



## VC730 Refreshment Center Combo



# Operator's Manual

## **INTRODUCTION**

Congratulations on the purchase of your new vending machine. This 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 vendor is designed to operate simply and reliably, but to take full advantage of your machine, 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 machine 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.

Once you 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](http://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.

For Service and Customer Care:

8:30 a.m. - 4:00 p.m. CST. Mon thru Fri, 815.297.9500 ext 160 or email: [customercare@seagamfg.com](mailto:customercare@seagamfg.com)



Seaga Manufacturing, Inc.  
700 Seaga Drive  
Freeport, IL 61032 U.S.A.  
[www.seagamfg.com](http://www.seagamfg.com)

## SPECIFICATIONS

The machine is comprised of two (2) units - Snack Unit (VC16S) and the Beverage Unit (VC7RD). Installation and setup of these units is explained in the next sections of this manual.

<b>Machine Description</b>	<b>Snack Unit</b>	<b>Beverage Unit</b>
<b>Model Number</b>	<b>VC16S</b>	<b>VC7RD</b>
<b>Height (in)</b>	28.5	41
<b>Width (in)</b>	30.2	30.2
<b>Depth (in)</b>	28.5	28.5
<b>Volts (V)</b>	115	115
<b>Frequency (Hz)</b>	60	60
<b>Watts (W)</b>	100	350
<b>Current (A)*</b>	1.0	3.8

\* - Current draw varies depending on Operating Conditions and Load and are subject to change.

**The machine is designed for use in indoor conditions only. The recommended operating environment is 75° F and 40% RH.**

## OVERVIEW

This manual covers Installation, Setup, Programming and Service instructions. It is extremely important that this manual be read thoroughly prior to commissioning the unit in the field. This will ensure a satisfactory long-term performance.

The unit consists of two (2) separate cabinets that are installed together via mechanical means and connected via electrical connections to operate as ONE unit.

The Snack Vendor (VC16S) consists of three (3) trays. The first and second trays have 4 selections each (Tray 1 – B1 through B4, Tray 2 – B5 through B8). The third tray has 8 selections (C1 through C8). The top two trays are normally used for products that are wider such as chips, pastries etc. and the third tray is used for Confectionary items such as candy bars. The Snack Vendor (VC16S) also houses all the payment mechanisms and electronic Vending Machine Controller (VMC) on the right side of the cabinet, as shown in Figure 14. The payment mechanisms, electronic components (such as VMC) and transformer are installed on a vertical shelf that slides out for easy access. The connector to connect the Beverage Unit (VC7RD) is also provided in this vertical shelf of the Snack Vendor (VC16S).

The Beverage Vendor (VC7RD) consists of Product Delivery systems consisting of a teeter-totter style mechanism and a vertical drop system. The Beverage Vendor also houses the removable Refrigeration System. The cabinet of the Beverage Vendor has a delivery system that has 4 selections for Cans and 3 selections for Bottles. The Cans are loaded in the chutes (D1, D2, D3, and D4) and the Bottles are loaded in Vertical Drop System columns (D5, D6 & D7). The loading instructions are given in subsequent sections. The refrigeration system is installed at the bottom of the Beverage Vendor and there is a foamed separation between the cabinet interior and the refrigeration system. The installation, setup and functionality of the refrigeration system is explained in the section titled Refrigeration.

## RECEIVING, INSPECTION, UNPACKING AND TESTING

After you have received your machine, inspect all vendor components. **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. Once you have your machine located, we suggest that you keep this manual for future reference.

The unit is placed on a wooden pallet and stretch-wrapped. Please exercise caution while cutting into the stretch-wrap with a sharp tool such as a utility knife, as it may cause scratch marks on the machine.

The Snack and Beverage Units are boxed in separate cardboard boxes. The Snack Unit box is placed on top of the Beverage Unit. After removing the stretch wrap, remove the Snack Unit and place it aside. **USE EXTREME CAUTION AS THE TOP OF THE BOX IS NOT ATTACHED TO THE BOTTOM OF THE BOX.** The top of both the snack and beverage units slide up for removal. Remove the Beverage Unit from its box and place it in the desired vending location. Remove the Snack Unit from its box and place it on top of the Beverage Unit carefully. Please use proper lifting and safety precautions while placing the Snack Unit on top of Beverage Unit.

Open all Unit doors and remove the packing materials. Keys can be found in the white envelope placed in the vend area of the Snack Unit. Remove the tape on the tray levers of the Snack unit. Also remove the protective paper from under each helix coil as well as the ties securing the ends of the helix coils during shipping. Remove all protective plastic from the window lenses.

Remember: at least two people are necessary to move any of the components of the machine. Follow proper safety standard for lifting and working with electronic/refrigerated equipment.

## INSTALLATION

Once the machines have been unpacked and placed in their permanent location, installation involves both electrical connection and mechanical attachment. Tools required: Adjustable wrench and Philips screwdriver. For optimal installation, follow the order of connections as outlined below:

### **1. Mechanical Connection between Snack and Beverage Units:**

The Snack and Beverage units must be screwed together for safety purposes. Two screws are provided in the white envelope found in the vend area of the Snack unit. Square the fronts and edges of the Snack and Beverage units. Open the Snack unit door and locate the two holes at the bottom of the unit. Insert both screws and tighten.

### **2. Electrical Connection between Snack and Beverage Units:**

Remove the Styrofoam insert from the opening in the upper right corner of the beverage unit and save this for reinsertion. Open the Beverage unit door and locate the beverage main harness. See Figure 1. Insert harness through the opening up into the Snack cabinet, see Figure 2. Reinsert the Styrofoam piece for maximum insulation of the refrigeration unit. (You may have to remove a small piece out of the Styrofoam to accommodate the harnesses.)

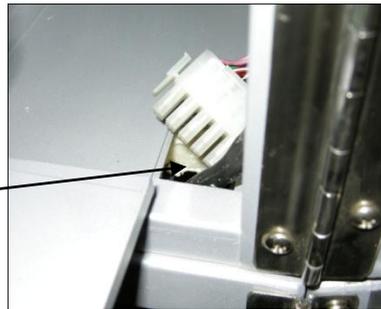
Figure 1 – Beverage Harness



Beverage  
Harness

Figure 2 – Inserting Beverage Harness

Beverage  
Harness  
inserted up  
through  
Snack Unit



Connect the beverage main harness to Connector #4 (see Figure 3).

