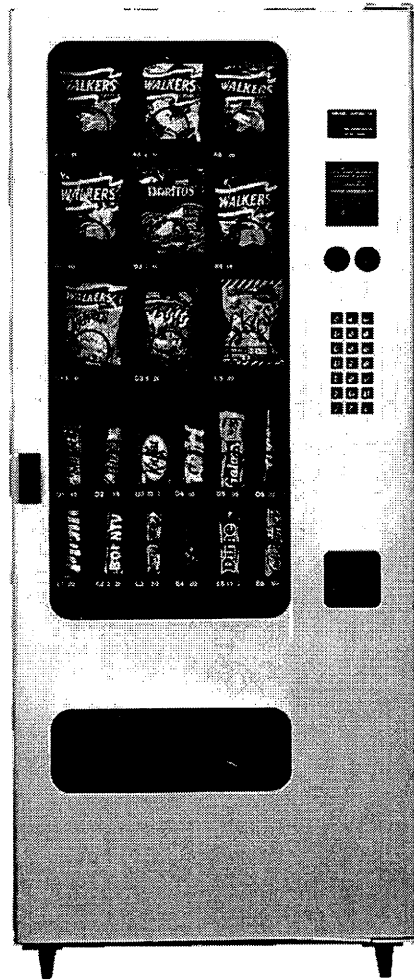




REFRIGERATED GLASS FRONT MERCHANDISER

EC Series



SERVICE MANUAL

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August, 97

P/N 4209026

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Record the Model Number and Serial Number of your machine below. They are needed for you to obtain quick service and parts information for your machine. The numbers are given on the identification plate located on the back side of the cabinet of the vendor.

MODEL NUMBER: _____

SERIAL NUMBER: _____

INTRODUCTION

This manual contains instructions, service and installation guidelines for the **Refrigerated Glass Front Merchandiser EC Series** product line.

Read this manual thoroughly to familiarize yourself with the functions of all components, along with the features that are available. The initial set-up of a vending machine is a very important step of insuring that the equipment operates in a trouble-free manner. By following the instructions at the initial installation of the machine, service problems can be avoided and set-up time can be minimized.

All Glass Front vendors are equipped with an electronic control system, which includes a wide variety of features that can be programmed and used by the owner/operator as needs arise.

Programming of the vend functions, pricing and features is done at the controller. Changes can be made without the need of any additional accessories or remote parts.

Cash accountability provisions enable you to retrieve information such as "Total Cash" transactions and "Total Vend" cycles that have been performed by the vendor.

Electrical malfunctions are recorded by the controller and are displayed when the machine is placed in the *Service Mode*. Non-functional motors or selections are indicated.

The vending sequence is "first-in, first-out" for each selection, eliminating the need for stock rotation to maintain fresh products in the vend area. Each selection has an individual motor and operates independently from other motors.

Each vendor can support a "satellite" vending machine, such as a Can Vendor or Food Merchandiser. The satellite vendors utilize the Glass Front Merchandiser's controller, coin changer, bill validator (if applicable) and keypad to perform the vend functions they require.

On refrigerated (air conditioned) models the temperature is controlled electronically.

Each machine has a model number and a serial number, given on the Serial Number Plate attached to the inside and rear of the vendor. Note these numbers for your records. All inquires and correspondence pertaining to this vendor should reference the model and serial numbers.

If you have any questions about information in the manual, replacement parts or the operation of the vendor, contact your local distributor or:

VendNet™
P. O. Box 488
165 North 10th Street
Waukee, IA 50263-0488 USA

PHONE: 1-515-274-3641
USA 1-800-833-4411

PARTS FAX: 1-515-987-4447

SALES FAX: 1-515-274-0390

SPECIFICATIONS

General

Height	68 inches	173 cm
Depth	35 ½	87
Width	3-Wide 29 5/16	74
	4-Wide 35 3/16	89
	5-Wide 41 inches	104 cm
Weight	3-Wide 577 lbs	261 kg
	4-Wide 648	295
	5-Wide 778	330

Electrical

Power	230 VAC	115 VAC
Cycle	50 Hz	60 Hz
Starting Amps	3.75	3.75

Refrigeration

Hermetically Sealed
Electronic Controls
R-134a Refrigerant
1/3 Hp
5.9 Ounces

Capacity

80 - Select Controller Options:
80 Snack Selections
60 Snack Selections & 12 Satellite Canned
Drink Selections

Pricing

MDB Coin Mechanism

UNPACKING

To minimize installation time and to avoid service problems due to improper installation, follow the instructions outlined in this manual.

This machine has been thoroughly inspected before leaving the factory. The delivering carrier has accepted this vendor as its responsibility. Any damage or irregularities should be noted at the time of delivery and reported to the carrier. Request a written inspection report from the claims inspector to file any claim for damage. File the claim with the carrier (not the manufacturer) within 15 days after receipt of the machine.

Carefully remove the outside packing material in a manner not to damage the finish or exterior of the machine. Inspect the machine for concealed shipping damage. Report any damage hidden by the shipping material directly to the delivering carrier on a hidden damage report.

