SEAGA

Space Saver Series

Table Top Soda Vendor

Operator's Manual

INTRODUCTION

Congratulations on the purchase of your new SS Series Table Top Soda Vendor. This SS Series Table Top Soda Vendor has been designed to give you many years of dependable service. It requires little maintenance and is easy to set up and operate.

READ THIS MANUAL COMPLETELY

Your SS Series Table Top Soda Vendor vendor is designed to operate simply and reliably, but to take full advantage of your vendor, please read this owner's manual thoroughly. It contains important information regarding installation and operations, as well as a brief trouble-shooting guide.

EQUIPMENT INSPECTION

After you have received your vendor and have it out of the box, place it on a secure surface for further inspection. **Note:** Any damages that may have occurred during shipping must be reported to the delivery carrier immediately. Reporting damages and the seeking of restitution is the responsibility of the equipment owner. The factory is willing to assist you in this process in any way possible. Feel free to contact our Customer Care Department with questions you may have on this process. It is important that you keep the original packaging for your vending machine at least through the warranty period. If your machine needs to be returned for repair, you may have to purchase this packaging if it is not retained.

Once your have your vendor located, we suggest that you keep this manual for future reference, or you can view this manual online at www.seagamfg.com. Should any problems occur, refer to the section entitled "COMMON QUESTIONS AND ANSWERS". It is designed to help you quickly identify a problem and correct it.

MANUFACTURER'S WARRANTY

WHAT IS COVERED:
Manufacturer warrants TO THE ORIGINAL PURCHASER ONLY that each item of equipment manufactured is free from defects in material and workmanship under normal use and service. Manufacturer's obligation under warranty shall be limited to repair or replacement, at our plant, of any parts of the equipment, which shall, within one year of the date of shipment to the original purchase, be demonstrated to be defective. The original purchaser may obtain repair or replacement of the equipment under warranty by returning the defective item or entire vendor to the Manufacturer, freight prepaid.

WHAT IS NOT COVERED:
Manufacturer's warranty obligations DO NOT EXTEND TO OR INCLUDE installation expenses, vandalism, or difficulties resulting from failure to operate equipment in accordance with Manufacturer's instructions under competent supervision and difficulties due to changes in vended products, which are beyond the control of manufacturer.
SPECIAL NOTE: Manufacturer is not responsible for any loss of income due to a vending machine being out of service due to a warrantable item.

This warranty is in lieu of all the other warranties, expressed or implied, including the warranty of merchantability and fitness or use, and of all other obligations or liabilities on Manufacturer's part. Manufacturer neither assumes, nor authorizes any other person to assume for it, any other liability in connection with the sale of equipment manufactured by itself. This warranty shall not apply to equipment manufactured or any part thereof which is subject to accident, negligence, alteration, abuse, misuse, or damage in shipment. The term "original purchaser", as used in this warranty, shall be deemed to mean that person for whom the equipment is originally installed.

Manufacturer is not liable for any incidental, consequential or other damages of any kind whatsoever, directly or indirectly, arising from the use of the equipment whether based upon theories of contract negligence or tort.

The Standard models are for operation in the North American markets where as the [F] versions are intended for the European and U.K. markets
This Operator's Manual is divided into four (4) main sections consisting of a brief description of the Space Saver Beverage Vendor, Service Mode, Money Mechanisms and Beverage Can vending unit.

IMPORTANT NOTICES

REMOVE WIRE TIES ON FRONT OF EACH CHUTE.
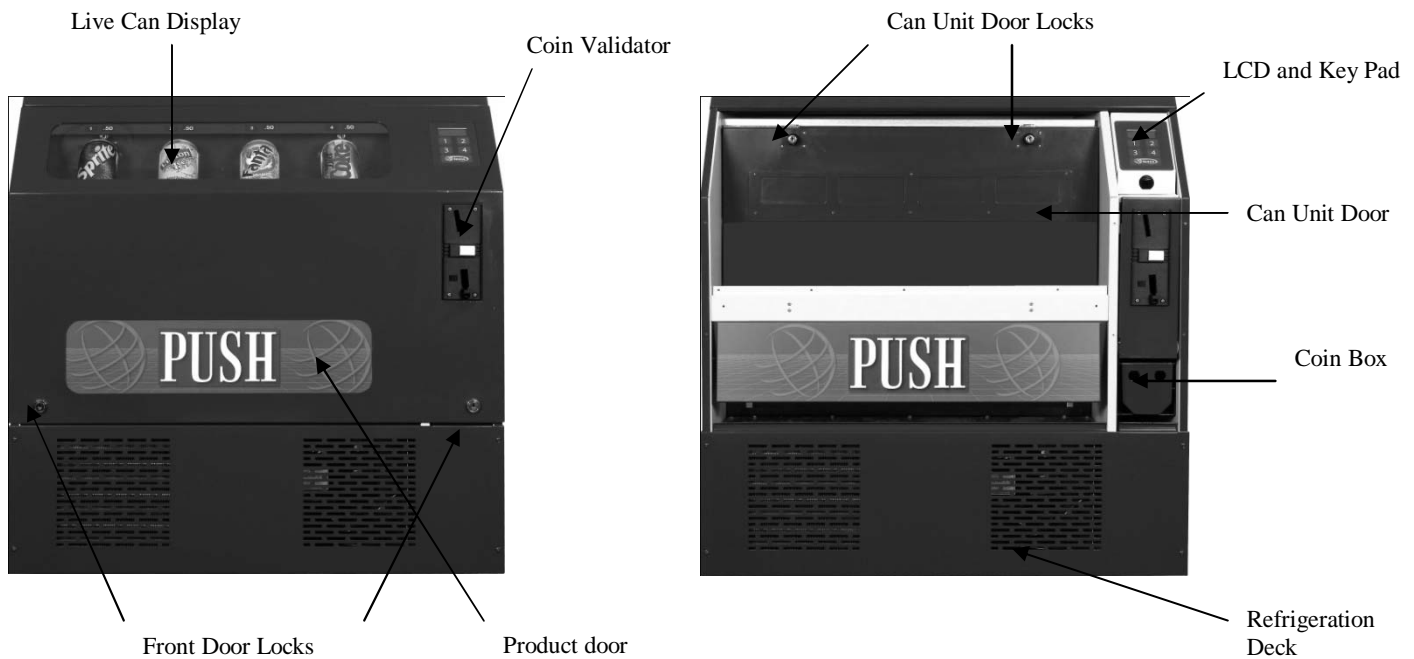Your vendor (s) are intended for indoor use only
Your vendor (s) must be set on a level well-supported location.
Always unload vendor before transporting it.
Do not load your vendor with disfigured or damaged product.