Figure 3 – Making Beverage Connection



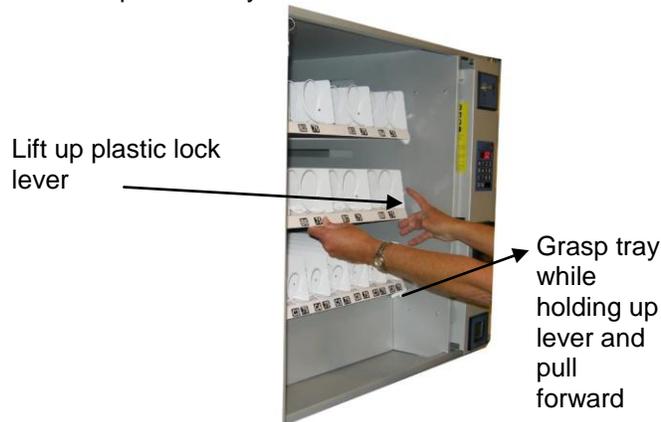
Beverage main harness attaches to  
Connector #4.

## LOADING PRODUCT TRAYS

Open the front door of vendor, and lift up the plastic lock lever on the right side of the tray to unlock. Holding the lever up, grasp the tray and lift the front of the tray slightly and pull forward. The tray will

slide out and then tilt down to make loading of products easier. Load only one product tray at a time (See Figure 4).

Figure 4 – Slide-out product trays



1. To Load Product in Snack Unit:

- a. Pull the desired product tray all the way forward. Product tray will tilt down.  
**Note:** Pull out only one (1) product tray at a time
- b. Place product in proper size helix coil.  
**Note:** Bottom of product must rest on the product tray and not on the Helix Coil. Load each column from back to front.  
**Note:** Fill all product trays fully; do not leave any spaces behind or between items
- c. Once product tray is fully loaded, lift and push it back in.

Repeat steps a through c until all product trays are fully loaded. Special Note: We suggest that you always partially fill the tray with product and perform at least five (5) test vend. Test vend can be performed easily by entering Service Mode and running the "SLCT" function, Individual motors testing.

**PRODUCT LOADING**

**Snack Unit**

Wide products such as Chips bags etc. are loaded in Tray 1 and Tray 2. Narrow products such as Candy bars are loaded in Tray 3. See Figure 5.

Figure 5 – Loading Product

Correct – load product between Helix Coils, resting on the product tray

Helix Coil

Product Tray



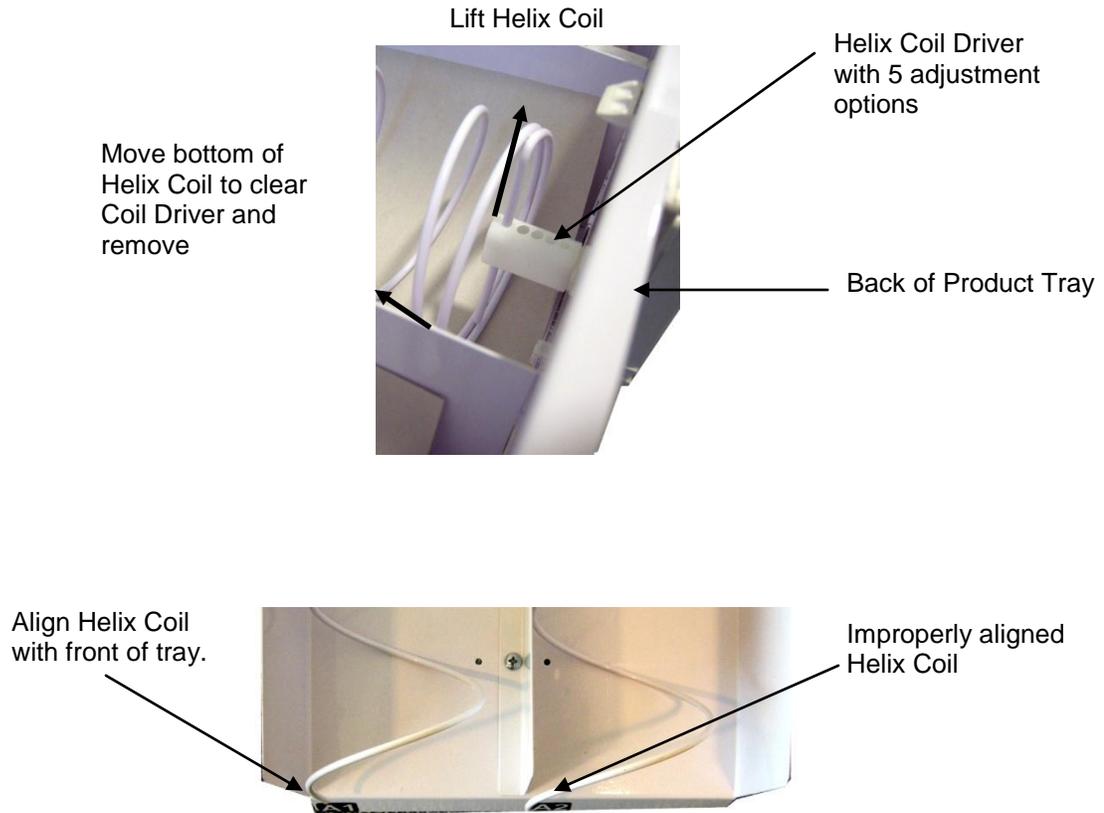
Incorrect

**HELIX COIL LOCATION ADJUSTMENT**

If you are required by a location to vend a product of a non-standard size, you may need to order a different helix coil and install it. To replace a helix coil:

1. Remove the Helix Coil from the Coil Driver by lifting the back of the helix coil up off the coil driver. You will need to move the bottom of the helix coil clear of the coil driver to completely remove the helix coil. See Figure 6.
2. Align the new helix coil end with the front of the tray, which gives the helix coil better contact with the product. The position of the helix coil in the coil driver is adjustable to assist you in aligning the new helix coil at the front of the tray. See Figure 6.

Figure 6 – Removing and Aligning a Helix Coil



## Beverage Unit

The cans are loaded in D1, D2, D3, & D4. Selections D5, D6 and D7 are set up for bottles. These instructions are also available for quick reference on a yellow decal inside the unit. See Figure 7.

Figure 7 – Loading Beverage Unit

### Selections D3 and D4

There are two chutes for each selection.

1. Load 8 cans from the bottom chute.
2. Load cans from the top chute until completely full. Upon filling top chute, proceed to fill bottom chute, leaving one less can in this chute. This assists with the gravity method of vending.

### Selections D1 and D2

There are two chutes for each selection.

1. Load 2 cans only from the bottom chute.
2. Load cans from the top chute until completely full. Upon filling top chute, proceed to fill bottom chute.

### Selections D5, D6 and D7 Vertical Product Columns

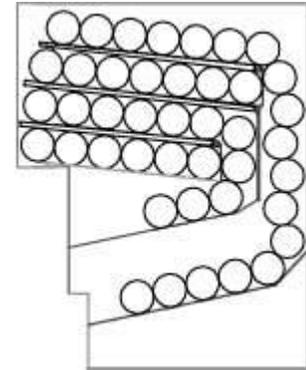
- 1.) For bottles, place bottom of the first bottle against the front of the column by the Sold Out Switch. Place the second bottle to the rear of the column, touching the cap of the first bottle. See illustration at right.
- 2.) Finish loading to the top of the column, making sure bottles are perfectly horizontal and not tilted or skewed in the column.
- 3.) To adjust the rear spacer, grasp firmly and lift up and move forward or rear, as required, so that the rear spacer is touching the rear bottle.