Record the model number and serial number of the vendor for your records. These numbers can be found on the Serial Plate located on the rear of the cabinet and/or inside the vendor. Refer to these numbers on all correspondence and inquiries pertaining to this vendor.

Remove the "Knock-A-Way" skid boards. Place a 2 x 6 under the vendor, insert a screwdriver or prying tool into the groove of the Knock-A-Way and split it in two. Turn the leveling screws in as far as possible. See **Figure 1**.

Position the vendor in its place of operation no further than 9 feet (2.74 meters) from the power outlet or receptacle and check that the door will open fully without interference.

Leave at least 6 inches (15 cm) of space between the back of the machine and any wall or obstruction for proper air circulation.

Level the vendor, making sure all leg levelers are touching the floor. The vendor must be level for proper operation and acceptance of coins through the coin mechanism.

The keys to the vendor are shipped in the coin return cup. Open the outer door and remove all internal packing material.

Consult all local, state and federal codes and regulations before installation of the vendor.

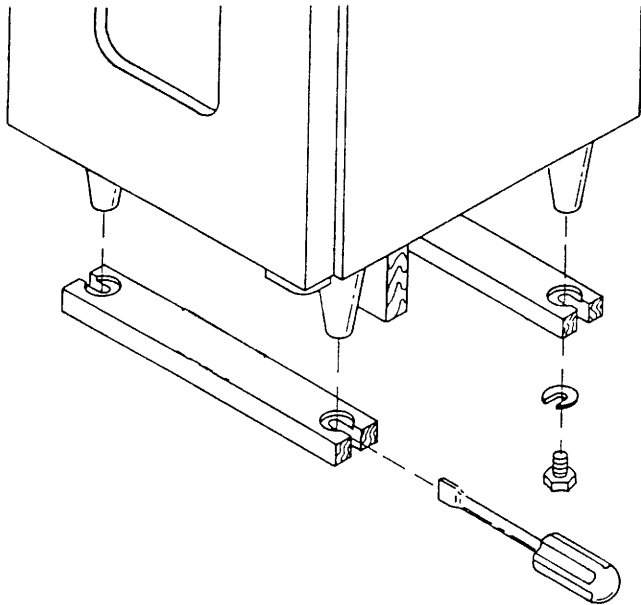


Figure 1

GROUNDING & ELECTRICAL

Prior to connecting the equipment, the integrity of the main electrical supply must be checked for correct polarity, presence of ground and correct voltage. It is recommended that these checks be repeated at 6-month intervals with the routine safety electrical testing of the equipment itself.

To correct negative voltage, amperage, polarity, or ground checks, consult a licensed electrician.

A noise suppresser has been installed in this machine to compensate for any main line signal noise that could interfere with the normal operation of the controller.

For 230 V vendors, the power source should be 230 VAC ($\pm 10\%$) 50 cycle, with at least a 10 amp circuit.

For 115 V vendors, the power source should be 115 VAC ($\pm 10\%$) 60 cycle, with at least a 10 amp circuit.

LOADING PRODUCTS

To load products, lift the tray slightly and pull forward until the tray stops. The upper-most trays will tilt for easier loading.

Load products from front to back, making sure all items fit freely between the augers. Do not attempt to force oversize items or packages into the spaces. Start loading at the front and do not skip a space. The bottom of package should be placed on the bottom of the compartment above the product augers. The label should face the front of the machine for easy identification by the customer. See Figure 2.

When finished loading each tray, make sure the tray is returned to its proper standby position. All trays must be pushed to the rear of the cabinet and properly seated in the "detent" position.

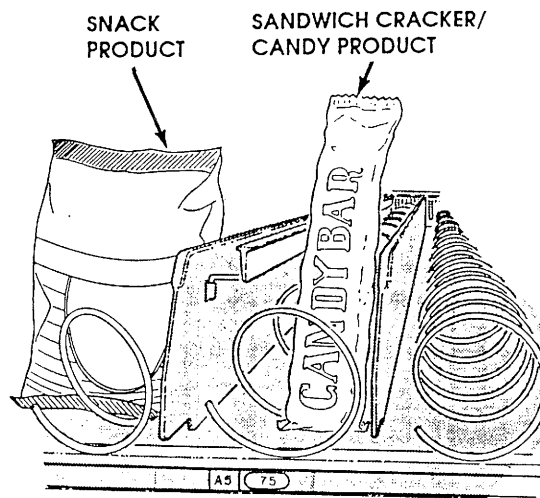


Figure 2

The size of the item being vended must be larger than the diameter of the auger being used to vend properly. Undersized items could cause vend problems. If the product does not fit the auger properly, it is recommended that a different auger be used. Optional kits are available; see the Parts Ordering section for ordering information.

CHANGING TIMING, TRAY SPACING & CONFIGURATION

Difficult-to-vend items can be dispensed more dependably by retiming the augers. Large items can be vended by altering tray spacing. Different product mixes can be vended by changing the tray configuration with a conversion kit from your service entity.

Timing

Each auger can be rotated in 20-degree increments for a different drop-off point. Most items vend successfully when the auger end is positioned at 6 o'clock.