Section 1   Brief Description of your SS series Beverage Vendor

Fig.1

HOW TO LOCK & UNLOCK THE DOOR OF VENDOR

Your Beverage Vendor has 2 locks. To open the door, unlock the right side lock by turning the key clockwise. Thereafter open the left side lock by turning the key counter clockwise. The door can now be opened and removed by raising it from both the sides until the top edge disengages from the Vendor cabinet.
To lock the door, grasp both sides of door about half way down. Engage the top of the door with the Vendor cabinet while keeping the bottom away from the machine. Lower the bottom of the door ensuring that the top of the door remains engaged with the cabinet. Lock the door by turning the left key clockwise and the right key counter clockwise.

Fig.2

LEVELING YOUR VENDOR

Once you have installed your vendor in its proper location, you will need to level it to ensure trouble free operation. The vendor is provided with 4 threaded levelers. These can be screwed into the bottom of the vendor and can be adjusted up or down as needed to ensure a proper level. (Fig.1)
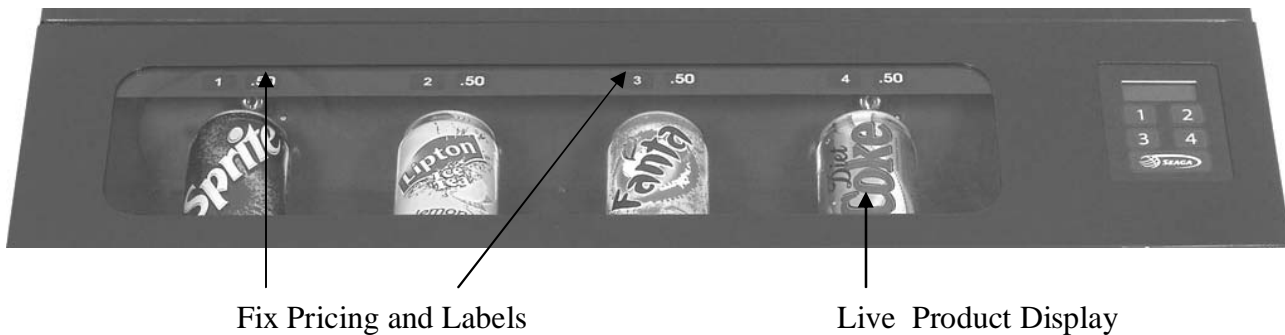
ELECTRICAL CONNECTION

The Beverage Vendor requires one 120 VAC 60 Hz grounded outlet
The [F] Beverage Vendor requires one 230 VAC 50 Hz grounded outlet

BEVERAGE SELECTION PRICING AND LABELS

The beverage selection is 1 to 4 on the keypad. The prices can be set by entering the Service Mode.

Fig.3

Fix Pricing and Labels   Live Product Display

PRODUCT VIEWING AND ADVERTISEMENT

Your Beverage vendor features 'Live' product display (Fig.3). This means that your customers will see actual cans of the product your vendor is offering.
1). Set-Up of 'Live' display
    a). Unlock and open the front door.
    b). Load product display shelf to correspond with its Label.
Note: To present your product in an attractive and professional manner as possible do not load any damaged items.

DELIVERY SYSTEM

The delivery system of your Beverage vendor consists of the Keypad, LCD Display and Beverage Can Unit. The customer inserts money and enters their selection on the Keypad. The selected Driver Motor turns and vends the Can.

KEYPAD AND LCD DISPLAY

The Keypad is a touch sensitive operation. Light pressure will be necessary to activate each number or letter. The vendor's Keypad is used by the customer to make their selection, and by the operator to set and test many functions of the vendor. (Fig.4)

Fig.4

LCD Display

Key Pad

The LCD Display shows the customer the amount of money entered into the vendor, and the cost of their selection, it shows the operator the Service Mode function for setting and testing the various functions of the vendor.

Section 2   SERVICE MODE

The operation of the machine can be adjusted by entering service mode by pressing the red button on the VMC circuit board and then accessing the appropriate operation. Price setting, coin value setting, motor operation and vend-credit criteria can be read and adjusted from here. The user can also perform tests for the motor operation through this mode.

Operation

1. Enter Service Mode by pressing the Red Button on the VMC Circuit board   Displays   Er. **
   Any faults that have occurred will be displayed as a two-digit code**
   If there are no errors the Display will automatically go to Audit Mode   Au

2. Each Service Code can be accessed by repeat pressing of the Service Button

Pressing Red Button (AUDIT)	Displays Au.—
Pressing Red Button (PRICE SETTING)	Displays PS.--
Pressing Red Button (COIN VALUE SETTING)	Displays Cn.—
Pressing Red Button (CONTROL WORD SETTING)	Displays Ct.**
	Where ** is current word
Pressing Red Button (ASSIGNMENT)	Displays AS.**
	Where ** is current motor version
Pressing Red Button (APPLICATIONS)	Displays AP.—
Pressing Red Button (EXIT Version #)	Displays F*. ** to 00.00

3. Service Mode can be exited by pressing the Red Service Button, the Reject button or automatically if the LCD Display has remained idle in service mode for up to 60 seconds.

