Quality

# COMBINATION SNACK/BEVERAGE (Combo-3/6) 



Model: 3155

Service Manual

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The Model and Serial numbers 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 machine.

MODEL NUMBER: $\qquad$

SERIAL NUMBER: $\qquad$

## SPECIFICATIONS

## Physical Dimensions

| MODEL | WIDTH |  | DEPTH |  | HEIGHT |  | WEIGHT |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Inches | $\mathbf{C m}$ | Inches | $\mathbf{C m}$ | Inches | $\mathbf{C m}$ | Pounds | $\mathbf{K g}$ |
| 3155 | 42 | 106 | $34-3 / 8$ | 87 | 72 | 183 | 963 | 437 |

## Electrical

115 Volt AC: $\quad 60 \mathrm{~Hz}, 7.5 \mathrm{Amps}( \pm 10 \%)$
230 Volt AC: $\quad 50 \mathrm{~Hz}, 3.75 \mathrm{Amps}( \pm 10 \%)$, 862.5 Watts
Transformer: 24 Volt AC

## Refrigeration System

| Type: | 3 - Wide | $1 / 3$ Plus, Hermetically Sealed |
| :--- | :--- | :--- |
| Controls: | Electronic |  |
| Refrigerant: | R-134a |  |
| Charge: | 8.65 Ounces |  |

Factory Configuration
3-Wide: Snack 29 Select - Expandable to 42
3-Wide Beverage 6 Select

## Coinage

MDB version - any MDB peripheral device

## INTRODUCTION

This manual contains service and installation guidelines and instructions for the Combination Snack/Beverage product line.
All Combination models are equipped with an electronic control system. All programming of the vend functions, pricing and features is done at the controller. Changes can be made without any additional accessories or remote parts.

Selections can be priced individually from $\$ .05$ to $\$ 999.95$ in five cent increments (U.S. currency).

Features include:

- Multi Drop Bus (MDB) coin handling mechanism
- Self-diagnostics and cash accountability
- Multi Vend, Free Vend, Bonus Vend and Promo Vend features
- Hermetically sealed refrigeration system with R-134a refrigerant
- Programmable electronic control of the refrigeration unit
- Motorized delivery, electronically controlled


## CAUTION:

This vendor utilizes DC motors. Do not attempt to turn augers by hand. Motor damage could occur.

- Visual feedback when a product has been vended or when an error condition exists
- No change or loss of program/memory because of power failure

Cash accountability records Total Cash transactions and Total Vend cycles performed by the vendor. Information for individual selections, complete range (rows) or total machine can be compiled and used for inventory and ordering records

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.
This manual should be read thoroughly to become familiar with the functions of all components, along with the features that are available. The initial set-up of a vending machine is very important in insuring trouble-free operation of the equipment. Following the instructions at the initial installation of the machine will avoid service problems and minimize set-up time.
Should you have any questions pertaining to information in the manual, replacement parts or the operation of the vendor you should contact your local distributor or:

> VendNefim
> 165 North 10th Street
> Waukee, lowa 50263-USA
> Parts: (888) 259-9965
> Service: (800) 833-4411
> Parts Fax: 515-987-4447
> All Other: (888) 836-3638
> E-Mail: Vendnet@vendnetusa.com

## UNPACKING

This vendor was thoroughly inspected before leaving the factory and the delivering carrier has accepted responsibility for this vendor. Note any damage or irregularities at the time of delivery and report them 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 outside packing material to avoid damage to the finish or exterior of the machine. Remove adhesive residue with denatured alcohol or common household vinegar.

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 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-Away Skids by placing a block spacer under the vendor. See Figure 1. Insert a screwdriver or prying tool into the groove and split the skid in two. Discard the slotted washers located on each side of the wooden skids. Turn the leveling screws in as far as possible.


Figure 1. Removing Knock-Away- Supports

## INSTALLATION

Consult local, state and country codes and regulations before installation of the vendor.
CAUTION:
To insure reliability and maintain manufacturers equipment warranty, machine must NOT be placed in an environment where the temperature is greater than $90^{\circ} \mathrm{F} / 32^{\circ} \mathrm{C}$ and the relative humidity is $65 \%$ or greater.

1. Position the vendor in its place of operation no further thansix (6) feet $(2 \mathrm{~m})$ from the power outlet or receptacle.