To change the auger end positions:

1. Remove the motor cover.
2. Raise the motor slightly and pull forward on the auger until it separates from the motor. See **Figure 3**.
3. Rotate the auger to the desired position and re-insert the auger coupling into the motor.
4. Make sure the auger coupling is seated over the vertical rail or retaining rib on the tray.
5. Replace the motor cover and securely tighten.

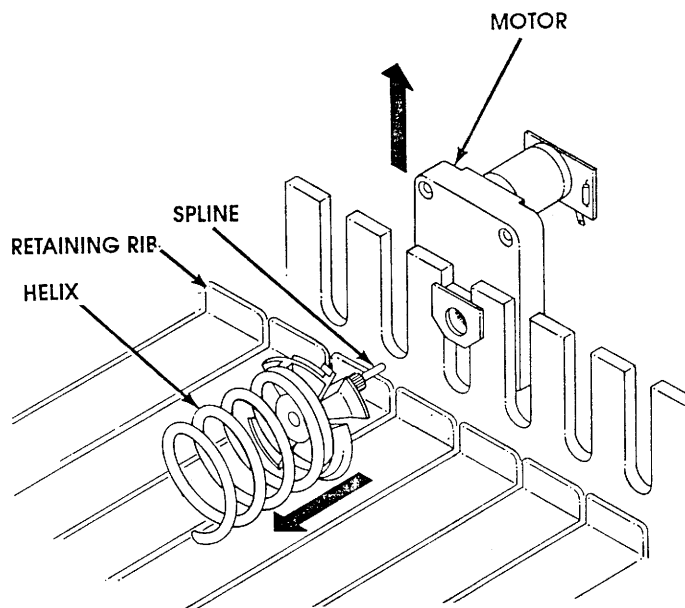


Figure 3

Tray Spacing

The trays can be adjusted up or down in one inch increments to provide additional headroom for vending taller products.

NOTE:

When increasing the headroom between two trays, a corresponding decrease in headroom of an adjoining tray will result.

To change tray spacing:

1. Pull out the tray to be adjusted until it stops.
2. Open the harness clamp on the right side wall by pressing up on the tab. See **Figure 4**.

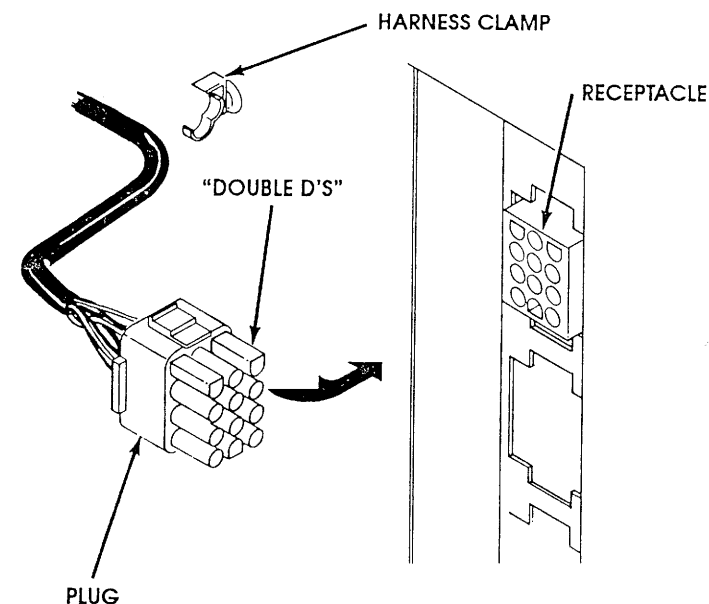


Figure 4

3. Unplug the 'Double D' tray plug from its receptacle on the right side wall.
4. Lift up on the front of the tray and pull slightly forward (approximately 1/2 inch/ 1.5 cm) to clear the tray stop.
5. Lift up on the rear of the tray and remove it from the vendor.
6. Disengage both left and right tray rails from their corresponding slots on the left and right side walls: pull inward on the bottom front of each rail and pull its flange out of the slot.

- Pull each rail forward to disengage its rear tab from the hole in the rear wall. See **Figure 5**.

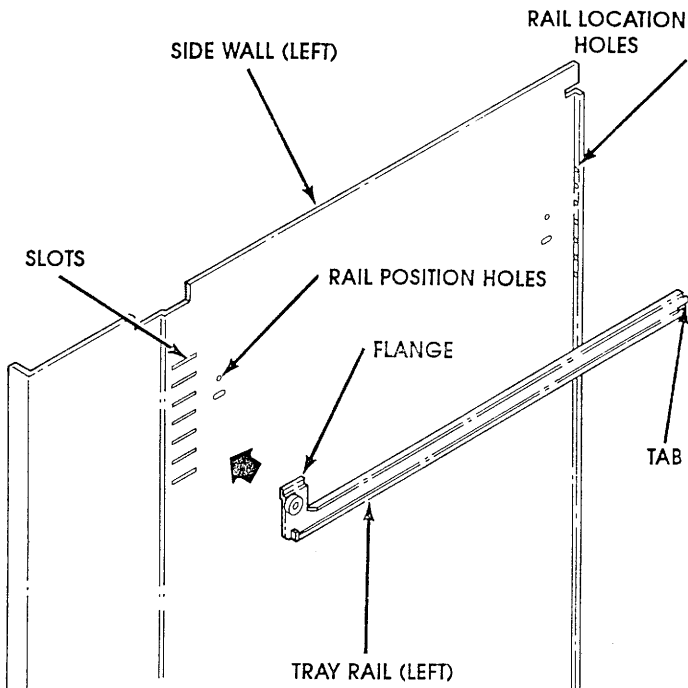


Figure 5

- Relocate both left and right rails by reversing steps 6 and 7.