Notes:
- If a selection button/service button is not pressed within 45 seconds then the Display will automatically exit from Service Mode.
- If a selection button is pressed, the Display will automatically exit from Service Mode 60 seconds after the last button pressed.
- Pressing the reject button also exits the Display from Service Mode

Audit
Within Service Code AU (Audit) readings can be taken from the Display with regards to cash taken, and number of products vended. The following details can be obtained on the Display.

1. Total Cash Taken (up to 9999.99)
2. Total Product Vended (up to 9999)

3. Individual Product Vended (from each selection) up to 999

i. Press the Red Service Button repeatedly till the LCD   Displays Au.—
   You are now in Audit Mode
ii. Press Selection 1 to reveal the total cash ($/£/€) and (c/p) taken   Displays ****and--. **
iii. Press Selection 2 to reveal the total product vended   Displays ****
iv. Press Selection 3 to reveal the individual product vended
   The display scrolls through each selection displaying the quantity vended   1.*** to 12.**
   Returns to Au— at end of routine.
v. Press Selection 4 to clear all the Total Sales Results   Displays clr
vi. Press Red Service Button to scroll to exit or press Reject Button to exit.

Price Setting

Price Setting can be done by entering Service Code PS. Each selection can be allocated any price from 00.01 to 99.99, and is achieved by inserting coins to vend amount and allocating the amount to each selection.

i. Press the Red Service Button repeatedly till the LCD Displays   PS.—
   You are now in Price Setting Mode
ii. Insert coins to first desired price (for simplicity set the lowest price first)
iii. Credit will accumulate on the display   Displays **. **
iv. Press desired selection button to store displayed credit to that selection Displays p.set
v. Insert additional coins if required.
vi. Press Red Service Button to scroll to exit or press Reject Button to exit.

Notes:
   - *Prices may be set from 00.01 to 99.99 (depending upon coin values)*
   - *It is not possible to set a zero price.*
   - *The default price setting is 99.99*

Coin Value Setting
Coin Value setting allows for the changing of validator or acceptors with different output maps. The machine is capable of accepting up to 15 different coin values. Values can be adjusted from 00.00 to 99.99.

1.Press the Red Service button repeatedly until   Displays   Cn.—
   You are now in the Coin Value setting Mode
   You first need to set the value for the coin
2. Press Selection Button 1 to increment the --.** Value   Displays   00.**
3. Press Selection Button 2 to decrement the --.** Value   Displays   00.**
   That is the cent/pence value set; now we need the dollar/euro/pound value
4. Press Selection Button 3 to increment the **.— Value   Displays   **.??
5. Press Selection Button 4 to decrement the **.— Value   Displays   **.??
   Now with the value on the display, insert the coin for which the value must be assigned to.
6. Insert Required Coin until it is accepted to store value to that coin
                                             Displays   *.set
                                             [Where * represents the coin identity a-l]
7. Repeat steps 3 to 7 till coins are set.
8. Press Red Button to exit or press Reject Button to exit.

Coin Output Map

No	IDENTITY	1	2	3	4	5	6	Default	Adjustable
1	A	X						01.00	YES
2	B		X					00.20	YES
3	C			X				02.00	YES
4	D				X			00.50	YES
5	E					X		00.10	YES
6	F						X	00.05	YES
7	G	X	X					01.00	YES
8	H		X	X				00.20	YES
9	I			X	X			02.00	YES

10	J	X		X				00.50	YES
11	K	X			X			00.10	YES
12	L		X	X	X			00.05	YES
13	M		X	X	X	X		10.00	NO
14	N		X	X			X	20.00	NO
15	O		X					50.00	NO

Notes:

- Coin Values between 00.00 and 99.99 can be set to any coin
- Setting a value of 00.00 to a coin still allows the coin to be accepted.
- The machine will automatically exit from Coin Value Setting within 60 seconds unless a button hasn't been pressed or coin inserted in that time.
- All the variable coin values may be set at the same value if required.

Control Word Setting

This is essentially to do with the Coin handling and Vend-credit status. The Control Word is a two (2)-digit number used to indicate to the vendor the required method of operation. This controls the operators desired relationship between coins inserted and vend price depending upon the power supply. The code is input within the Service Code count

CONTROL WORD MAP

Code	Battery	Mains	Escrow	Credit Vs Vend Price (before vend is performed)	Excess Credit (difference between credit and vend price)
01	X	X	X	CREDIT= VEND PRICE	None
02	X	X	X	0.99$\geq$ (CREDIT-VEND PRICE]> 0	Excess Credit Cancels [if any]
03	X	X	X	CREDIT> VEND PRICE	Excess Credit Cancels [if any]
04	X	X	X	CREDIT> VEND PRICE	Excess Credit Carried Forward
05	X	X	X	CREDIT> VEND PRICE	Excess Credit Carried Forward for 60 sec
06	X	X	X	FREE VEND – NO CREDIT REQUIRED	None
07	X	X	X	TEST VEND- NO CREDIT REQUIRED	None

Press the red service button repeatedly until   Displays   Ct.**
     (where ** is current value)
     You are now in Control Word Setting
     To change the current value, we first need to adjust the displayed code
Press Selection Button 1 to increment the --.** value   Displays   Ct.**
Press Selection Button 2 to decrement the --.** Value   Displays   Ct.**
     That is the control word set; now we need to store it
Press Selection Button 4 to store the new Control Word   Displays   Cntr set
Press Red Service Button to exit or Press Reject Button to exit.