## WARNING:

DO NOT USE EXTENSION CORDS. Extension cords can cause problems.
2. Leave at least six (6) inches ( 15 cm ) of space between the back of the machine and any wall or obstruction for proper air circulation.
3. Retrieve the keys to the vendor from the coin return cup.
4. Open outer door and remove all internal packing material.
5. Check that the door will open fully without interference.
6. Level the vendor, making sure all levelers are touching the floor. The vendor must be level for proper operation and acceptance of coins through the coin mechanism.

## Grounding (Earthing) \& Electrical

Before connecting the vendor, the integrity of the main electrical supply must be checked for correct polarity, presence of ground (earth) and correct voltage. These checks should be repeated at 6 -month intervals with the routine safety electrical testing of the vendor itself.
For proper operation of any equipment utilizing electronically controlled components, the equipment should be placed on an isolated or dedicated noise-free circuit.
For 115 -Volt vendors the circuit should be a minimum 15 Amp, 60 cycle, properly polarized and grounded (earthed).
For 230 -Volt vendors the circuit should be a minimum 7.5 Amp, 50 cycle, properly polarized and grounded (earthed).
To verify that the receptacle is properly grounded (earthed) and polarized, insert one probe of a Multi-Meter (set to check AC line voltage) or a test light in the ground (earth) terminal (hole) and the other probe into the hot terminal of the outlet. If unfamiliar with this procedure, contact a licensed electrician.
If the receptacle is not properly grounded (earthed) or polarized, you should contact a licensed electrician to correctly polarize and/or ground (earth) the receptacle to ensure safe operation.

A noise suppressor has been installed in this machine to compensate for any signal noise that could interfere with the normal operation of the controller.
Shown in Figure 2 and Figure 3 are properly grounded (earthed) and polarized wall outlets. Figure 2 shows two 230 -Volt wall outlets.


Figure 2. 230-Volt Outlets


Figure 3. 115-Volt Outlet

Connect the vendor power cord to a grounded 115 Volt AC, 60 Cycle, noise free polarized power source of not less than 15 Amps. Checking the power source can be accomplished with an AC Voltmeter in the following manner:

## 1. Voltage Check

When the AC Voltmeter probes are connected to the HOT and NEUTRAL terminals, the voltmeter should indicate 110 to 130 volts AC. See Figure 4.
2. Polarity and Ground Check When the AC Voltmeter probes are connected to the HOT and GROUND terminals, the voltmeter should indicate 110 to 130 Volts AC. See Figure 4.


Figure 4. Electrical Check with Voltmeter

## 3. Noise Potential Check

When the AC Voltmeter probes are connected to the NEUTRAL and GROUND terminals, the voltmeter should indicate 0 Volts AC. See Figure 4. Any voltage reading could cause noise problems in the electronic controller.

## 4. Amperage Check

At the fuse box or circuit breaker panel, locate the proper circuit and ensure that the fuse or breaker protecting that circuit is rated at 15 Amps or greater.

## NOTE

In a standard three (3) prong 115 Volt AC wall outlet the GROUND pin is round, the NEUTRAL pin is rectangular and located clock-wise from the ground pin and the HOT pin is rectangular and smaller than the neutral pin and located counterclockwise from the ground pin. See Figure 4.

To correct negative voltage, amperage, polarity, or ground checks, consult a licensed electrician. To correct a negative noise potential check, install a noise suppressor which can be obtained from any electrical or electronic supply store or in kit form.

## Outlet Tester

An easy to read outlet tester can be obtained from any electrical or electronic supply store.

Plug the tester into any grounded (3prong) 115 V AC outlet to detect faulty wiring. See Figure 5.

Read the indicator lights as explained on the tester. See Table 1 for explanation of faults.

Refer all indicated problems to a qualified electrician.


Figure 5. 3-Prong Outlet Tester

## CAUTION

## Unplug all equipment on branch circuit before testing.

## NOTE

This is not a comprehensive diagnostic instrument. Please refer to the tester packaging for more information.

Table 1. Indicated Problems when using a tester

| FAULT | REASON FOR FAULT |
| :---: | :---: |
| Open Ground | Ground contact not connected |
| Open Neutral | Neutral contact not connected |
| Open Hot | Hot contact not connected |
| Hot Ground Reverse | Hot and ground contacts interchanged |
| Hot Neutral Reverse | Hot and neutral contacts interchanged |

## Power Switch

Each vendor is equipped with a power switch located on the transformer panel along with a 3 -Amp breaker. The switch will shut-off the light and controller. See Figure 6.

The 3-Amp breaker is protection for the transformer.


