 and 400 machines, proceed as follows:-

1. On entry into this sub-program the display will show the message:

**PI = 00:00 - 00:00
TARIFF - EVERY DAY**

2. This is an empty price period. To enter a price period (in this example we shall use 10:30 - 15:45, Tariff 2, Weekends), press access. The display will now read:

START > 00:00

3. Enter a four digit number for the start time in hours and minutes. To correct any entry errors, press cancel to delete the last digit entered.

Note: Pressing cancel with no digits displayed will exit to the Operators program.

4. Once the start time has been correctly entered press access. The display will show:

PERIOD 10:30 - 00:00

5. Enter the finish time and press the access key. The display will now show:

**PERIOD 10:30 - 15:45
TARIFF > 0**

6. To set the tariff period, enter a number between 0 and 2, or use the up and down keys followed by access. The message will change to:

**PERIOD 10:30 - 15:45
TARIFF 2 > EVERYDAY**

7. Using the up and down keys, index the day setting between "Every day",

“Weekdays” and “Weekends”. When the required day setting is displayed, press the “Access” key to complete the price period data entry. The message on the display will read:

**PERIOD 10:30 - 15:45
TARIFF 2 EVERYDAY**

8. There are a maximum of ten possible price periods available. To enter another price period, use the up and down arrows to view the periods until an empty period is displayed. The new period is entered in the same way as described above.
9. If the start time is entered as being a later time than the finish time, the period will not be accepted by the machine. If periods overlap, the first overlapping period in the list will be the one in force until it has finished. To delete a period, continue as if that period were to be re-programmed, and when the display is requesting the start time to be entered, press cancel.

To change the tariff period for 4 button machines, please refer to the “Time/Date Sub-Program” sequence (page 12) for details of using the up and down arrows and button 1 on the keypad.

6. Vend Counters Sub-Program

1. When the vend counters sub-program is entered, the first drink counter is displayed:

**COFFEE
1372**

2. The up and down arrows enable the counters for each drink to be viewed, but they cannot be altered using the keypad. These counters can only be reset by using the “Reset Counters” switch.
3. There is one vend counter for each drink, plus counters for jug vends, free vends, total vends and total sales value. The total sales data is displayed in units of 1 penny.

7. Weight Counters Sub-Program

1. The weight counters sub-program operates in exactly the same way as the vend counters sub-program with the LCD displaying the weights of individual ingredients used. Weights are displayed in units of one kilogram.
2. There is one weight counter displayed for each ingredient allocated to a canister in the canister configuration sub-program.

3. These counters can be reset by the “reset counters” switch.

8. Time / Date Sub-Program

This sub-program allows the time, date and day to be altered if necessary. The date is programmed for leap-year roll-over and should not require adjustment. However, the time has not been programmed with BST/GMT changeover. This enables the machine to be used in countries other than the UK.

Note: The method of programming the date and time program for machines with 4 selection buttons is different to machines with 9 and 12 selection buttons. The following examples describe the correct methods for programming both machines.

To set the time and date on machines with 4 selection buttons, proceed as follows:

The time is entered in 24 hour format. In this example it is assumed that a time of 07:58 am is to be entered.

1. Enter the time/date sub-program. Press the access key until 00:00 is displayed. Press button 1. The display will read:



10:00

2. Using the up/down arrows, scroll through until the display shows:



00:00

3. Press button 1. The display will read 01:00. Using the up/down arrows, scroll through until the display shows:



07:00

4. Press button 1. The display will read 07:10. Using the up/down arrows, scroll through until the display shows:



07:50

5. Press button 1. The display will read 07:51. Using the up/down arrows, scroll through until the display shows:



07:58

6. Press the access key to set the time and exit from the program.

The date is entered in Day, Month, Year format. In this example it is assumed that a date of 25th April 2002 is to be entered.