Notes: *The default Control Word is '03' – (Excess Credit Cancels)*
Codes 05 [Multi-vend with Time out] allows for the excess credit to be carried forward on the credit for up to 60 seconds. This time is prolonged if a coin is inserted or a selection is pressed for a further 60 seconds from that input. After 60 seconds the excess is cancelled.
The time out canceling only applies to excess credit (surplus credit after a vend) and not credit inserted prior to any vend.
The setting of a Control Word outside of the allocated codes, results in the machine reverting back to its original code (not default)
The machine will return to Normal Mode {00.00} 60 seconds after the last button has been pressed unless the Red Service Button has been pressed or the reject is pressed.

During 'Free Vend' the machine will display ' FrEE'

- All selections will vend without coins
- Prices can be set during Free Vend
- Appropriate Audit Registers will be incremented (Product sales)
- There is no automatic exit from this mode, this must be done through Service Code Ct

During 'Test Vend' the Machine will display 'test'
- All selections will vend without coins
- Appropriate Audit Registers will not be incremented
- Coin input is enabled with coins inserted being displayed for 1 second only
- Prices cannot be set during Test Vend
- There is no automatic exit from this mode, this must be done through Service Code Ct

MOTOR ASSIGNMENT

Overview

The following details would be helpful in a proper assignment of the Motor version. The vendor uses Seaga 3 wire 12v DC gray motor

Motor Version

Motor Version Map

Version	Name	Description	Start Sense	Home	Time-out	Assignment	Indicator
1	Spiral Motor	Seaga 3 Wire Motor 24V white	Open	Yes	**	Individual	- - - -
2	Spiral Motor	Seaga 3 Wire Motor 12V gray	Open	Yes	**	Individual	- - - -
3	Reserved						
4	Reserved						
5	Reserved						
6	Reserved						

Operation

How to set up your Motor Version:

To change, do the following:

1. Press the Red Service Button till AS   Displays AS-*
     where * is the current version #
2. Press Button 1 (or 2) to increment/decrement Version #   Displays AS.0?   where ? is version 1 to 6
3. Press Button 3 to store Version Value   Displays set
4. Press Red Service Button or Reject to scroll to exit   Displays 00.00

Notes

- When setting up a Motor Version a default Timing value will be assigned automatically, (see default value). This may need to be changed (see timing value setting).
- The default motor version is Version 1.
- The VMC will return to Normal Mode (00.00) 60 seconds after the last button has been pressed unless the Red Service Button has been pressed or the reject is pressed.

Timing Value

Overview

The timing value is a measure of time that allows the VMC to either ignore any signals from the motor until the time has expired, or if the time has expired without any signals. Depending on the Version, the timing Value has different characteristics.

Generally speaking the timing value is set to the normal vend time. For example, if the vend normally takes 6 seconds to complete, then set the timing value to 6. This allows for the VMC to 'expect' a home signal at the required time and to ignore any spurious signals in the meantime. It also sets an appropriate delay after a 'home' should be expected, disabling power to the motor if this home wasn't reached. In this case the motor is inhibited, the appropriate error code is set and the money entered is returned to the user.

The Vend cycle is Voltage and Load dependent so an approximate setting of the timing value needs to be set. The vend cycle, is the time from motor start (when at home) to motor end (return to Home) in seconds. This translates directly to the timing value that re-conditions the value for correct operation.

Operation

1. Press the Red Service Button to scroll to	Displays AS.—
2. Press Button 1 (or 2) to increment/decrement Value	Displays AS.** where ** is value 01 to 99
3. Press Button 4 to store Timing Value	Displays set

Notes

- The current timing value is displayed whilst doing a test as Pl.**, where ** is current value
- The timing Value can be set from 00 to 99.
- For Version 1 Motors the default timing value is 7
- For Version 2 Motors the default timing value is 3
- The timing value reverts back to default every time a version change is set
- The timing value cannot be individually assigned and applies to all outputs when set.
- The VMC will return to Normal Mode (00.00) 60 seconds after the last button has been pressed unless the Red Service Button has been pressed or the reject is pressed.

Test Sequence

Overview

The VMC constantly tests the operation of the machine, the data stored and the peripherals attached. Every .01 seconds, a self-test analysis is done to verify correct operation of the machine. Further tests are done on Power Up, Button Press, Coin Insertion and entering/exiting Service Mode. These tests will generate the relevant fault code as necessary. However, it is possible to do a thorough analysis through Service Code AP, which will individually test each motor as well as escrows and other related functions. This is useful to re-align any jammed motors.

Test Code Map

	TEST	WHAT IS VISIBLE	ACTION
1	Escrow Return	Displays ' TEST'	Escrow Return Opens [if present]
2	Power		Power Status Checked
3	LEDS	Displays ' 88.88 ' all Column LEDS on	Ensure all LED Segments Illuminate
4	Price Setting		Confirm Prices are set
5	Escrow Keep	Displays PL.** [Timing Value]	Escrow Keep Opens [if present]
6			Confirms Coin Values
7	Motor 1	Displays 01.-* where * is motor Version	Motor 1 operates [if present]
8	Control word		Confirms that a valid control word is set
9	Motor 2	Displays 02.-* where * is motor Version	Motor 2 operates [if present]
10	Motor Assignment		Confirms that a valid motor assignment is set
11	Motor 3	Displays 03.-* where * is motor Version	Motor 3 operates
12	Coin count value		Confirm that a valid coin count value is set
13	Motor 4	Displays 04.-* where * is motor Version	Motor 4 operates [if present]
14	Audit		Confirms that all audit registers are valid
15	Motor 5	Displays 05.-* where * is motor Version	Motor 5 operates [if present]
16	Timing belt		Confirms that valid timing belt value is set
17	Motor 6 Etc Motor 16	Displays 06.-* where * is motor Version	Motor 6 operates [if present]
18	End of Test	Displays 0-.**	Where ** is a fault found during test

1. Press the Red Service Button to Enter Service Mode to scroll to   Displays   AP.–
   You are now in applications Mode

2. Press Selection 1 to activate test sequence   Displays   test

       The machine will now perform a test as outlined below any faults that occurred will be indicated
       by a 2 digit code at the end of the Test Sequence.   Displays   Er.**

                                                          where ** may be a 2 digit code

3. Press Red Service Button to exit or Press Reject Button to exit.

Notes: *- The test sequence may activate a motor for two cycles; this is normal.*
           - If after a test a fault code appears, correct the fault and test again.
           - The Display will return Normal Mode 60 seconds after the last button has been pressed unless
            the Red Service has been pressed or the reject is pressed.