Note: There are many variations of packaging among the beverage brands. The instructions above are meant to be a guideline. If you have packaging that isn't mentioned or shown, experimentation will be necessary for a proper vend.

Selections D3, D4  
Chute #1 Vends 1<sup>st</sup>  
Chute #2 Vends 2<sup>nd</sup>

Selections D1, D2  
Chute #3 Vends 1<sup>st</sup>  
Chute #4 Vends 2<sup>nd</sup>

Product Chutes



Vertical Product Column

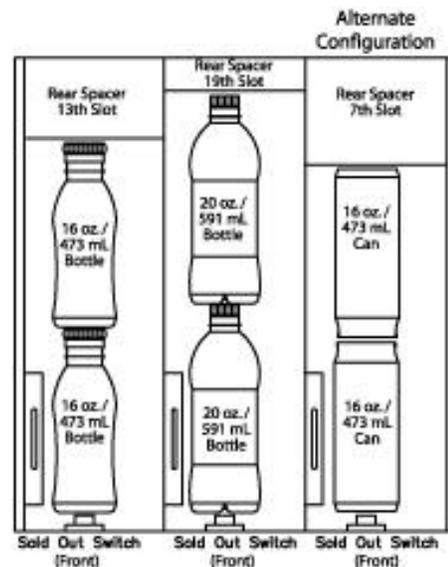
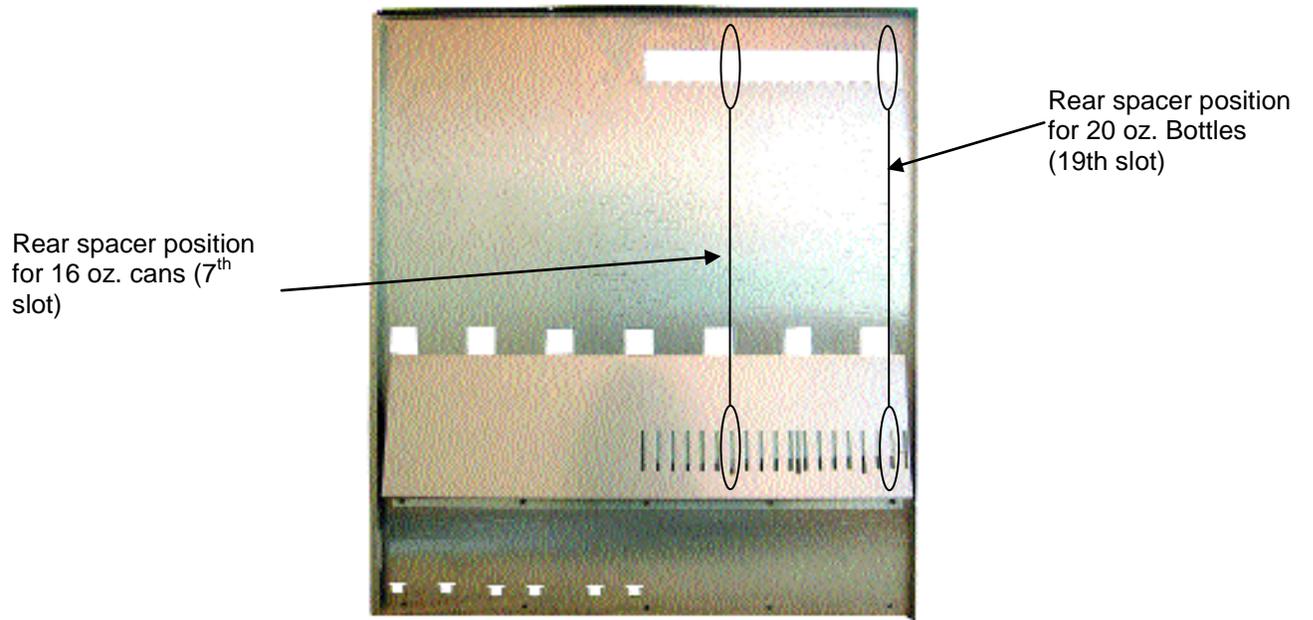


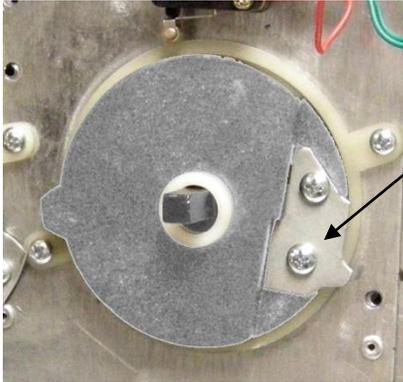
Figure 8 – Vertical Column Components



***You may need to adjust due to product height variance.***

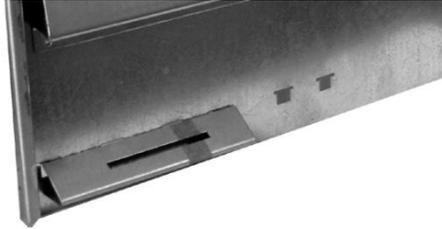
Rear Spacer



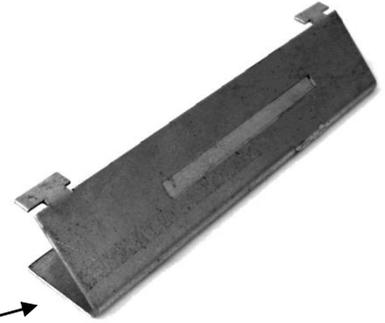


Bottle Cam shown installed on auger. Motor and brackets removed.

Bottle Shim shown Installed



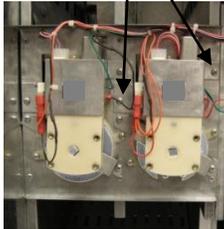
Bottle Shim



Specialty kits are available for Frappuccino and Red Bull as well as oddly shaped packaging, but are not included. Contact Seaga Customer Care, if needed:

Figure 9 – Removing Vertical Drop Motors and Auger System

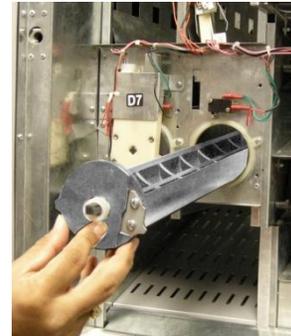
Remove two screws holding in motor/bracket.



If replacing motor, unplug wire harness and re-assemble.

If replacing auger, continue with instruction to right...