1. Enter the time/date sub-program. Press the access key until 00:00:00 is displayed.
2. Press button 1. The display will read:



10:00:00

3. Using the up/down arrows, scroll through until the display shows:



20:00:00

4. Press button 1. The display will read 21:00:00. Using the up/down arrows, scroll through until the display shows:



25:00:00

5. Press button 1. The display will read 25:10:00. Using the up/down arrows, scroll through until the display shows:



25:00:00

6. Press button 1. The display will read 25:01:00. Using the up/down arrows, scroll through until the display shows:



25:04:00

7. Press button 1. The display will read 25:04:10. Using the up/down arrows, scroll through until the display shows:



25:04:00

8. Press button 1. The display will read 25:04:01. Using the up/down arrows, scroll through until the display shows:

25:04:02

9. Press access key to set the date and exit from the program.

To set the time and date on machines with 9 and 12 selection buttons, proceed as follows:

1. The time / date sub-program displays the time, date and day of the week. The up and down arrows are used for viewing the three different messages.
2. To view the time, enter the time / date sub-program. The display will show:

TIME = XX:XX

Where xx:xx is the current time.

3. To change the time shown, press the access key. The display will now show:

**TIME = XX:XX
SET TIME > 00:00**

4. The time is entered in twenty-four hour format. Enter the correct 4 digit number for the time in hours and minutes. When correct, press the access key. The time is now set.

5. To view the date press the up or down arrow until the display reads:

DATE = XX:XX:XX

Where xx:xx:xx is the current date (Day, Month, Year).

6. To change the date press the access key. The display will show:

**DATE = XX:XX:XX
SET DATE > 00:00:00**

7. Enter the date using the sequence, day, month, year. When the correct date has been entered press the access key. The correct date is now set.

8. To view the day press the up or down arrow until the display reads:

DAY = XXXXXXXXX

Where xxxxxxxxx is the current day of the week.

9. To alter the day, press the access key. The display will now show:

**DAY = XXXXXXXXX
> XXXXXXXXX**

10. Use the up or down arrow keys until the required day is displayed. Press the access key. The time, date and day are now programmed.

9. **Operator Code Sub-Program**

(Default 12 - Override 1121233) - 4 selection buttons

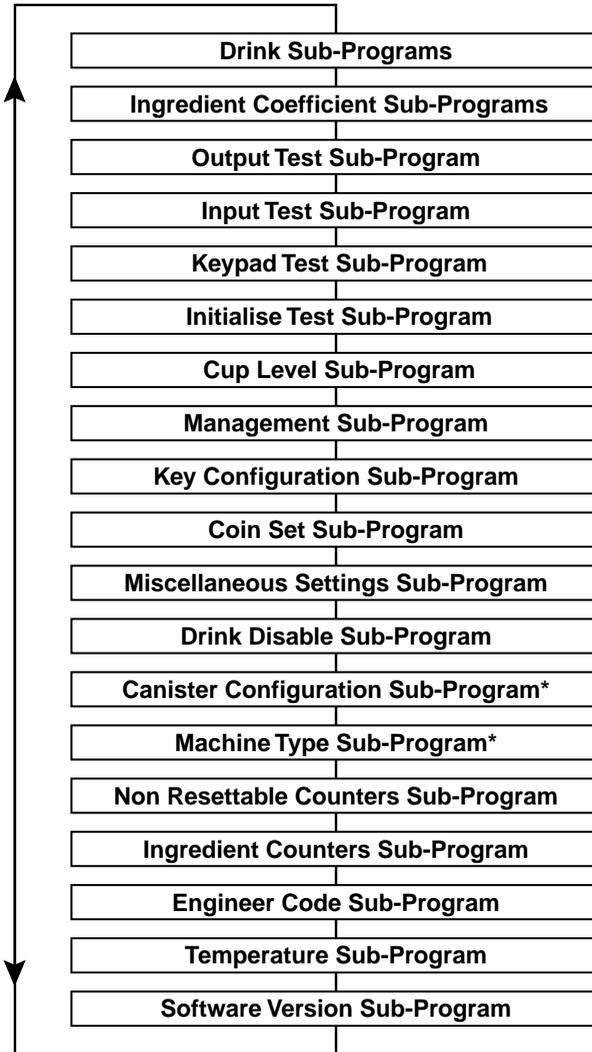
(Default 17 - Override 1121233) - 9 and 12 selection buttons

Entry into the “operator code sub-program” enables the operator code to be changed. This code may be of any length up to seven digits. Enter a new code at the prompt and when correct press the access button.