FACTORY DEFAULT SETTING

The can be reverted back to factory defaults by the user by entering service code AP.-- Care must be taken while doing this as all data will be lost and will have to be entered again.

A list of factory defaults is as follows:

DATA	DEFAULT VALUE	TO CHANGE
Standard Audit Totals	0000.00	
Prices	99.99 [all selections]	Service Code PS
Coin Value Settings	As per Coin Output Map	Service Code Cn
Coin Count Value	15 [if escrow present] 99 [if no escrow present]	Service Code Cn
Credit [Display]	00.00	
Control Word	3 [excess credit cancels]	Service Code Ct
Motor Version	Version 1 [all motors]	Service Code AS
Motor Timing Value	7	Service Code AS
Motor Assignment	Selection 1 – Motor 1 etc	Service Code AS
Motor Backup	No-Individual Assignment (1)	Service Code AS

     1. Press the Red Service Button to enter Application Mode   Displays   Ap.-
           You are now in application mode
     2. Press and hold selection 2 for seconds till   Displays   set
           The machine will automatically exit from service mode and display ' Out Of Ord(e)r '

    3.   Press Red Service Button to re-enter Service Mode and re-configure settings.

Fault Analysis

Within the machine there is an internal fault analysis. Every 0.1 second the machine will do a self-analysis test. This test does not affect the normal operation of the machine. There will be no change of status of the machine from a users point of view. The machine will still accept coins, display prices and vend products even during self-analysis test. If the machine observes a problem it will double verify the cause and store the error, which will be displayed during service mode. To display an error code, simply enter service mode by pressing the red button. The error code will be displayed intermittently. To clear an error code, simply exit service mode (rectify error if necessary).

Note: If more than 5 normal error codes have been detected the machine will assume 'Fatal error' status putting the machine 'Out of Ord(e)r'.

Fault Code Map

Code	Description	Remedy
--	No error present	None
00	Empty Error Location	None
01	Motor 1 Error	Remove Jam-Activate Test Sequence-Exit Service Mode
02	Motor 2 Error	Remove Jam-Activate Test Sequence-Exit Service Mode
03	Motor 3 Error	Remove Jam-Activate Test Sequence-Exit Service Mode
04	Motor 4 Error	Remove Jam-Activate Test Sequence-Exit Service Mode

05	Motor 5 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	Not available in Beverage Can Vendor
06	Motor 6 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
07	Motor 7 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
08	Motor 8 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
09	Motor 9 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
10	Motor 10 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
11	Motor 11 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
12	Motor 12 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
13	Motor 13 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
14	Motor 14 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
15	Motor 15 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	
16	Motor 16 Error	Remove Jam-Activate Test Sequence-Exit Service Mode	Not available in Beverage Can Vendor
30	Zero Price Setting	Reset all prices - Exit Service Mode	
31	Zero Coin Count Value	Reset Coin Count Value - Exit Service Mode	
32	Zero Control Word	Reset Control Word Value - Exit Service Mode	
33*	Zero Coin Value	Reset Coin Value - Exit Service Mode	
35	Incorrect Motor Version	Motor Version outside of norm. Confirm Motor Version	
40	Data Corrupt Price	Reset all Prices [Fatal error] - Exit Service Mode	
41	Data Corrupt Coin	Reset Coin Values [Fatal error] - Exit Service Mode	
42	Data Corrupt Control	Reset Control Code [Fatal error] - Exit Service Mode	
43	Data Corrupt Selection	Reset Motor selection [Fatal error] - Exit Service Mode	
44	Fatal Power Up	Confirm Prices, Product codes and Coin values - Exit Service Mode	
45	Power Interrupt	Possible Fraud attempt - Exit Service Mode	
46	Invalid Coin Output Code	Replace/Reprogram Coin Acceptor	
47*	Button Panel fault	Check all buttons are operating currently - Exit Service Mode	
48	Coin Validator Error/Fault	Check operation of Coin acceptor - Exit Service Mode	
49*	Coin Validator alarm	Possible fraud on Coin acceptor – Check operation of Coin Acceptor	
51*	Battery Low	Replace Battery - Exit Service Mode – Press any selection button 5 times	
52	Coin Acceptor Rate Low	Check Coin Acceptor- Check battery - Exit Service Mode	
53*	Battery Dead	Replace Battery - Exit Service Mode - Press any selection button 5 times	
55*	Printer Communication Error	Check Printer operation – Disconnect printer	
56*	Change giver Comm's Error	Check Change giver operation	
57*	Modem Communication Error	Check Modem Operation	
58*	Note/Bill reader Comm's Error	Check Note/Bill reader operation	
59*	Cash-Less device Comm's error	Check Cash-Less device operation	
60*	External Alarm Activation	Alarm has been activated – check for machine tampering	
61*	Escrow Keep Time-out	Check Escrow Unit- Activate Test Sequence – Exit Service Mode	
62*	Escrow Return Time-out	Check Escrow unit- Activate Test Sequence – Exit Service Mode	
70*	EEPROM Write Error	Check Prices and Coin data	
71*	EEPROM Read Error	Check Prices and Coin data	
99*	Machine Lock-up	Code Required-Consult Machine Supplier	

Note: * Reserved Codes – Not present in current model

SOFTWARE VERSION

OVERVIEW

Currently the VMC is powered by a Flash Based Micro-Controller Integrated Circuit. Flash based technology is the latest in its kind and is unique in that all data is retained within the IC even on power loss. Flash based systems also have the advantage of being able to be re-programmed with relevant updates.