Remove auger for replacement.

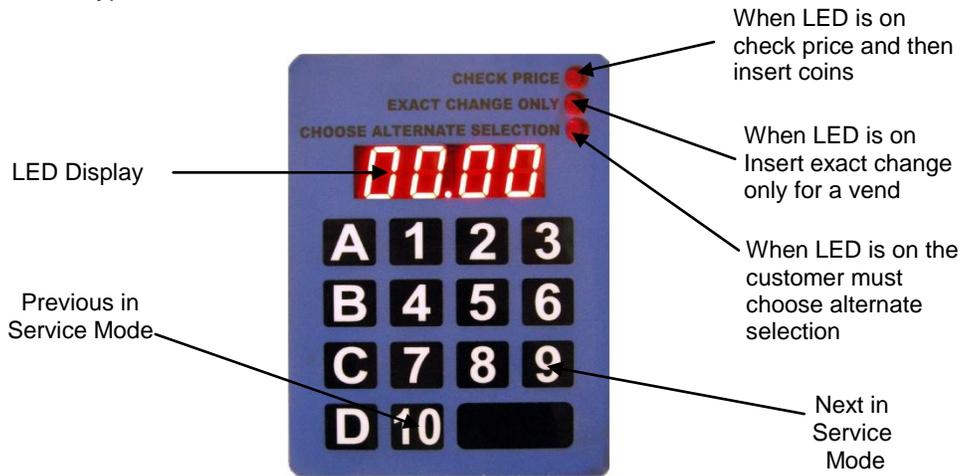


The Beverage unit does not ensure FIFO (first in first out). So whenever fresh beverages are loaded (usually from the upper chutes) it is likely that the lower chutes of the can unit may still be holding some older cans for a period of time. Although beverages have reasonably good shelf life, we recommend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

### **KEYPAD AND LED DISPLAY**

The Keypad is touch sensitive. Light pressure will be necessary to activate each number or letter. The Keypad is used by the customer to make their selection, and by the operator to set and test many functions of the machine. Note: The keypad and LED Display are 2 separate components, though they appear as one streamlined piece.

Figure 10 - Keypad

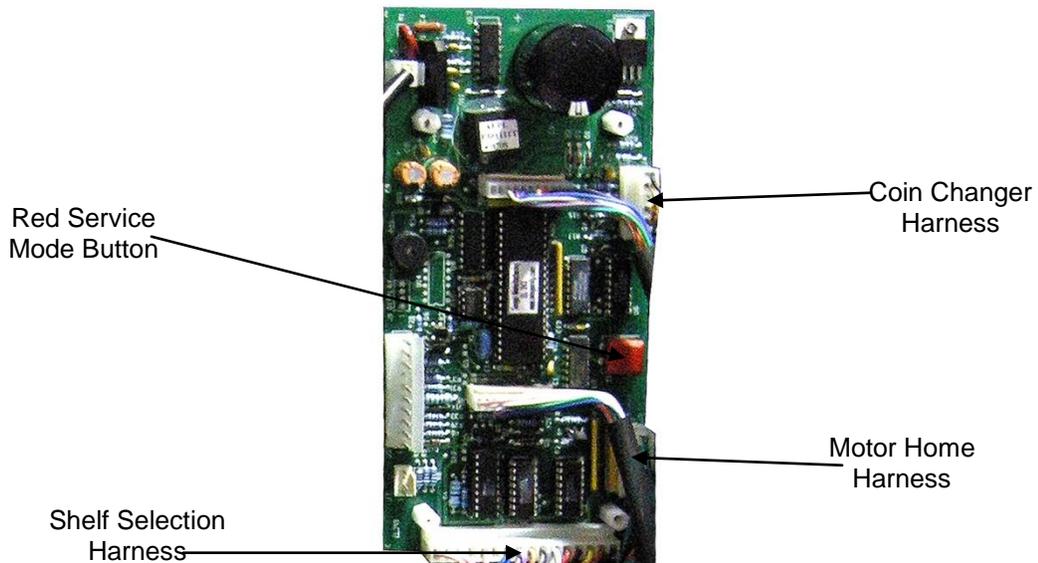


The LED Display shows the customer the amount of money entered into the vendor, and the cost of their selection. It shows the operator the Service Mode function for setting and testing the various functions of the vendor.

### PROGRAMMING

Unlock and open the Front Door to access the VMC, and enter Service Mode by pressing the Red Service Mode Button on the VMC Controller. (Fig. 11)

Figure 11 – VMC Controller



### SERVICE MODE

The Service Mode is entered and exited by pressing the Red Service Mode Button on the VMC. All Service Mode functions are cycled and selected by pressing the DOWN (9) and UP (10) keys. If no action is taken within 20 seconds the display will return to Standard Operation Mode.

**MOTOR COUNT (“Cnt”)-** Displays the total count of motors available in this vendor. Enter Service Mode. Cycle through the Service Mode until the display reads “Cnt”. Press any keypad character other than the DOWN (9) or UP (10) key and the controller will display the motors it recognizes. The total number of motors should equal the total number of selections.

**BILL ESCROW (“ES”)-** Optional setting that when ON will return the bill to the customer if no vend is made, when OFF the vendor will return coins to the customer. Enter Service Mode. Cycle through the Service Mode until the display reads “ES”. Press any keypad character other than the DOWN (9) or UP (10) key to turn this mode ON (“ES y”) or OFF (“ES n”). This function is typically used to prevent the machine from being used as a changer.

**MULTI-VEND MODE (“UL”)-** Optional setting that when ON allows more than one vend to be performed, provided there is still credit remaining. Enter Service Mode. Cycle through the Service Mode until the display reads “UL”. Press any keypad character other than the DOWN (9) or UP (10) key to turn this mode ON (“UL y”) or OFF (“UL n”).

**FORCE-VEND MODE (“FC”)-** Optional setting that when ON requires a purchase once credit has been deposited. Enter Service Mode. Cycle through the Service Mode until the display reads “FC”. Press any keypad character other than the DOWN (9) or UP (10) key to turn this mode ON (“FC y”) or OFF (“FC n”). Change is not available for return until at least one successful vend is made.

**BEVERAGE SOLD-OUT MODE (“Can”)-** Optional setting that when ON operates sold-out function for this vendor, and will display “Sold Out” when selection is empty. Enter Service Mode. Cycle through the Service Mode until the display reads “Can”. Press any keypad character other than the DOWN (9) or UP (10) key to turn this mode ON (“Can y”) or OFF (“Can n”). Press “A” to save the new setting.