NOTE:

Rails must be level front to back and right to left.

- Replace the tray by placing its rear rollers on the left and right rails and lifting up on the front of the tray as you push it back.
- Install the tray plug into its receptacle on the right side wall.
- Re-engage the tray harness into its harness clamp and snap the clamp closed.
- Test vend the tray in its new position to assure that the tray plug is properly seated.

Tray Configuration: Candy to Snack

To change the tray configuration, order a conversion kit: see the "Parts Ordering Procedure" section of this manual.

- Unplug the harness and remove the tray assembly from the vendor. Place the tray harness in the tray before removal.
- Remove the motor cover and retain any hardware.
- Remove existing tray divider and discard.
- Remove existing auger assemblies and discard.
- Remove the existing even-numbered motor. This motor will not be needed.
- Tape or secure the terminals removed from the motor out of your way.
- Move the odd-numbered motor to the center slot of the compartment.
- Install the auger retainer furnished as part of the conversion kit.
- Install the auger assembly furnished as part of the conversion kit, making sure the motor coupling properly engages the motor and is securely snapped over the vertical rail or retaining rib on the tray.
- Replace the motor cover removed in step 2.
- Replace the tray assembly into the vendor. Make sure the tray is properly located and latched, and connect the tray harness
- Set the selection to the desired vend price and adjust the price scroll to agree.

NOTE:

In large-item selections, the selection numbers will be the odd numbers. If selections C3 and C4 are converted to a single compartment, the selection number would become C3.

- Test vend the converted selections for proper operation and price settings.

Tray Configuration: Snack to Candy

To change the tray configuration, order a conversion kit: see the "Parts Ordering Procedure" section of this manual.

1. Unplug the harness and remove the tray assembly from the vendor. Place the tray harness in the tray before removal.
2. Remove the motor cover and retain any hardware.
3. Remove the existing auger assembly and discard.
4. Remove the auger retainer and discard
5. Move the motor from the center slot to the left slot in the compartment.
6. Add the new motor furnished as part of the conversion kit in the right-hand slot of the compartment.
7. Properly wire the motor and switch. (Refer to Wiring Diagram for wire colors and locations).
8. Add the divider furnished as part of the conversion kit.
9. Install the new auger assemblies furnished as part of the conversion kit, making sure the motor couplings properly engage with the motor and are securely snapped over the vertical rail or retaining rib on the tray.
10. Replace the motor cover removed in step 2.
11. Replace the tray assembly into the vendor. Make sure the tray is properly located and latched, and connect the tray harness
12. Set the selections to the desired vend price and adjust the price scrolls to agree.
13. Test vend the converted selections for proper operation and price settings.

CONTROLLER FUNCTIONS

Sales Mode

The *Sales Mode* is the normal operating mode of the vendor.

At the start of a sales cycle, **.00** displays.

If the coin tube level of the changer's lowest denomination is below the lowest sensor, the "USE CORRECT CHANGE" LED will light.

As money is deposited, the amount of credit displays.

NOTE:

Upon initial power up or a reset condition, ---- displays until the peripherals and the controller have been initialized.

The customer presses the desired selection number on the keypad and the selection number displays.

The controller compares the established credit with the vend price of that selection.

- If sufficient credit is available and the selection is present, the vend cycle will start.

Following a successful vend, the amount of change to be returned displays for two seconds or until all coinage is paid back.

The vend counter is incremented by one and the cash counter is incremented by the price of the selection vended.

NOTE:

Counter rollover occurs at 99,999,999 for the number of vends and \$999,999.95 for the total cash sales.

- If credit is less than the selection price, the price will flash for three seconds or until a different selection key is pressed.

- If the motor is flagged as faulty, the selection number and the “MAKE ALTERNATE SELECTION” LED will flash for three seconds or until a different selection key is pressed.
- If an item is selected and the vendor is unable to complete the vend cycle, the “MAKE ALTERNATE SELECTION” LED will flash for three seconds or until a different selection key is pressed. The selection is disabled and will remain inoperative until cleared or repaired. The credit is returned to the customer.

When the credit amount equals or exceeds the highest priced item, the vendor no longer accepts credit.

NOTE:

Credit acceptance is controlled by the coin mechanism.

Service Mode

To change any settings and retrieve diagnostic information, the controller must be placed in the *Service Mode*.

When the controller is placed in the *Service Mode*, the number of active motors displays. If any errors were detected during a vend, the failed motors display , followed by any MDB error codes.