The software version is displayed for a fraction of a second on exiting from service mode.

SOFTWARE RESET

As with all microprocessor based devices, a device reset must be incorporated in case the device goes into loop state. The VMC has incorporated on board an internal device reset or watchdog which pulls the device out of any loop state. A loop state is when the software locks itself on a particular branch code, thus preventing the VMC from operating correctly.

Occurrences of this are extremely rare and are usually a result of Voltage Spikes or strong Electro-Magnetic Interferences.

The Device may also be reset by depressing the Black reset Button on the Circuit Board. This does not effect any of the overall operation of the VMC; it purely pulls the device back as if it were initially powered up. The only information lost on pressing the Black Button is the following:

1. Any Credit on the display will be cleared
2. Any error Codes that occurred are cleared.

Summary Of Software Versions

Motor Version Numbers

Ver	1	2	3	4	5	6	FLASH TAS	NOTES	DATE
1.00	X	X					X		Dec '03
1.01	X	X					X	extension of column empty check	Feb '04
1.02	X	X					X	Extension of column empty check & Countdown on vend	Mar '04
1.03	X	X					X	Improved motor handling, shortened timing value	Jun '04

**.:   Includes 00—07 minor device changes
TAS: Token Access System
ACC: Accumulated Audit Readings

SOLD OUT FEATURE

After pressing the button and if there is no can in any/all four selections, the Display will show 'SOLD OUT'. However other the other selections can be made as usual.
Note: DISPLAY may also show 'SOLD OUT' in case motor is not in home position or if the motor is faulty.

Section 3   MONEY MECHANISM

COIN VALIDATOR

The Coin Validator receives the coin from customers. The Coin Validator will accept quarters, dimes, and nickels, and can be set to accept the new golden dollar. For (F) series of Vendors the Coin Validator will be preset to accept U.K. and Euro coins.
One (1) coin box is provided with your vendor, it is stored in the bottom of the vertical shelf. Once the front door is opened, pull out the coin box to empty it.

CLEANING

Your Coin Validator needs to be cleaned only when the Coin Validator no longer reads the coin values.
1. Cleaning the Optics. You will need cotton swabs, and a mild soap and water solution.
   a. Unlock and open the front door
   b. Remove the Coin Box, and Pull the Vertical shelf out.
   c. Swab the lenses with the solution, and reassemble.

VERTICAL SHELF REMOVAL

To Remove the Vertical Shelf
   a. Unlock and open the Front door, unplug the Vendor
   b. Slide out the Vertical Shelf completely
   c. Disconnect wiring harness
   d. Unscrew the two screws holding the vertical shelf using allen key at top right side of the shelf. (Fig. 5)
   e. Remove the vertical shelf. (Fig. 5)

Fig.5

Coin Validator

Vertical Shelf screws

PCB card

Coin Box

COMMON QUESTIONS AND ANSWERS

Q. How High Can I set my Prices?
A. Each selection can be priced individually up to $95.95

Q. Can Customers reach down and help themselves to product?
A. No, They Can't. The product door is a Triangle shaped flap designed to deter reach and theft. When pushed, the back of the triangle flap will come in contact with the bottom product tray, creating an anti-theft wall to act as a block.

Q. In the event of a power outage, will I have to reprogram my Vendor?
A. No. Your selection prices are safely stored.

Q. Coin Validator is not accepting Coins
A. Lenses may be dirty
   Coins may be damaged or worn out
   Wire harness may not be connected properly
   Coin Validator may not have power

Section 4   **BEVERAGE CAN VENDING UNIT**

The Beverage Can Unit is a refrigerated unit. The Unit has 4 different lanes handling 26 Cans each. Total Can handling capacity is 104. The unit incorporates a self-contained pull out type refrigeration deck.

ACCESSING CAN UNIT

The can dispensing unit can be easily accessed by opening the two locks at the top of the can unit door (Fig. 6). The door is then opened downwards. This is the area where the beverage cans are filled in to the vendor. The door and the vending flaps of the can unit can be dislodged from the can unit by removing two screws, (use allen key no.5) which are located on either side of the machine below the can unit door.

Fig.6   Locks
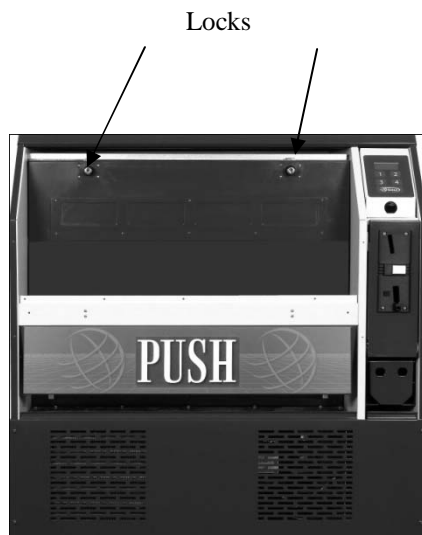
LOADING CANS

Unlock the can unit door. To Load cans in the vendor follow the steps mentioned along with the diagrams below. **Note: Cans must always be loaded from the bottom shelf first.**
See diagram below.   Beverage Cans can be directly loaded into the can shelves using the can unit door as a ramp to roll down the can in the lower shelf.
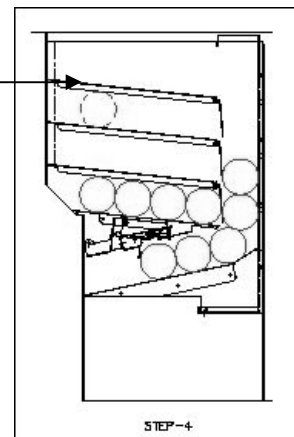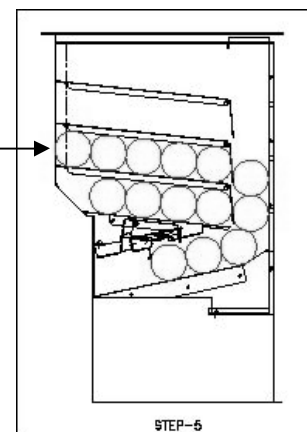
First Load the bottom shelf with 3 cans (step 1)