Engineers Program (Default 21 - override 1121234)

Each time the Engineers program is entered, an “Engineer Entry” counter is incremented. This acts as a security feature, ensuring that the Engineers code may not be used without leaving evidence that the program has been entered.

The sub-programs which make up the Engineers program are as follows:-



*** Vision 300 and 400 Machines only**

1. Drink Sub-Programs

The drink sub-programs allow the ingredient and water quantities for each drink to be adjusted to accommodate different ingredient types and taste requirements. Proceed as follows:

1. On entry into the ingredient sub-programs, the first ingredient to be displayed is the ingredient which constitutes the major part of the drink. In the case of tea, this will be:

**TEA
INGREDIENT = 40**

2. All ingredient quantities are displayed in twentieth of a second increments. Therefore a quantity of 40 actually means that the ingredient is dispensed for forty twentieth's, or two seconds thus simplifying the calculation of ingredient quantities. The engineer does not need to consider the exact weight or volume of ingredient and has an immediate idea of the approximate time taken to dispense a sensible quantity.
3. The quantity may be altered in the same way as other parameters are programmed. Depending on the drink type, there may be a number of different ingredient values to be adjusted. For each ingredient value there is an associated water value, again measured in twentieth's of a second.
4. The diagram (figure 3) illustrates the ingredients that may be involved in the make-up of a drink. The chocomilk sub-program is used as an example. Not all drinks will involve this amount of ingredient, most will only contain a main ingredient and water.

Figure 3



5. The maximum parameter allowed for any one ingredient quantity is 255 except when programming jug vends.

2. Ingredient Coefficient Sub-Program

There is an ingredient coefficient value for each ingredient allocated to a canister in the canister configuration sub program (Vision 300/400 only). The ingredient coefficients are used to determine the weight of each ingredient used. The formula used in the calculation is:-

$$\text{Ingredient coefficient} \times \text{ingredient quantity} = \text{hundredth's of a gramme of ingredient in drink}$$

This formula enables an accurate count of the weight of each ingredient used to be logged, using information found in both the Operators and Engineers weight counters.

Although the machines are pre-programmed with preset values for all the ingredient coefficients, these values may vary with ingredients from different manufacturers and may not be accurate for the particular ingredient being used. More accurate coefficients may be calculated in the following way:

1. Set the ingredient quantity time to 100 in the drink sub program.
2. Using a suitable container, collect the dispensed ingredient for the drink type at the dispense nozzle of the canister.
3. Accurately weigh the ingredient in grammes, taking into account the weight of the container used.
4. Round the weight to the nearest whole number to give the ingredient coefficient. As an example, if the weight of ingredient using a dispense time of 100 was found to be 57.84 grammes, the ingredient coefficient would be 58.

Note: The accuracy of the weight counters is entirely dependent upon the accuracy of the measurement of ingredient used to determine the ingredient coefficient. Crane Stentorfield can accept no responsibility for the accuracy of ingredient coefficient values supplied by any other party.

3. Output Test Sub-Program

This sub-program enables the engineer to individually test each output of the machine.

1. On entry into the sub-program the LCD will display the first output (Inlet Valve), with its present state (off) beneath it.



2. Pressing the arrow keys allows the engineer to cycle through the outputs in turn, displaying the name of each one. In order to test an output, press the "I" key to switch it on, and the "0" key to switch it off. The caption at the bottom of the LCD will show the current state of the output. If the output is left 'ON' for more than three seconds the protection circuit will switch it 'OFF', even though the

display will still indicate that it is 'ON'. This prevents damage to the motors.