Record the displayed information immediately. Any keypad input will erase this data. MDB errors are cleared upon exiting the *Service Mode*.

To enter the *Service Mode*, open the door of the vendor and press the Service Mode Button on the Control Board. (See **Figure 6**.)

To exit the *Service Mode*, press the Service Mode Button. The vendor will also exit the *Service Mode* if there is no key pressed for approximately 25 seconds.

If you are in the process of changing data when you exit the *Service Mode* (either by pressing the Service Mode Button or by allowing the system

to time-out) any unfinished changes will be ignored, leaving the data in its previous state.

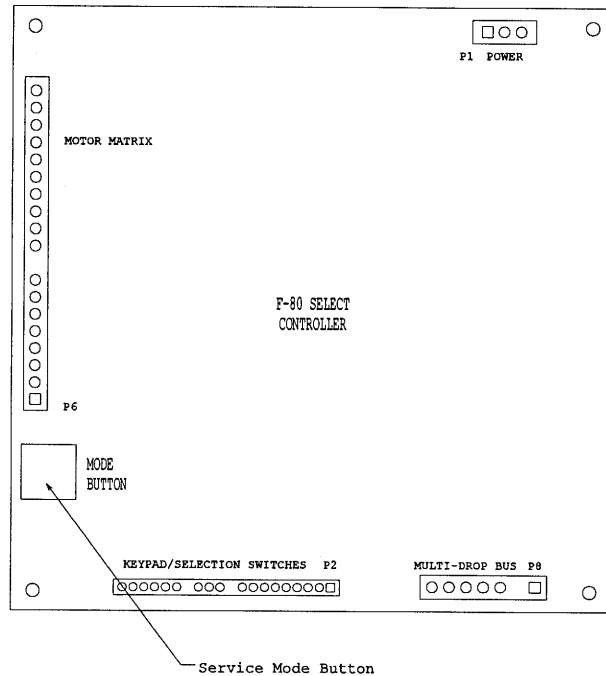


Figure 6

Displayed Errors

Motor Configuration Errors

If any errors were detected during a vend, the failed motors display when the controller is placed in the *Service Mode*. The displayed motors were functional when the *Sales Mode* was last activated, but, due to failures or removal, are not in the circuit now.

For instance, if during a vend the controller detected a motor switch failure, that selection would be flagged and would be disabled. That motor would display the next time the *Service Mode* is entered.

MDB Errors

These errors are only displayed when the *Service Mode* is entered and are cleared upon any keypad activity or upon exiting the *Service Mode*.

Table 1. Error Codes

Displays	Description
CScF	Invalid changer scale factor
tSnS	Defective coin tube changer
CJAM	Coin jam detected
tJAM	Coin tube jam detected
CnEr	Coin acceptance problem detected
AcEr	Acceptor unplugged
ChEr	Coin changer ROM checksum bad
bScF	Invalid acceptor scale factor
bSnS	Defective bill sensor
bJAM	Bill jam detected
StFL	Bill stacker is full
CShb	Bill cash box is out of position
bMtr	Bad bill motor detected
bLEr	Bill acceptor ROM checksum bad
rScF	Invalid card reader scale factor
CdEr	Card error detected
bCrd	Invalid card detected
rJAM	Card reader jam detected
CoEr	Communications error detected
brdr	Card reader failure

Programming the Controller

To access the programming, enter the *Service Mode*, then choose from the following modes.

Table 2. Modes

Press	Display	Mode
<1>	Coin	Coin Dispense
<2>		Motor Count
<3>	Acct	Accountability
<4>	Prc	Price Setting
<5>	Slct	Test Vend Single Motor
<6>		Test Vend All Motors
<E>	Optn	Vend Options

Coin Dispense Mode

In the Coin Dispense Mode, coins stored in the coin mechanism payout tubes can be removed.

Press the Service Mode Button, then press <1>.

Coin displays.

Table 3: Coin Dispense Functions

Press	To dispense a coin of:
<A>	the lowest denomination
	the next higher denomination
<C>	the next higher denomination
<D>	the highest denomination

Pressing a key once will pay out one coin. Pushing and holding a key will allow the coins to pay out at a rate of approximately two per second. Coins will continue to be dispensed from the pay-out tube as long as its activating key is pressed.

Pushing any key other than <A>, , <C> or <D> will exit back into the *Service Mode*.

Motor Count Mode

The Motor Count Mode displays the total number of functional motors configured within the machine. This number should equal the total number of selections. Only the total number of functional motors displays; individual selection numbers do not display.

Press the Service Mode Button, then press <2>. The controller tests each motor in the configuration.

If the motor count displayed does not agree with the total number of selections in the machine, the electrical circuit of all motors is not complete.

To exit, press the Service Mode Button once.

To determine which motor is not functioning:

1. Were faulty motors displayed when placed in the *Service Mode*?
2. Test vend single selections.
3. Test vend all selections.
4. Refer to the "Troubleshooting" section of this manual for further assistance.

Accountability Mode

The total vends and total cash are displayed. This information is not resettable to zero. The display will continue to flash the accounting data until the mode is exited.