Figure 6. Power Switch

## LOADING PRODUCTS

## Bottles/Cans Live Display

The Live Display provides a full view of the products being dispensed along with the price and selection number of each item.
To load the Live Display, simply slide the can or bottle into position from the rear. The black foam liner will hold the product securely in position. Be sure that the product label faces outward toward the customer.

Turn the price scroll to the correct price for each selection.

## NOTE

Facing the open machine, COLUMN 1 is the far right front column. COLUMN 2 is the far right back column. Column 5 is the far left front column. COLUMN 6 is the far left back column.

Standard 12 oz cans may be double loaded in the front and back, increasing the column capacity.

## Bottles/Cans

Make sure that the product being loaded matches the product displayed in the Live Display.
Make sure that the white composite Funnel Slide on each side of each product column is clean. See Figure 9. This assures that the product cannot bridge, blocking delivery from the product column. Then check the product cradle ("bed" area of the delivery mechanism located at the bottom of the product column) to be sure that it is properly aligned with the bed area face-down in each column. If it is not facedown, cycle the motor to re-position. If this is not done, motor may jam. See Figure 7.


Figure 7. Delivery Mechanism

Most products ( 10 to 20 ounce cans and bottles) may be loaded without column adjustment. However, the front and back gates to the product columns may be adjusted if necessary. To adjust column depth (front to back): with the gate closed, lift the gate assembly (right and left sections together) and reposition in the adjustment slots. Product should have not more than 1/8 to 1/4 in. free space at front or back of column. See Figures 7 and 8.


Figure 8. Bottle/Can Product Area.

## CAUTION:

- When loading bottled product, make sure that the bottoms of the bottles face the center of the machine. Load bottles in the back of the machine with bottom facing the attendant. Load bottles in the front of the machine with top facing the attendant.
- Do not load dented or damaged cans or bottles in the columns. Possible jams could occur.
- Do not store bottles in "spare" space of the cabinet. The refrigeration unit could be damaged.


Figure 9. Product Column (open)

## Drop Sensor Adjustment

The delivery chute uses a drop (vibration) sensor to detect whether product is vended after a selection is made. The drop sensor sends a signal to the controller when a product hits the delivery chute. The sensor is attached to the underside of the delivery chute.

## To Adjust Drop Sensor:

1. Locate the sensor adjustment screw on the drop sensor board. See Figure 9a.
2. Use a small flat head screwdriver to slowly turn the adjustment screw clockwise (increase sensitivity) and stop when the indicator light comes on.
3. Slowly turn the adjustment screw counterclockwise (decrease sensitivity) and stop when the indicator light goes out. At this point begin to turn adjustment screw counterclockwise four and a half (4-1/2) additional turns. Test the sensor for proper operation by tapping the delivery chute. The indicator light should blink when the chute is tapped.
4. Close the door and perform several test vends.
5. If vending special products, the drop sensor may need the following additional adjustments:

- If machine is sending more than one product per vend request, open the door and turn adjustment screw clockwise 1/4 turn (to increase sensitivity). Test vend. Repeat procedure if necessary.
- If machine fails to vend product upon vend request, turn adjustment screw counterclockwise $1 / 4$ turn (to decrease sensivity). Test vend. Repeat procedure if necessary.


Figure 9a. Drop Sensor Adjustment

## Packaged Snacks

To load products, lift the tray slightly and pull forward until the tray stops. The uppermost trays 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. Do not skip a space. Place the product on the bottom of the compartment on the product augers, with the label facing the front of the machine for easy identification by the customer. See Figure 10.
When finished loading each tray, lift and push it back into the cabinet. All trays must be pressed to the rear of the cabinet and properly seated in the detent position.


Figure 10. Loading Example
The size of the item being vended must be larger than the diameter of the auger being used to vend properly. Undersize items could cause vend problems. If the product does not fit the auger properly, use a different pitched auger or appropriate product spacer. See the following table for augers available from your distributor or service entity.