3. When a different output is selected, or the sub-program exited, the previous output is automatically switched 'OFF'.

Note: It is not possible to test the heater using the output test sub-program. Serious damage may occur if there is insufficient water in the heater tank when the heater is turned on.

4. Input Test Sub-Program

This sub-program enables the engineer to individually test each of the input lines.

1. The operation of the input sub-program is similar to the output test sub-program except that the display shows the name of the input and the caption indicates its' current state:



COIN INPUT IP
OFF

2. As the state of the input changes, so does the caption on the second line. There is a delay of approximately three-quarters of a second before the display caption changes to ensure that any rapid changes can be seen.

5. Keypad Test Sub-Program

The keypad test sub-program enables the engineer to test each key on the keypad to ensure that it is operating correctly.

1. Whenever a key is pressed, the name of that key will be displayed on the LCD. Because the access key was pressed to enter the sub-program, on entry to this sub-program the LCD will display:



ACCESS KEY

2. For numerical keys, the number will be displayed, such as "1 key" or "2 key". For other keys, the name of the key will be displayed, such as "Up" or "Down".
3. To exit from this sub-program into the engineer program, press the blank key.

6. Initialise Sub-Program

The initialise sub-program enables the engineer to return all the parameters to their factory settings.

1. Upon entry into the initialise sub-program, the display will show the message:

**USE ACCESS KEY
FOR INITIALISATION**

2. To initialise the machine, press access. The display will now show:

INITIALISED

3. The LCD will flash this message accompanied by an intermittent beep. To return to the Engineers program or standby mode, it is necessary to press the cancel key. This ensures that should the initialise sub-program ever be inadvertently activated, the engineer cannot overlook the fact that the machine has been initialised.

7. Cup Level Sub-Program

1. The cup level sub-program allows the amount of water used in each cup vend to be altered on a percentage basis. This enables different size cups to be used without having to change each drink ingredient quantity. Jug vends remain unaffected.
2. The sub-program will display the percentage cup level which may be altered in the same way as all other parameters. 100% cup level will dispense the exact amount of water set in the drink ingredient sub-programs. A figure below 100% will dispense less water, and a figure above 100% will dispense more.

8. Management Sub-Program

The management sub-program informs the controller which hardware aspects of the machine have been selected. For Vision machines this relates to the coin system fitted.

Access into the “Coin System” program displays the type of coin system selected. To change the selection, press the access key followed by the ‘up’ or ‘down’ keys to display the required selection. Enter the new selection by pressing the access key. If the machine is not fitted with a coin system, the option “Free Vend Only” should be selected.

9. Key Configuration Sub-Program

The key configuration sub-program enables the positions of the drinks on the keypad to be re-configured.

1. Upon entry into the sub-program, the display will show the first button followed

by the name of the drink allocated to that button:

BUTTON 1
= COFFEE

2. Use the up and down arrows to view the drink application assigned to each button.
3. In order to change the drink allocation for any button, press the enter key, then using the up and down keys, scroll through each drink name in turn.
4. When the required drink name for the selected button is displayed, press the enter key to save the selection.

Note: There is no limitation to the number of buttons that can be assigned with the same drink choice.

10. Coin Set Sub-Program

The coin set sub-program enables the coin set to be changed to suit the coin mechanism (where fitted) connected to the machine. Although the actual coin set used by the coin mechanism is totally transparent to the controller, this will ensure that the displayed message in the standby mode correctly indicates which coins may be entered. The possible coin sets are:

- 1p - 20p
- 1p - 50p
- 1p - £1
- 5p - 50p
- 5p - £1

These are selected in the same way as parameters in the “management sub-program”.

Note: This sub-program is not accessible if “Free Vend Only” or “Card System” is selected in the management sub-program.

11. Miscellaneous Settings Sub-Program

The miscellaneous settings sub-program allows various delays and timings to be set which will affect all of the drinks in the machine. These settings may be viewed and changed in the same manner as the parameters in the ingredient sub-programs.