Press the Service Mode Button, then press <3>.

Acct displays.

For the Vend Count, press <A>. The first four digits of an eight digit number display. Then, the last four digits will display.

For the Cash Total, press . The first four digits of an eight-digit number display. Then, the last four digits (including any decimal point) display.

To exit, press another function key or press the Service Mode Button.

Price Setting Mode

A vend price must be set for each selection. The price programmed must match the desired item and price scroll. To check a price, push the selection numbers while in the *Sales Mode*.

Press the Service Mode Button, then press <4>. **Prc** displays.

NOTE:

The changer must be installed to verify the correct price.

If the item price is set to .00, the item will vend for free.

1. Press the selection letter and number of the selection you want to price. That selection's current price displays.
2. To change the price:
 - To decrease the value, press <#>.
 - To increase the value, press <*>.
3. To save the price displayed:
 - press the selection number of the next item to be priced,
 - press another function key, or
 - press the Service Mode Button.

NOTE:

When setting vend prices, make sure the price scrolls on the product shelves agree with the vend prices programmed into the controller and that the selection labels are properly located below the item.

Test Vend Single Motor Mode

CAUTION:

Because this vendor utilizes DC motors, do not attempt to turn the helix manually or damage to the motor could occur.

To verify that a selection is functioning properly, the controller will check the motor circuit and try to run the selection through a complete vend cycle. The vend count is not increased.

Press the Service Mode Button, then press <5>.

Sltc displays. Press the letter and number of the selection to be tested.

- If the selected motor is operational, the motor will run one complete cycle and the controller will return to the *Service Mode*.
- If the selected motor fails, **FAiL** will display for two seconds; then the controller will return to the *Service Mode*.

NOTE:

Test vending a flagged selection will reset the flag if the motor successfully completes a vend cycle. Entering and exiting the *Service Mode* will also reset the flag, even if the motor is non-functional.

To exit back to the *Sales Mode*, press the Service Mode Button once.

Test Vend All Motors Mode

All selections in the machine can be tested to verify that they are functioning properly. The controller will check the motor circuits and run each selection, starting with the first motor in the first row, and progressing upward.

The operator must observe the testing of the selections, because the controller will skip any motor(s) that is not sensed on the motor circuit prior to beginning the machine test.

The test vend modes do not effect the accounting data information.

Press the Service Mode Button, then press <6>. The selection number of each motor is displayed as it is tested.

- If the vend is successful, the controller will continue with the next selection.

- If the vend fails, **Fail** displays for two seconds. Then the next motor is tested.

The test may be stopped at any time by pressing and holding any key on the selection keypad during the test. Doing this returns the program to *Service Mode*.

To exit back to the *Sales Mode*, press the Service Mode Button.

Vend Options Mode

Various sales options can be enabled and disabled through this option. See **Table 4**.

Press the Service Mode Button, then press <E>. **Optn** displays.

To exit the Vend Options Mode, press a different function key, or press the Service Mode Button.

Table 4. Vend Options Mode

Press	Option	Displays	To Toggle, Press	Description
<A>	Force Vend	Fcry = On	<A>	If a dollar bill is used, a purchase is necessary to receive change. Overrides the "coin return" command.
		Fcrn = Off		The vendor can be used as a change machine.
	Bill Escrow	Escy = On		Returns the bill to the customer when no vend is made and the coin return button is pushed. (Must have a validator with escrow capabilities.)
		Escn = Off		Gives change for bill when the coin return button is pushed.
<C>	Multi Vend	MULy = On	<C>	Multiple purchases can be made as long as adequate credit is available. After 20 seconds of no activity the change will be returned automatically.
		MULn = Off		Customer immediately receives the change after a vend.
<D>	Can Drink	Cany = On	<D>	Host can run a satellite can drink vendor. Selection motors are configured upon exiting the <i>Service Mode</i> when this option is changed.
		Cann = Off		Satellite can drink vendor selections are disabled.
<F>	Free Vend	FrEy = On	<F>	All product vended at no charge to customer.
		FrEn = Off		Individual price settings used.
<2>	Fast Change	Fchy = On	<2>	Change due is returned as soon as a selection is made.
		Fchn = Off		Change due is returned after a selection is made.

TEMPERATURE CONTROL

The environmental temperature controller regulates the temperature inside the vending machine. The controller samples the air temperature once each second and activates or deactivates the refrigeration compressor to regulate the temperature at an optimal set point.

Refrigeration cut-in 68°F

Refrigeration cut-out 58°F

The set point temperatures have been pre-programmed into the controller and are not adjustable.

Operation

At the initial power up or reset, the temperature controller will pause for approximately three minutes before the refrigeration compressor. During this period the controller goes through a calibrating sequence, sampling and averaging the temperature and monitoring the controller inputs.

After the initial three-minute pause the controller will compare the average temperature to the pre-programmed set points. If the average temperature is greater than the refrigeration cut-in set point, the refrigeration compressor will be activated.

If the average temperature is below cut-in set point, the controller will continue to sample the temperature.