STEP–1
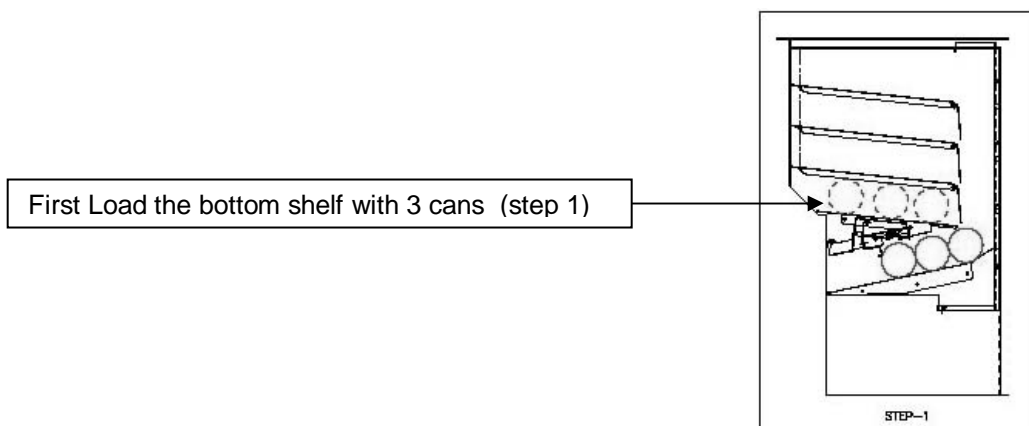
and then load 1 can in 3rd shelf (step 2),

STEP-2
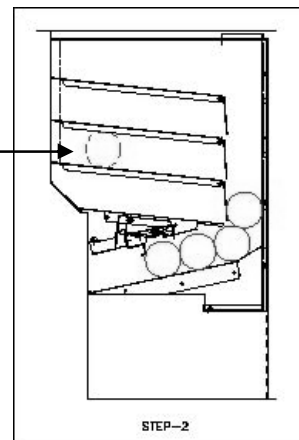
fill the bottom shelf completely (step 3)

STEP-3
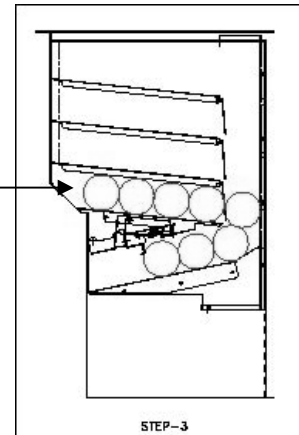
Now Load 1 can in 2nd shelf (step 4)

STEP-4

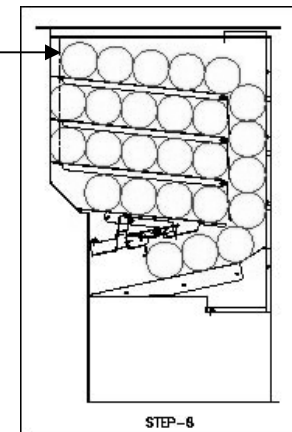Load 3rd shelf completely (step 5)

STEP-5

15

Load 1 can in 1 sty shelf (step 6)

STEP-6
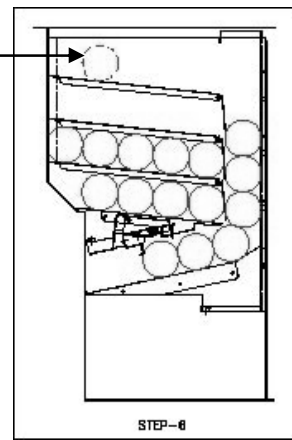
Load 2nd shelf completely (step 7)

STEP-7
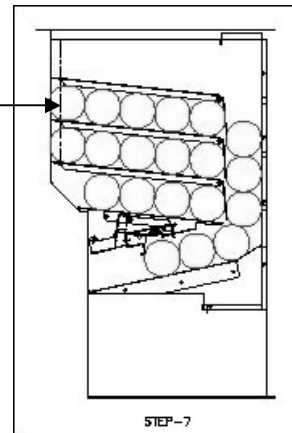
After this load the remaining cans in the 1st shelf (step 8).
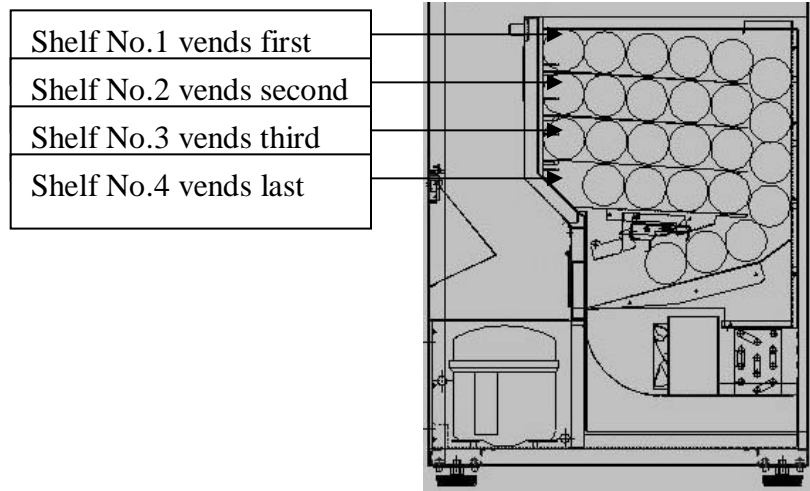
STEP-8

Special Note: We suggest that you always partially fill the vendor with product and perform at least five (5) test vends. Test vends can be performed easily by entering Service Mode and running "Individual motors testing".