1. Water Start To Ingredient Start Delay

The water start to ingredient start delay defines the time between water starting to be dispensed and the ingredient starting to be dispensed. If ingredient reaches the mixing bowl before the water, it may stick to the sides of the bowl. This delay ensures that ingredient is always dispensed into a bowl already containing water.

2. Water Stop To Whipper Stop Delay

The water stop to whipper stop delay defines the length of time that the whipper will continue to run after the water valve has closed. This ensures that the whipper operates whenever there is water in the mixing bowl.

3. Flush Time

This setting is the period of time that a valve is opened during a flush cycle. It is generally set slightly higher than the period set for a vend to ensure that the mixing bowl is filled further than during a vend. Care should be taken to ensure that the period set does not cause the bowl to overflow.

12. Drink Disable Sub-Program

This sub-program allows drinks to be either enabled or disabled. The following example illustrates the sequence required to disable chocolate.

1. Enter the drink disable sub-program and scroll up or down using the appropriate arrow key until the message on the LCD display reads:



2. Press the access key. The message on the display will now read:



3. Press the access key again. The drink is now disabled.

13. Canister Configuration Sub-Program - Vision 300 & 400 Only

This sub-program allows the ingredient which is to be used in each canister to be selected. Because Vision 400 machines may be fitted with up to four canisters, there are four canisters to be allocated in the sub-program. The canisters are numbered one to four with canister one being the right hand canister when viewing the machine from the front with the door open.

All canister positions must be allocated even if a canister is not fitted to that particular station. In this case the canister position should be set to “not used” in the sub-program. If one of the canisters is allocated “Espresso Coffee”, the machine will use Espresso Coffee to make Cappuccino, Espresso and Espresso choc drinks. If no Espresso Coffee is allocated, these drink selections will be made with ordinary coffee.

14. Machine Type Sub-Program - Vision 300 & 400 Only

This sub-program allows Vision 300 and 400 machines to be configured to dispense

drinks according to one of the standard options, shown in figure 4.

Figure 4

Machine Type	Drink Selections											Canister							
	Coffee	Tea	Chocolate	Cappuccino	Espresso	Chocomilk	Espresso choc	Café-au-Lait	Coffee Jug	Option	Tea Pot	Controlled Hot Water	Free Flow Hot Water	4	3	2	1		
301a	●									●			●				C		
301b		●											●	●			T		
311a			●												●		H		
311b	●				●					●							C		
302a	●	●								●						T	C		
312a	●		●							●						H	C		
312b		●	●										●			H	T		
322a	●		●		●					●				●		H	C		
322b	●			●	●					●	●				●	M	C		
313a	●	●	●							●				●		H	C	T	
323a	●	●	●		●					●				●		H	C	T	
323b	●	●		●	●					●	●			●		M	C	T	
333a	●		●	●	●	●	●	●	●							H	C	M	
402a	●	●								●						T	C		
412a	●		●							●						H	C		
422a	●		●		●					●				●		H	C		
422b	●			●	●					●	●				●	M	C		
413a	●	●	●							●				●		H	C	T	
423a	●	●		●	●					●	●			●		M	C	T	
433a	●		●	●	●	●	●	●	●					●		H	M	C	
434a	●	●	●	●	●	●	●	●	●					●		H	C	T	M
434b	●		●	●	●	●	●	●	●					●		H	E	C	M

Key to Canisters:

C = Coffee T = Tea H = Chocolate

E = Espresso M = Cappuccino Milk O = Option

 = Fast Feed Dispense

After selecting an option, the machine must be initialised using the initialise sub-program. This will set the drink disable settings, keypad configuration settings and canister configuration settings which allocate the required drink selections and ingredients to the correct buttons and canisters respectively.