Available Augers

| SELECTION |  |  | COMBO AUGER PART NUMBER |
| :---: | :---: | :---: | :---: |
| TYPE/COLUMN WIDTH/DIA \& ROTATION | PRODUCT SPACE | COUNT |  |
| CANDY <br> 2-3/8" DIA CCW <br> (2-3/4" WIDE COLUMN) | .5" | 24 | 4211397.006309 |
|  | .7" | 18 | 4200272.112309 |
|  | .9" | 15 | 4211397.004309 |
|  | 1.0" | 13 | 4200272.116309 |
|  | 1.2" | 11 | 4211397.002309 |
|  | 1.4 " | 10 | 4211397.003309 |
|  | 1.7 " | 8 | 4211397.001309 |
|  | 2.0 " | 7 | 4200272.122309 |
|  | 2.3 " | 6 | 4211397.023309 |
|  | 2.9" | 5 | 4200272.123309 |
|  | 3.8" | 4 | 4211397.015309 |
| SNACK (CRISPS) <br> 2-25/32" DIA CCW <br> (4-5/16" WIDE COLUMN) | 1.2" | 11 | 4200272.114309 |
|  | 1.6" | 9 | 4200272.115309 |
|  | 1.9 " | 8 | 4200272.119309 |
|  | 2.0 " | 7 | 4211397.011309 |
| DUAL <br> 2-3/8" DIA CW <br> (5-3/4" WIDE COLUMN) <br> Note: <br> Dual type selections require a pair of matching $2-3 / 8^{\prime \prime}$ diameter augers - CCW on the left and CW on the right. Please select matching auger from Candy type. | .9" | 15 | 4211398.004309 |
|  | 1.4 " | 10 | 4211398.003309 |
|  | 1.7" | 8 | 4211398.001309 |
|  | 2.0 " | 7 | 4211398.002309 |
|  | 2.3 " | 6 | 4211398.013309 |
|  | 2.9" | 5 | 4211398.023309 |

## Product Ejectors

Product ejectors can be added to the end of the augers to help move the product out of the tray area (see Figure 11). Order P/N 4025748.


Figure 11. Product Ejectors

## CHANGING AUGER TIMING, TRAY CONFIGURATION \& TRAY SPACING

By re-timing the augers, difficult-to-vend items can be dispensed more consistently. By altering tray spacing, larger items can be vended. By changing the tray configuration, different product mixes can be accommodated.

## Retiming

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

1. Unsnap and lift the motor slightly and pull forward on the auger until it separates from the motor. See Figure 12.
2. Rotate the auger to the desired position and re-insert the auger coupling into the motor.
3. Make sure the splined auger coupling snaps into place and is seated over the vertical rail (see Figure 12) or retaining rib on the tray.
4. Gently pull forward on the auger to verify proper installation.


Figure 12—AUGER TIMING

## Tray Configuration

## Candy to Snack

1. Order the conversion kit from your local distributor or service entity.
2. Unplug and remove the tray assembly from the vendor. Place the tray harness in the tray before removal.
3. Remove existing tray divider and store for possible future use.
4. Remove existing auger assemblies and store for possible future use.
5. Remove the existing "even" numbered motor. This motor will not be needed.
6. Dress terminals removed from the motor around the tray harness and tape in place.
7. Move the "odd" numbered motor to the center slot of the compartment.
8. Install the auger retainer furnished as part of the conversion kit.
9. Install 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 (see Figure 8) or retaining rib on the tray.
10. Replace the tray assembly into the vendor making sure that the tray is properly located and latched and connect the tray harness
11. Set the selection to the desired vend price and adjust the price scroll to agree.
12. Test vend the converted selections for proper operation and price settings.

NOTE
In large item selections, the selection numbers will be the "odd" numbers. For example, selections C3 and C4 are converted to a single selection, C3.

## Snack to Candy

1. Order the conversion kit from your local distributor or service entity.
2. Unplug and remove the tray assembly from the vendor. Place the tray harness in the tray before removal.
3. Remove the existing auger assembly and store for possible future use.
4. Remove the auger retainer and store for possible future use.
5. Move 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 the Schematic section for wire colors and locations).
8. Add the divider furnished as part of the conversion kit.
9. Install new auger assemblies furnished in conversion kit, making sure the motor couplings properly engage with the motor and are securely snapped over the vertical rail (see Figure 8) or retaining rib on the tray.
10. Replace the tray assembly into the vendor making sure that the tray is properly located and latched and connect the tray harness.
11. Set the selections to the desired vend price and adjust the price scrolls.
12. Test vend the converted selections for proper operation and price settings.

## Tray Spacing

The trays can be raised or lowered in one-inch $(2.5 \mathrm{~cm})$ increments to provide additional headroom for vending taller items.