**TEST ALL MOTORS (“Test”)-** Allows user to test all motors in your vendor. Enter Service Mode. Cycle through the Service Mode until the display reads “Test”. Press any keypad character other than the DOWN (9) or UP (10) key to test all motors. No other function can be accessed during the test. The time this function requires will vary. Display will return to Standard Operating Mode. ***Important: never use this function when the machine is loaded and doors are open!***

**INDIVIDUAL MOTOR TESTING (“Slct”)** - Allows user to individually test each motor in this vendor. Enter Service Mode. Cycle through the Service Mode until the display reads “Slct”. Enter any selection to test its motor. (ex. A1)

**PRICE SETTING (“Prc”)-** Allows the user to set individual prices for each motor or item loaded in your vendor. Enter Service Mode. Cycle through the Service Mode until the display reads “Prc”. Enter any selection to display current price. (ex. A1) Press the DOWN (9) or UP (10) key to change the price for that selection. Price setting will change in 5 cent increments. Press “A” to save the new price.

**CASH HISTORY (“Cash”)** - Displays total cash count. Enter Service Mode. Cycle through the Service Mode until the display reads “Cash”. Press any keypad character other than the DOWN (9) or UP (10) key to display the total cash count the vendor has accumulated. This function cannot be reset to zero.

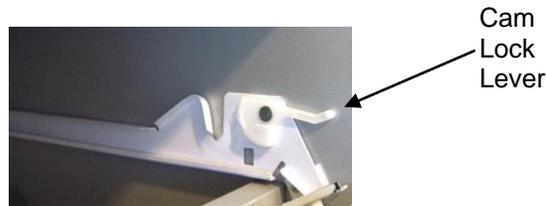
**SALES HISTORY (“Sale”)** - Displays total vend count. Enter Service Mode. Cycle through the Service Mode until the display reads “Sale”. Press any keypad character other than the DOWN (9) or UP (10) key to display the total vend count that your vendor has performed. This function cannot be reset to zero.

**COIN DISPENSING (“Coin”)-** Allows user to manually dispense coins from the Coin Mechanism by coin type. Enter Service Mode. Cycle through the Service Mode until the display reads “Coin”. Pressing keys 1-7 will dispense the lowest through the highest denomination of coins. For American Coin Mechanisms key 1 will dispense nickels, key 2 will dispense dimes, and key 3 will dispense quarters.

## REMOVING PRODUCT TRAY

Push up the plastic cam lock lever on the right side of tray (Fig. 12). Grasp the Product tray under both the front corners, and lift the front of the tray slightly and pull the tray out completely. Remove the Wiring harness connector located on the inside right-hand side of the tray.

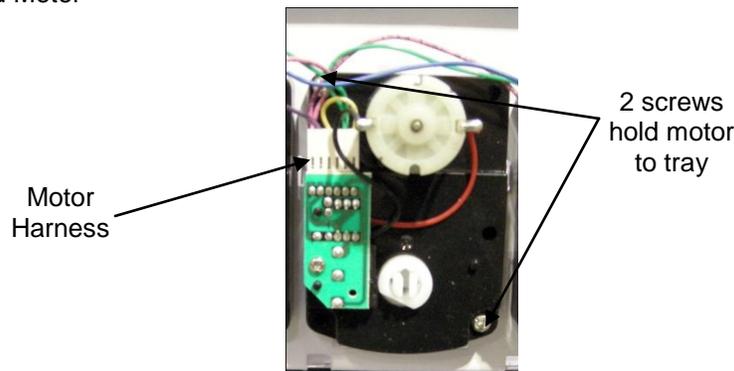
Figure 12 – Product tray cam lock lever  
(Shown with tray removed)



## VEND MOTORS

Each Selection is vended by the action of the Vend Motor. The Vend Motors are screwed onto the rear of each Product Tray. In the rare event of a jam, a Vend Motor may need to be returned to its home position.

Figure 13 – Vend Motor



1. To "Home " a Vend Motor
  - a. Unlock and open the Front Door to access the Circuit Board, and enter Service Mode by pressing the MENUS Button
  - b. Cycle through the Service Mode until the Display Reads "SLCT"
  - c. Enter the letter and number of the motor you wish to home. The motor will rotate to its home position.
  
2. To Remove a Vend Motor
  - a. Unlock and open the front door
  - b. Unlock Product Tray and pull it out fully while keeping it level
  - c. Lift Product tray to release from the Track and pull it out

**Caution:** The Product Tray Wire Harness will need to be unplugged prior to complete removal of the product tray. The wiring harness is plugged into the slide-out shelf in the Snack unit.

- d. Remove Helix Coil from the driver by lifting the front end of the Helix Coil up with one hand pinching the lugs of the shaft. Push the shaft through the back of the vend motor, freeing up the helix coil/driver/shaft assembly for removal.  
**Note:** This operation is more difficult with smaller Helix Coils.
- e. Remove the two Phillips head screws that are securing the motor to the product tray.
- f. Disconnect Wires of the Vend Motor, paying close attention to the orientation of the motor plug wire connector.

- g. Replace Vend Motor by repeating above steps in reverse order, making sure you plug the vend motor connector in the same way it was originally. **Note:** Failure to do so may result in vend motor failure.

## PAYMENT SYSTEM

### COIN CHANGER

The Coin Changer receives and returns change to customers. The Coin Changer will accept Quarters, Dimes, and Nickels. The Coin Changer can be set to accept the new Golden Dollar. Once all coin tubes reach the required inventory levels, all other coins will be routed into the coin overflow tray. All Golden Dollar coins will always be routed to the coin overflow tray.