15. **Non-Resettable Counters Sub-Program**

1. The vend counters record the number of drinks/jug vends dispensed and the prices charged for them.

When the vend counters sub-program is entered, the first drink counter is displayed:



2. Pressing the 'up' and 'down' arrows enables the counters for each drink to be viewed, but they do not allow the counters to be altered.
3. There is one vend counter for each drink, plus counters for each jug vend, total vends and total sales vends. Additionally, an "Engineer Entry" counter is incremented each time the Engineers program is accessed.
4. These counters cannot be reset and will remain intact for the service life of the controller board. A "Total Vend" counter keeps a record of the number of vends dispensed and is incremented each time a drink is dispensed.

16. **Ingredient Counters Sub-Program**

1. This sub-program works in exactly the same way as the vend counters sub-program with the LCD displaying the weights of individual ingredients used. Weights are displayed in units of one kilogram.
2. There is one counter displayed for each ingredient allocated to a canister in the canister configuration sub-program.
3. When accessed from within the Engineers program, the counters are non resettable. This ensures that a cumulative record is kept throughout the service life of the controller board.

17. **Engineer Code Entry Sub-Program (Default 21 - 1121234)**

Entry into the engineer code entry sub-program allows the engineer code to be changed. This code may be of any length up to seven digits. Enter a new code at the prompt and when correct, press access.

Note: If a zero code is entered, the machine will remain in the Engineers program continually, so the zero code will have to be overwritten. A code of zero is also entered if the engineer attempts to alter the code and then exits the sub-program without entering any number.

18. Temperature Sub-Program

The temperature sub-program allows the parameters controlling boiler temperature and temperature display to be altered. There are four parameters which may be altered.

1. Maximum Temperature

This is the maximum temperature to which the water will be heated and maintained at and must be set to a value greater than the minimum temperature.

2. Minimum Temperature

This is the minimum water temperature at which a drink may be dispensed. If an attempt is made to vend a drink with the temperature below this value when minimum temperature is enabled, the following message will be displayed:

**SORRY NOT IN USE
WATER HEATING**

3. Minimum Temperature Enable / Disable

This feature allows the engineer to enable or disable the vending of drinks below the minimum temperature.

4. Temperature Display

Allows the actual temperature to be displayed (free vend only).

19. Software Version Sub-Program

The software version sub-program displays the serial number of the software version running on the machine and is for information only.

Function Switches - Vision 300/400

Vision 300 and 400 models are fitted with 4 switches mounted in a panel located next to canister 1.

These switches (figure 5) are used for the following functions.

1. **Flush Switch:** When this switch is pressed the machine will flush through the complete water system.

The “sorry not in use self cleaning” message is displayed, the blocker enabled and the controller waits until the water is at the correct temperature set by the thermostat.

In order to guarantee the highest standards of cleanliness, the boiler fill valve is disabled ensuring that the water used in the self-cleaning cycle is delivered at the optimum temperature to kill any micro-organisms which may have accumulated.

Each hot water valve is switched on in sequence for a pre-set flush time. While the valves are on they are “rattled” to remove any limescale deposits and their corresponding whippers are run.

Once the flush cycle is complete the controller refills the boiler to the correct level. When the correct water temperature is reached the machine returns to standby mode, ready to make a vend.

2. **Counters Switch:** When this switch is pressed the first drink counter is displayed. The up and down arrows on the keypad enable the counters for each drink to be viewed but not reset.

There is one vend counter for each drink, plus counters for jug vends, free vends, total vends and total sales value. The total sales data is displayed in units of 1 penny.

3. **Reset Counters Switch:** This switch enables the operator to reset the vend and weight counters to zero.

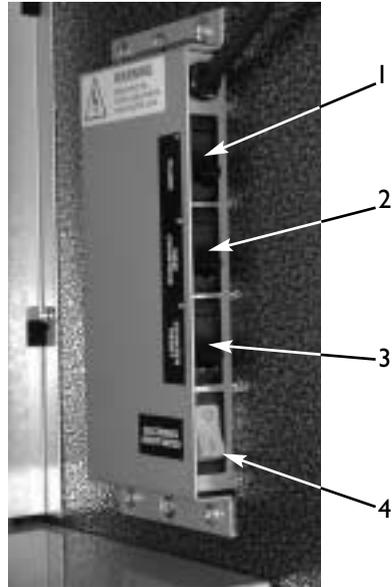


Figure 5

To reset the counters, enter the operators program and press the switch. The machine will give an intermittent bleep and flash the message (shown on facing page) on the display.