When in the cooling mode, the controller monitors the time elapsed while attempting to reach the refrigeration cut-out temperature. If this time ever exceeds two hours, the controller will enter a “defrost mode”. The refrigeration is deactivated for fifteen minutes and then reinstated. The defrost mode enables the refrigeration unit to shed any ice that may have formed on the evaporator.

Status LEDs

The LEDs on the lower right of the inside cabinet provide visual verification of the status of the temperature controller.

- The green LED lights when the controller is in the cooling mode.
- The red LED is not used.
- The yellow LED indicates operating status:

Yellow LED blinking with the on time equal to the off time: indicates normal operating mode.

Yellow LED blinking two on and then off, two on and then off: indicates the refrigeration is in a defrost cycle. This mode is entered if the refrigeration unit has been on for more than two hours continuously. This mode will be exited automatically after a defrost period of 15 minutes.

Yellow LED not blinking at all: indicates the temperature sensor may be defective or the controller may not be able to perform a temperature and/or calibration conversion cycle. See the “Refrigeration Troubleshooting” section of this manual.

REFRIGERATION TROUBLESHOOTING

Know and understand how to service the unit and how it operates. Units may vary, but the operation is basically the same. Never guess at the problem, find the symptom before attempting any repair.

NOTE:

Most refrigeration problems are electrical.

This system was not meant to be worked on in the field. Three things that can go wrong with a sealed system and should be repaired at the Factory Service Center are:

- Low Charge - usually caused by leaks; look for oil around seals and welds. Unit will not seal properly.
- Restriction in Systems (unit frosts, then melts) - not cooling properly, low side in vacuum
- Bad valves - unit does not cool properly; noisy compressor

Compressor will not start

Check to see if compressor has power:

1. Tripped breaker or blown fuse
2. Wall outlet faulty
3. Short or tear in power cord
4. Improper wiring
5. Faulty temperature control board: bad relay

Compressor trips on Overload

1. Improper voltage: Should be within 5-10% above, 5% below. Using the voltage section of the Multi-Meter, check the power source.
2. Overload defective:

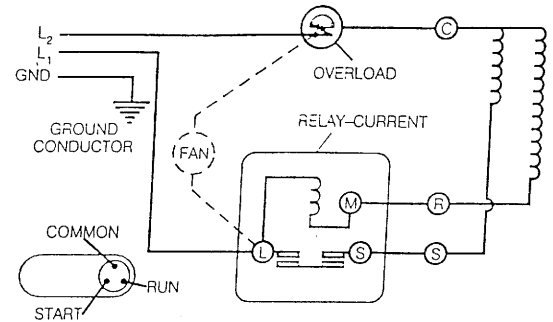
NOTE:

Power must be off and fan circuit open.

Use the resistance section of the Multi-Meter to check terminals 1 and 3 for continuity. If no continuity is measured (infinity), overload

may be tripped. Wait 10 minutes and retry. If still no continuity, overload is defective.

3. Compressor Start Relay defective: Test with Multi-Meter. (See **Schematic 1.**)
 - Unscrew lead terminals and remove relay from compressor. Keep relay upright.
 - Check terminals 1 and S, or L and S. Replace relay if there is continuity.



Schematic 1

4. Check the compressor (See **Schematic 1.**) Check the winding resistance with the Multi-Meter. If readings are not within 2 Ohms, the compressor is faulty. Use the RXI scale.

Table 7. Winding Resistance

Measured between	Ohms
COMMON to START	12
COMMON to RUN	2
COMMON to SHELL	No Continuity
RUN to START	14

WARNING:

Wiring diagrams must be followed as shown. Any deviation can cause serious electrical hazard and potential damage or rupture component electrical parts

5. Short in other component: Isolate and eliminate each electrical component until short is found.
6. Compressor is too hot
 - Dirty condenser
 - Faulty condenser fan motor or blade
 - Restricted air flow

NOTE:

The condenser must be kept clean of dirt and debris to allow for proper air circulation

Noisy or vibrating unit

1. Components rubbing or touching each other
 - Check fan blades and motor
 - Loose shrouds and harness
 - Copper tubing
 - Loose or unsecured parts
2. Worn or aged grommets
3. Compressor
 - Bad Valves
 - Slugging
 - Bad windings (See **Schematic 1.**)
4. Compressor Start Relay frozen in start position (See **Schematic 1.**)
5. Low voltage

Unit short cycles

1. Sensor in wrong area (i.e., touching evaporator or other metal)
2. Defective temperature controller board

Unit operates long or continuously

1. Air flow restricted
 - Faulty evaporator fan motor or blades causing coils to ice over
 - Air flow blocked by product in front of evaporator
2. Gasket leak
3. Excessive load: After loading, unit will run longer to pull out excessive heat from product.
4. Shortage of refrigerant or restriction
5. Defective temperature controller board

Refrigerated space too warm

1. Temperature switch on controller board set incorrectly. See “Temperature Control” section of this manual.
2. Restricted evaporator space
3. Evaporator fan motor or blades faulty. This causes the coils to ice over the evaporator.