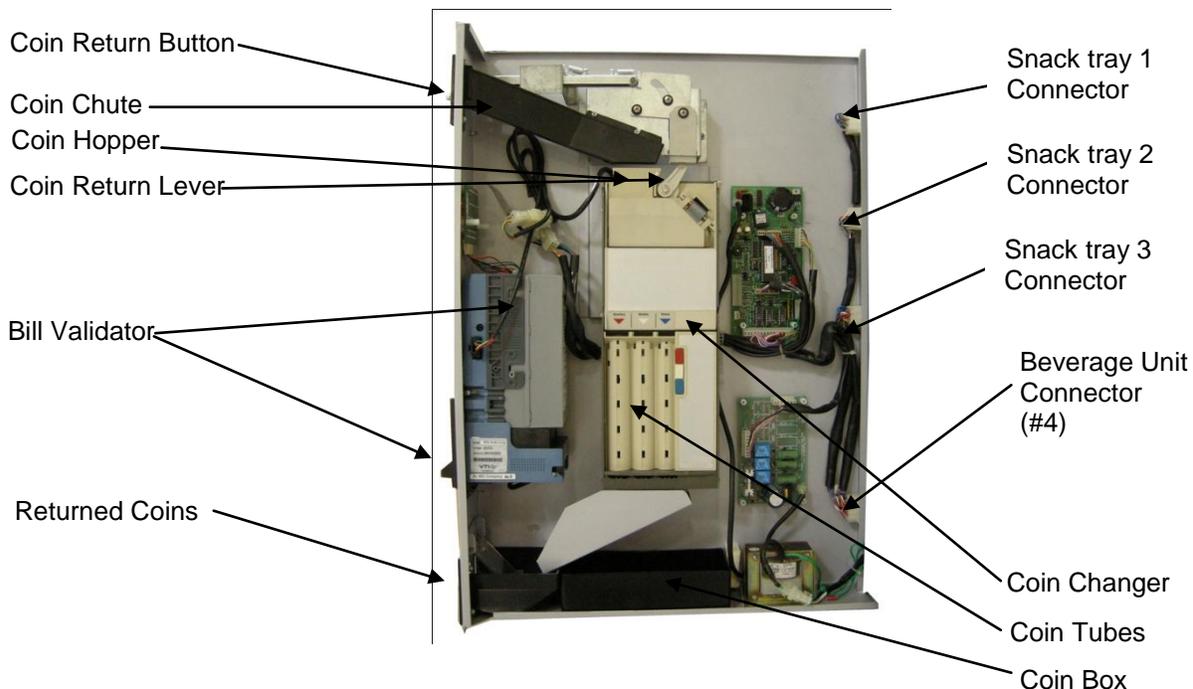
### LOADING CHANGER

As change is given to the customer in coins only, it is recommended that you initially load the tubes completely full when setting up your vendor and that you do not allow your vendor's coin inventory to drop below three-quarters full. Fill all three coin tubs through the side of the changer, as shown in Figure 15.

### COIN RETRIEVAL

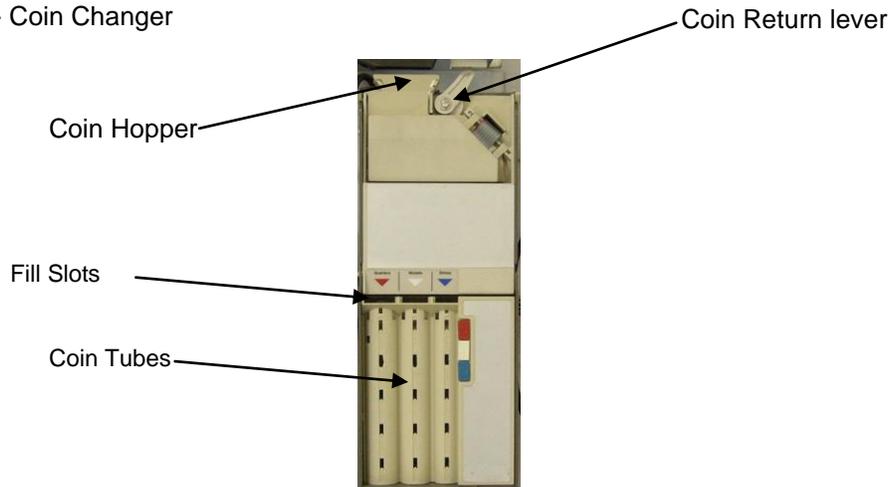
Coins can be retrieved from the vendor in three (3) ways, the Coin Box, Manual Coin Retrieval Button, and the Coin Return Button. The Coin Box sits below the vertical shelf. The Coin Box holds all accepted coins except for coins needed to maintain inventory in the coin tubes. (Some overflow may occur) The Manual Coin Retrieval buttons are located on the upper portion of the changer and are labeled A, B and C. Press the A, B or C button to manually dispense coins. In addition, you can also go into Service Mode and choose the Coin function. Pressing keys 1 through 7 will dispense coins.

Figure 14 – Vertical Shelf and Components



The Coin Return Button pushes the Coin Return Lever, which returns inserted coins to the customer. **Note:** If Force Vend is on, pressing the Coin Return button will not return coins.

Figure 15 - Coin Changer



### **CLEARING COIN JAMS**

To clear a jam, remove the hopper assembly

1. To remove Hopper Assembly

- a. Unlock and open the front door of Vendor. Unplug the Vendor
- b. Loosen the mounting screws that hold the Coin Return arm and Coin Chute to the vertical shelf, and shift this assembly up.
- c. Push the thumb Tabs up, and tilt the Coin Hopper forward
- d. Lift and remove. Note: The coin hopper is still connected to the Coin Changer by the ribbon harness that can be pulled free.
- e. Clear Jam and reassemble.

### **CLEANING COIN CHANGER**

Your Coin Changer needs to be cleaned only when the Coin Changer will no longer read coins.

1. Cleaning the Optics. You will need cotton swabs [Q-tips], and a 50/50 water/isopropyl [rubbing] alcohol solution.

- a. Unlock and open the front door
- b. Remove the Coin Box, and Pull the Vertical shelf out.
- c. Tilt The Coin Hopper open, there are two (2) Lenses on the flap and two (2) Lenses inside the coin hopper
- d. Swab the lenses with the solution, and reassemble.

### **REMOVAL OF COIN CHANGER**

To Remove the Coin Changer.

- a. Remove the Coin Hopper as Above
- b. Disconnect Wiring harness
- c. Lift Coin Changer and remove.

### **BILL VALIDATOR**

The Bill Validator allows your customers to pay for their purchase with paper currency. Your Bill Validator is installed at the factory, and is set to validate \$1 and \$5 bills, but will not accept \$5 bills if the coin tubes are empty. The Bill validator verifies, accepts and stores paper currency but change is given in coins only.

### **BILL VALIDATOR CAPACITY**

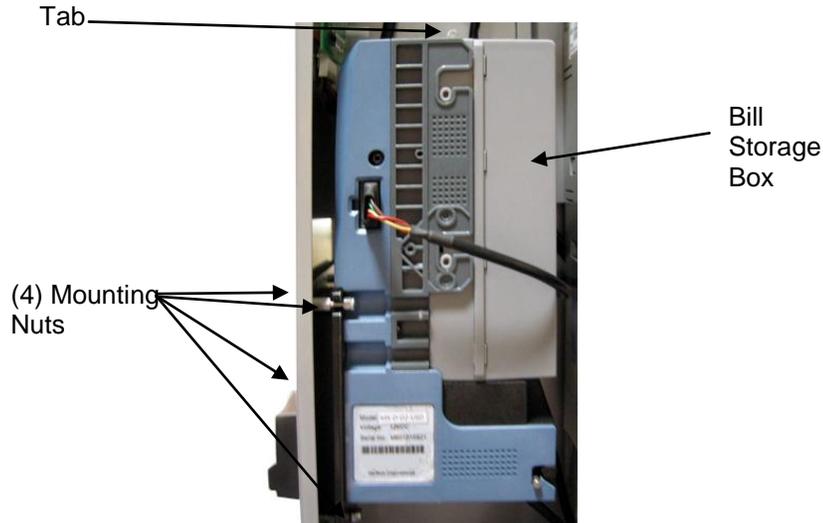
The Bill Storage Box will hold approximately 250 bills.