COUNTERS RESET

The operator must press the cancel key to clear the display and return to standby mode. This ensures that if the reset counters switch is inadvertently activated, the operator is aware that the counters have been reset.

4. **Electronics On/Off Switch:** When pressed, this switch completely disables the machines electrical functions allowing the operator to safely carry out machine cleaning and filling etc.

Pre-Set Values

The tables on the following pages illustrate the pre-set values for all of the parameters which may be changed in the Operators or Engineers programs. These are the values with which the machine leaves the factory.

If the “Initialise” sub-program is activated, each one of these values will be restored into the memory of the controller.

The pre-sets for the parameters found in the Operators Program are shown in the following tables:

Vend Counters

Drink Type	Counter Pre-Set
Coffee	0000000
Tea	0000000
Cappuccino	0000000
Espresso	0000000
Chocomilk	0000000
Espresso choc	0000000
Milk	0000000
Option	0000000
Café-au-Lait	0000000
Hot Water	0000000
Coffee Jug	0000000
Tea Pot	0000000
Option Jug	0000000
Hot Water	0000000
Free Vends	0000000
Total Vends	0000000
Total Drink Value	0000000

Weight Counters

Ingredient Type	Counter Pre-Set
Coffee	0000.000
Chocolate	0000.000
Milk	0000.000
Tea	0000.000
Espresso	0000.000
Option	0000.000

Time and Date

Parameter	Setting
Time (24 Hr. clock)	00:00
Date	1:1:90
Day of the Week	Monday

Alternative Price Periods

Period	Start Time	End Time	Tariff	Day Type
One	00:00	00:00	-	Everyday
Two	00:00	00:00	-	Everyday
Three	00:00	00:00	-	Everyday
Four	00:00	00:00	-	Everyday
Five	00:00	00:00	-	Everyday
Six	00:00	00:00	-	Everyday
Seven	00:00	00:00	-	Everyday
Eight	00:00	00:00	-	Everyday
Nine	00:00	00:00	-	Everyday
Ten	00:00	00:00	-	Everyday

Drink Prices

Drink Type	Normal Tariff	Tariff One	Tariff Two
Coffee	0	10	20
Cappuccino	0	10	20
Espresso	0	10	20
Chocomilk	0	10	20
Espressochoch	0	10	20
Milk	0	10	20
Chocolate	0	10	20
Hot Water	0	10	20
Coffee Jug	0	10	20
Café-au-Lait	0	10	20
Tea	0	10	20
Option	0	10	20
Tea Pot	0	10	20

The pre-sets for the parameters found in the Engineers Program are shown in the following tables:

Ingredient Selections

Drink	Coffee Ingredient	Coffee Water	Chocolate Ingredient	Chocolate Water	Milk Ingredient	Milk Water
Coffee	18	50				
Cappuccino	13	55			30	90
Chocolate			55	140		
Chocomilk			55	85	17	55
Espressochoch	14	30	55	70	17	36
Espresso	19	50				
Milk					30	150
Coffee Jug	36	100				
Café-au-Lait	15	77			12	60

Drink	Ingredient	Water
Tea	8	55
Hot Water		75
Option	18	50
Tea Pot	16	110

Miscellaneous Settings

Parameter	Setting
Water to Ingredient Start Delay	15
Water to Whipper Stop Delay	40
Flush Water Time	100

Cup Level

Cup Level	100%
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Management

Coin System	Free Vend Only
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Ingredient Coefficients

Ingredient Type	Setting
Coffee	11
Chocolate	35
Milk	24
Espresso	9
Tea	8
Option	15

Coin Set

Coin Set	1 - 50p
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N.B. The weight and vend counters viewed from within the Engineers Program cannot be altered from their original settings.

Notes

Notes



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