4. Condenser air flow restricted
 - Plugged or dirty condenser
 - Condenser fan motor or blades bad
 - Blade stuck
4. Condensing space restricted
 - Unit placed too close to a wall
5. Compressor - bad valves
 - Capillary tube will start frosting 8 to 10 inches past evaporator connection tube
 - Check for oil around brazed connections

Refrigerated space too cold

1. Temperature switch on controller board set incorrectly. See the “Temperature Control” section of this manual.
2. Defective temperature sensor.
Check resistance: a “short” or “open” could indicate a defective sensor.

NOTE:

Measure the resistance of the temperature sensor with the power off and the connector to J1 removed from the temperature controller board.

- A. Turn off power switch.
- B. Locate the thermistor assembly: reach behind lower storage shelf, through the hole, and grasp the thermistor harness.
- C. Unplug the harness.
- D. Using a Multi-Meter set to Ohms (Ω), touch one probe to pin 1 and the other to pin 2 on the thermistor harness.
At a temperature of 77°F (25°C) the resistance should measure 10,000 Ohms (10k Ω).
 - If the temperature is warmer, the resistance will be lower.
 - If the temperature is cooler, the resistance will be higher.

Refrigeration Unit Removal

The refrigeration unit is a hermetically sealed completely self-contained modular 1/3 H.P. unit charged with 5 ounces of ozone-friendly R-134-a refrigerant. The complete refrigeration unit can be removed if there is a service problem.

CAUTION:

Do not place any object in the evaporator assembly area or inside the cabinet area that will block the air flow. This may damage the refrigeration system, which may void the refrigeration warranty.

1. Unplug the power cord.
2. Open the door.
3. Remove the screws at the bottom, front of cabinet (3 in 3-Wide).
4. At front corners, pry up with fingers. Lift enough to clear foam over lip.
5. Tip the back up and rock it to remove cover.
6. Take the screen out and clean.
7. Unplug the refrigeration harness on the right, back side of unit.
8. Unplug the tray harness and remove the bottom tray.
9. Remove the right side rail.
10. Loosen screws on brackets holding refrig unit in place. Slide keyhole slots off.
11. Move the sensor cord out of the way.
12. Pull the refrigeration unit forward and lift out.

CARE & CLEANING

CAUTION:

Always disconnect power BEFORE cleaning.

Cabinet Interior

Wash with a mild detergent and water, rinse and dry thoroughly. Odors may be eliminated by including baking soda or ammonia in the cleaning solution. Plastic parts may be cleaned with a quality plastic cleaner. Do not get the cleaning solution on electrical components.

Cabinet Exterior

Wash with a mild detergent and water, rinse and dry thoroughly. Clean occasionally with a quality car wax. Remove and clean Condensate Drain Hose to eliminate any deposits that may restrict condensate water flow.

Refrigeration System

Clean dust from condenser and screen in the front door with a soft bristle brush or a vacuum cleaner. Remove any dirt or debris from the refrigeration system compartment. If the condenser coil is not kept clean, the compressor will overheat or fail, voiding the sealed system warranty. Clean the condensation pan.

PARTS ORDERING

Augers

Table 8. Available Auger Sizes

Auger Type	Product Size			Auger Part No.
	Width (in.)	Thick. (in.)	# of Items	
Candy	2-3/4	1-3/16	15	4200272-000
	2-3/4	15/16	18	4200272-001
	2-3/4	21/32	24	4200272-002
	2-3/4	1/2	30	4200272-003
	2-3/4	1-1/2	12	4200272-004
	2-3/4	2-1/32	9	4200272-005
	2-3/4	3-3/32	6	4200272-006
Snack	5-1/2	1-13/16	10	4200272-007
	5-1/2	1-1/2	12	4200272-008
	5-1/2	1-3/16	15	4200272-009
	5-1/2	2-11/16	7	4200272-010
	5-1/2	2-5/8	8	4200272-011

If you have any questions:

check out our Website
<http://www.vendnetusa.com>

call VendNet™ at 1-515-274-3641 or
1-800-833-4411 (USA)

send us Email at VendNet@Ecity.net

Ask for the Parts Department.

We will be happy to assist you.

Procedure

When ordering parts, include the following:

1. Shipping address.
2. Address where the invoice should be sent.
3. The number of parts required.
4. The correct part number and description. Always refer to the pertinent parts and/or part manual.
5. The model and serial numbers of the machine for which the parts are needed.
6. Any special shipping instructions.
7. Carrier desired: air or air special, truck, parcel post or rail.
8. Signature and date.
9. Purchase order number, if used.
10. Mail your order to

VendNet™

P. O. Box 488

165 North 10th Street

Waukee, IA 50263-0488 USA

PARTS FAX: 1-515-987-4447

SALES FAX: 1-515-274-0390

All orders are carefully packed and inspected prior to shipment. Damage incurred during shipment should be reported at once and a claim filed with the terminating carrier.

If you do not have the right parts manual: contact your local distributor or VendNet™. They will be able to assist you.

Use the most accurate description you can and include the name of the assembly in which it is used and, if practical, a sample part. Furnish any information which will enable our Parts Department to pinpoint the exact part needed.