## **BILL RETRIEVAL**

The bills your customers spend are kept in the Bill Storage Box.

1. To Retrieve Bills.
  - a. Unlock and open the Front Door.
  - b. Pull the Vertical Shelf out.
  - c. Open door located on top of bill collection box.
  - d. Close top door on bill collection box after bills are retrieved.

Figure 16 – Bill Storage Box



## **REMOVING BILL VALIDATOR**

From time to time it may be necessary to remove the Bill Validator for cleaning and clearing jams.

1. To remove the Bill Validator.
  - a. Unlock and open the Front Door, unplug vendor.
  - b. Pull the Vertical Shelf out.
  - c. Pull Tab forward and lift Bill Storage Box.
  - d. Disconnect Bill Validator from Wiring Harness.
  - e. Remove the Four (4) Mounting Nuts. (Fig. 16)
  - f. Remove Bill Validator

## **CLEARING BILL JAMS**

It is possible that a torn or damaged bill can jam within the Bill Validator, putting it out of service.

1. To Clear a Jam.
  - a. Remove Bill Validator as above.
  - b. Press Tab on bottom of Bill Validator, and pull Lower Housing free.
  - c. Remove Jam, and reassemble.

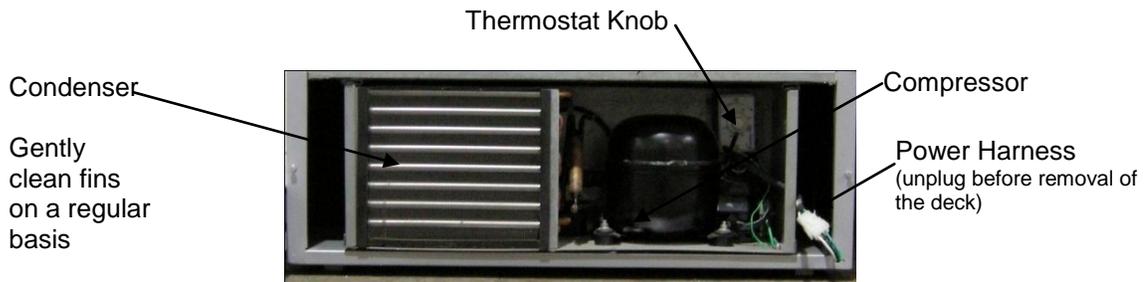
## **REFRIGERATION DECK**

Your vending machine incorporates a high efficiency refrigeration system having two air circulation fans to chill the beverages. Once you have the front panel removed you can further remove the refrigeration deck by removing the nut and bolt in the front center of the deck. Then reach to the right side of the inside wall separating the refrigeration deck from the body of the vendor. There you will find the electrical disconnect, which needs to be unplugged (Fig. 17). The refrigeration Deck can now be pulled out from the vendor.

The Thermostat Knob can be adjusted without pulling out the refrigeration deck (Fig. 17), however the front panel must be removed. Turning the Knob clockwise will lower the temperature in the dispensing

unit and vice versa. **Note:** Your VC730 has been factory tested to provide you with proper cooling and should not need to be adjusted.

Figure 17 – Refrigeration unit



### CLEANING THE CONDENSER

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

### REFRIGERATION

Refrigeration is the transfer of heat from one area to another. In the case of this machine we are transferring the heat from the area containing the beverage selections to the outside of the machine and dissipating the heat throughout the room. The more heat we are able to transfer away from the beverages the colder they become.

This process is accomplished by the use of a sealed compressing system using an ozone friendly gas commonly known as R134a refrigerant. The system is comprised of several key mechanical components: the condenser, the evaporator and the compressor. The condenser is located in the lower front left of the machine and it is where the heat is dissipated from the cooling process and blown to the outside of the machine. The evaporator is located inside the machine towards the back of the cooling system underneath the beverage unit section being cooled. Its purpose is to absorb the heat from the drink selections and provide the cool air needed to refrigerate the beverages. The compressor is the heart of the cooling system and its purpose is to provide pressure and circulation of the refrigeration gas.

The refrigeration system is monitored and controlled by several key electrical components. The condenser fan, evaporator fan, thermostat, and the start and overload components located on the side of the compressor. The line voltage from the 115 volt AC outlet in the room is fed to the two fans, the condenser and the evaporator fans, and they run continuously as long as the machine is plugged into 115 volt AC power coming from the wall. The thermostat controls the on and off cycling of the compressor.

To determine if the compressor system is running it is sometimes difficult due to the fact that the compressor tends to be very quiet. The sound and slight vibration from the fans running can sometimes be mistaken for the compressor running. One way to tell if the compressor system is running is to cautiously place your hand on the compressor to feel if it is warm. CAUTION as it may be hot to the touch. If the compressor is stone cold and stays that way for an extended period of time, you can assume there is an electrical problem in the circuitry or components that operate the compressor. Another way to see if the compressor is running is to feel the air exiting the condenser coils from the front to see if there is any heat.

Any problems with the fans running can also lead to a cooling system failure. In order for any cooling system to operate properly it is most important that all fans are running and that the condenser coil is kept clean and free of any dust, dirt or obstructions.

## **COMMON QUESTIONS AND ANSWERS**

### Product prices, payment systems and currency:

#### **Q. How high can I set my Prices?**

- A. Each selection can be priced individually up to \$99.95. Note: Keep in mind when setting a price that you may have an effect on the Exact Change Only message.

#### **Q. Why does my Exact Change light stay on?**

1. Insure that proper levels of coins are loaded into the changer.
2. Check prices to insure all prices are correct. If there is a price set at \$99.95 this will cause the light to stay on.
3. Insure that the changer is properly connected.

#### **Q. Why do the coins I insert reject immediately?**

1. Insure that the changer harness is connected properly. **Note: always disconnect power to snack vendor before disconnecting and reconnecting payment system harnesses.**
2. Insure there is no pressure on the coin return lever located on the changer itself. Slight pressure will cause the changer to automatically reject coins.
3. Clean changer.

#### **Q. Why won't the unit take more than 3 - \$1 bills, or more than 1 - \$5 bill?**

- A. The VMC protects the amount of change in the changer and will only allow the bill acceptor to take bills up to the highest vend price in the machine. For example, if your highest vend price is \$3, after inserting 3 - \$1 bills or 1 - \$5 you will not be able to insert more bills.

#### **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 and will become an anti-theft wall to act as a block.

#### **Q. In the event of a power outage, will I have to reprogram my prices, settings, etc.?**

- A. No, your settings are stored, but take note that you may have to reload your changer if the Exact Change Only light is on.

#### **Q. Are the price decals installed at the factory? Are there extras and where do I find them?**

- A. No, the price decals are not installed at the factory but are included in your parts pack envelope. The decals included with the machine range from \$0.75 to \$2.00 and extra price points are included to allow some modifications.