STOCK ROTATION

The Beverage vendor does not ensure FIFO (first in first out). So when a fresh stock of cans are loaded (usually from the upper shelves) it is likely that the lower shelves of the can unit may still be holding some older cans for an interval of time. Although beverage cans have a reasonably good shelf life, we recommend that the Beverage Can unit be emptied once in 30 days and reloaded so that a forced product rotation takes place.

The Cans are vended as per Fig.7

Fig.7

| Shelf No.1 vends first |
| Shelf No.2 vends second |
| Shelf No.3 vends third |
| Shelf No.4 vends last |

Note: The beverage cans in the lower shelf will be the last to be vended by the machine. The new product stock must be loaded in the lower shelves. The old cans retrieved from the lower shelf of the vendor be loaded on the top shelf. These cans will now be vended first by the can unit, thus ensuring that no old stock is vended from the machine.

REFRIGERATION DECK

Your beverage vendor incorporates a high efficiency refrigeration system having two air circulation fans to chill the cans. The refrigeration unit can be easily accessed by opening two screws located on the front bottom panel of the vendor. Remove the two screws at the mid point of the Panel (Fig.8) The refrigeration Deck can now be pulled out from the vendor.

Fig.8

Air circulation fans

Thermostat Knob

Compressor

Condenser

Two Screws to fasten the deck to the vendor
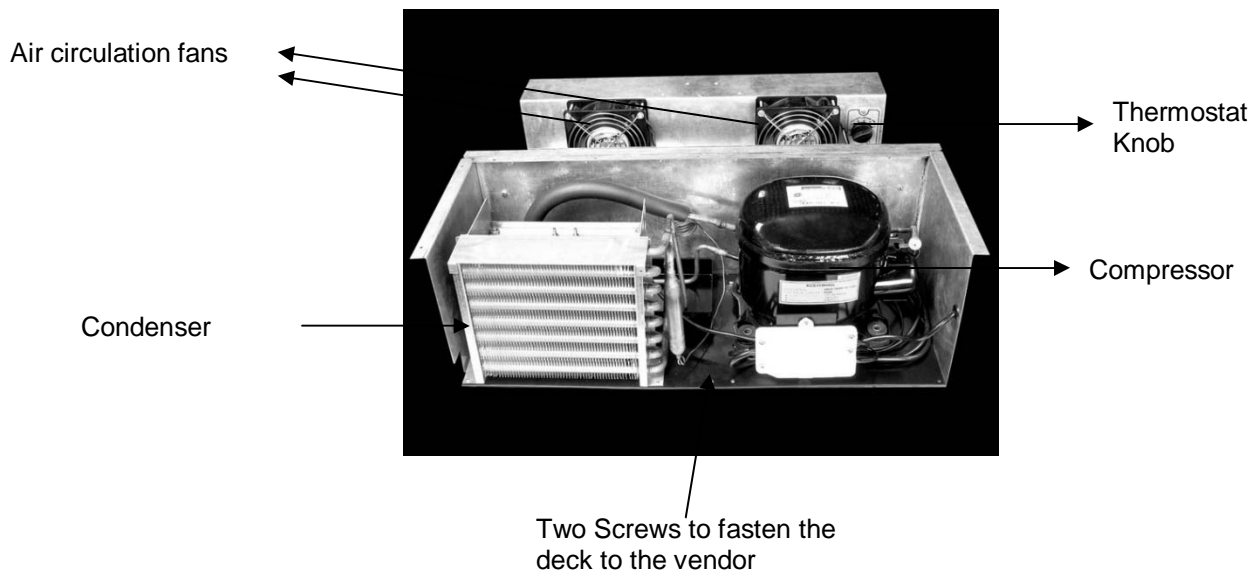
ACCESS POINT FOR THERMOSTAT

The Thermostat Knob can be adjusted without pulling out the refrigeration deck (Fig.9). The Knob is accessible through a port located on the extreme right hand side of the vend area below the fourth can dispense driver motor. Turning the Knob clockwise will lower the temperature in the dispensing unit and vice versa.

Fig.9

Thermostat Knob
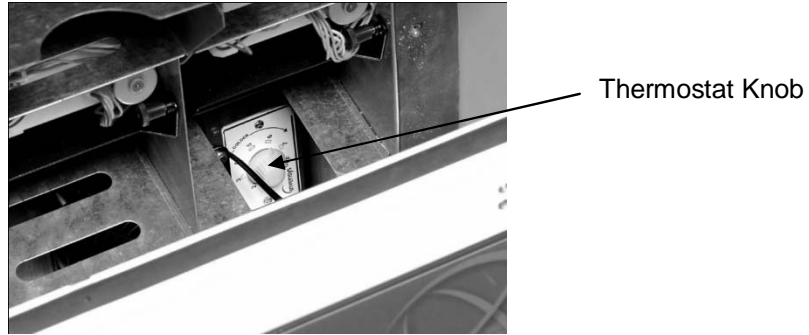
TEMPERATURE CHECK

Once your vendor is unboxed you will need to plug in your vendor and allow it to come to operating temperature. It will take about 18 hours for the vendor to reach an operating temperature of 38° F - 45° F. Temperature fluctuation is normal, and will depend upon your local climate.

CLEANING THE CONDENSER

Dust and dirt restricts good airflow and cooling of the condenser, due to which the refrigeration unit will not chill the cans properly. Remove the front bottom panel of the refrigeration unit. Brush the dirt and dust from the condenser. You can also blow air on the condenser or vacuum clean it. Do not damage the fins of the condenser while cleaning. Reassemble the front bottom panel after cleaning.

NOTES