#### **Q. Are the prices preprogrammed at the factory? Is there a default setting for all of the programming functions?**

- A. Yes, the prices are pre-programmed at the factory to \$1. However, programming the price settings is a great way to get familiar with your machine while you are in test mode and prior to locating the machine. Your first-hand knowledge will allow you a greater understanding of how the equipment works.

#### **Q. How often should I clean my payment systems?**

- A. This will depend on how much traffic you have at your machine – the more money inserted, the dirtier the payment systems will become. Clean your payment systems on a monthly basis to begin with. Lengthening the time between cleanings is at your own discretion.

### Beverage unit temperature and refrigeration:

#### **Q. What type of environment is the equipment designed for?**

- A. The machine is specifically designed for indoor use only. Optimal location temperature is 75° F, with 40% RH. Avoid placing unit in direct sunlight.

#### **Q. How do I clean my condenser?**

- A. Remove the front bottom panel of the refrigeration unit. Brush the dirt and dust from the condenser fins. You can also blow canned air (available at office supply/computer stores) on

the condenser or vacuum clean it. Do not damage the fins of the condenser while cleaning.  
Reassemble the front bottom panel after cleaning.

**Q. How do I set my temperatures, and what is the factory recommended low and high settings?**

- A. The thermostat is pre-set by the factory to an industry standard.

**Q. My beverage selections are not cold enough. How do I get them colder?**

1. Make a small, clock-wise adjustment to the thermostat to increase the coolness.
2. Clean condenser coil (see Refrigeration section of this manual). The coil should be clean and lint free, if dirt or lint build-up is on coil, this will restrict air flow and cause the compressor temperature to rise above operating temperatures and compromise cooling.
3. Insure condenser fan and evaporator fans are running.

**Note: this should be done with power cord unplugged from wall outlet for personal safety.**

4. Insure you beverage vendor is placed in a location that it is designed for, which is indoors only. Outside or non climate controlled environments will compromise cooling.

If further assistance is needed, please contact Seaga Customer Care or a local refrigeration technician.

**Q. My beverages are not cooling at all.**

1. Insure through the tS function that the refrigeration deck is turned on. Insure the unit has power – test wall outlet where the unit is plugged in.
2. Check that refrigeration connections are properly connected.

Product vending:

**Q. Why won't my snack selection vend?**

1. Check to insure proper connection is made to vend motor.
2. Go into sLct, and choose selection, this will home the motor if it is out of home.
3. Inspect harness for visual breaks and replace harness if broken wires are found.
4. If above steps fail, switch motor with known working motor.

**Q. Why are vertical columns in my beverage unit double vending?**

1. Check bottle diameter to insure the bottle is not too small to vend (should be with 2 ¼" to 3" in diameter).
2. Insure shim is properly installed.
3. Run lane in sLct mode and look to see if any error is displayed after vend is made. If error is displayed check wiring to home switch located behind motor.
4. Check home switch itself for cracks or breaks, replace if necessary.

**Q. I've loaded my beverage product chutes and columns to capacity – why does my display say Sold Out?**

1. In the can drink chutes, make sure the cans are loaded correctly and firmly pressed against the teeter totter mechanism to fully depress sold out switch.
2. In can drink columns, insure wiring to sold out switch is connected properly.
3. In can drink columns, remove teeter-totter mechanism and inspect sold out switch to insure that the lever is not bent. You may be able to slightly bend this back in place if necessary.
4. Run lane in sLct mode to insure motor is being recognized.
5. In the vertical column, insure product is fully depressing the sold out lever.
6. In the vertical column, insure switch lever is resting properly against sold out flap in the lane.
7. Insure wiring is properly connected to sold out switch.

If both vertical, and can drink lanes are all reading sold out, inspect main beverage harness for a break in orange wire.

**Q. A product keeps hanging up or getting stuck. What can I do?**

1. The product may be loaded incorrectly in the helix coil or the product may be in the wrong size helix coil.

2. Product pushers may help bring the product forward as the helix coil turns and help the product drop at a more even level.

**Q. How do I install the Product Pushers?**

- A. Align the product pusher groove with helix coil diameter and slide along the helix coil with triangle pointing towards the front (away from the product). Slide until the product pusher is completely inside the helix coil with about ½” from the helix coil end point.

**Q. A selection will try to vend but the product will not come out. What do I need to do?**

- A. The most probable answer is that the helix coil has become detached from the driver. Remove the jammed item and then check to see if the helix coil is free from the driver. If so, snap the helix coil back into the driver and then home the motor.

Display and keypad:

**Q. Why isn't my display working?**

1. Insure the snack machine is plugged into a working outlet
2. Check the harness connection to the display board. Slide out the shelf that the display is mounted to, look at the bottom of the display board to locate the display harness, press upward on the connection to insure that it is connecting properly. It may take a few seconds to have the display come back on if connection was not made initially.
3. Check the connection on the VMC labeled display and insure that proper connection is made.

**Q. My Keypad is not working/ some selections not working**

1. Check harness connections to the keypad ribbon harness that is located behind the keypad on the slide-out shelf.
2. Inspect key pad for damage caused by selection pressed with foreign objects. Large dents, tears, scratches may damage the membrane and result in failure.
3. Check connection on VMC labeled keypad and insure that proper connection is made.

Transporting and installing:

**Q. Do I have to test my equipment before placing it on location? Must I disassemble to transport to the location? Is there a way to do a general check of equipment without full assembly?**

- A. We suggest full testing prior to the unit being moved to the location. Why? It gets you familiar with the machine so that you look professional and efficient when at the location setting up the machine. Complete assembly of the machine for testing is not required; you could test vend the snack machine on the floor next to the Beverage unit or set it on top of the Beverage unit.

**Q. Can the snack and beverage machine be transported while attached? Loaded?**

- A. The units should never be transported attached. Additionally, transporting with product loaded voids manufacturer's warranty and can damage your equipment. Transport units unattached and empty of product/change only.

**Q. Can I place the beverage unit on its side for transport?**

- A. Never place the beverage machine in any other position but upright. There are numerous components that can be jostled out of place, becoming very problematic for you. Once the machine is set in place, the compressor needs to rest for a minimum of 2 hours prior to running in order for the oils in the compressor to return to their non-threatening position.

**Q. Are the beverage shims pre-installed at the factory?**

- A. Yes, but they may have moved during shipping and should be reviewed prior to loading.

**Q. Are there different helix coils that will hold a larger number of products (more product spaces)?**

- A. For other helix coil options, please call Seaga Customer Care.

**Q. My Beverage Unit door will not line up & lock. What can I do?**

- A. This may be caused by an unlevel machine, perhaps on an uneven surface. We suggest you put all the units together and securely bolt them together as per the instructions. This should resolve any fit issues.

**Q. Should I use a surge protector for the equipment?**

- A. A surge protector is a small investment that can protect your equipment. We recommend using a surge protector.