## NOTE

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

1. To change the vertical tray spacing, follow these steps:
2. Pull out the tray to be adjusted until it stops.
3. Disengage the tray harness from its snap-open harness clamp on the right-hand wall.
4. Disconnect the tray plug from its receptacle on the right side wall.
5. Lift up on the front of the tray and pull slightly forward (approximately $1 / 2 \mathrm{inch} / 1.25$ cm ) to clear the tray stop.
6. Pull tray out until it tilts down. Lift the rear of the tray and remove it from the vendor.
7. Disengage both left and right tray rails from their slots on the side walls: pull inward on the bottom of each rail and pull its flanges out of the slots in the front and rear.
8. Relocate both left and right rails by reversing step 7.

NOTE
Rails must be level front to back and right side to left side.
9. Replace the tray by placing its rear rollers on the left and right rails and lifting up slightly on the front of the tray as you push it back until the tray latches in its detent position.
10. Plug the tray harness into its receptacle on the right side wall.
11. Re-engage the tray harness into its harness clamp and snap the clamp closed.
12. Test vend the tray in its new position to assure that the tray plug is properly seated.


Figure 13. Removing a Tray Rail

## COIN MECHANISM \& BILL VALIDATOR

## CAUTION:

Do not plug in or unplug the coin changer with the power on!
The controller will monitor the condition of the coin changer at all times. Any activity (coins inserted) will be recorded and stored in the controller.

## Removing Accepted Bills

Accepted bills may be removed by opening the "bill box" lid or by removing the bill box from the validator. (See manual from validator manufacturer).

## NOTE

If the bill box is removed, make sure that it is fully latched in place when it is returned to the validator.

## Clearing Jams \& Cleaning

Trapped bills, debris or dirt can result in poor bill acceptance or bill rejection. Remove the bill box and lower housing to clear trapped bills or debris. Clean the bill path plastic parts or belts with a cloth moistened with a mild soap and water solution. Clean the magnetic head and optic sensors using a swab and isopropyl alcohol. (See manual from validator manufacturer)

## CAUTION:

Do not use any petroleum based cleaning solvents, scouring pads or stiff brushes for cleaning.

## CONTROLLER FUNCTIONS

There are two modes of operation.
Sales Mode: The vendor accepts deposits, pays out change, and dispenses product to the customer. The 10 -character scrolling display is used to communicate with the customer.
Service Mode: Used by the operator to program and service the machine. The display is used to communicate with the operator.

## Sales Mode

## Display and Vend Cycle

When no credit has been established and a selection is made, the price for that selection displays for approximately one second.
When credit is deposited the amount displays. Five digits are available.
After a selection is made, the controller will determine if sufficient credit is available. If the accumulated credit is greater than or equal to the price of the selection a vend attempt will take place. If credit is less than the selection price, the price will display will scroll pl ease insertmore money.
After a successful vend, the amount of change to be returned will be displayed until all coinage is paid back.
If a selection is made and a vend cannot take place, or selection is empty, (assuming that sufficient credit and change are available) the MAKE ALTERNATE SELECTION message scrolls.
If the payout tubes in the coin mechanism are below the low-level sensors, the USE CORRECT CHANGE message will scroll.
If no motors have been assigned or if the motor has been recorded as faulty, the MAKE ALTERNATE SELECTION message scrolls.

## Jammed Motor Condition

The controller will not run motors that have been recorded as "jammed" or have not been assigned. A motor jam is detected when power is applied to a motor and the motor fails to return to the home position within about 9 seconds.
Motors recorded as inoperative can be reset by running a test vend of that particular selection. See the Test Vend Selections section of this manual (page 21).

## Vend and Cash Counters

Following a successful vend, the vend counter will be incremented by one (1) and the cash counter will be incremented by the price of the vended selection. The counter rollovers occur at $79,999,920$ and $\$ 99,999.95$ respectively.

## NOTE

Test vends are not included in the counter totals.

## Resettable Vend and Cash Counters

The resettable counters track Total Vends dispensed and Total Cash collected since last reset. The vend count and cash totals will be available by individual selections, range (rows) and entire machine utilizing all the rows (i.e. row A to row J for the combo vendor).

Following a successful vend, the resettable vend counter will be incremented by one (1) and the resettable cash counter will be incremented by the price of the selection vended. The counter rollovers occur at 79,999,920 and \$99,999.95 respectively if never reset.

## NOTE Test vends are not included in the counter totals.

## Service Mode

## Entering the Service Mode

To change any settings or programs in the vendor, the controller must be placed in the Service Mode. To enter the Service Mode, push the red service mode button once (located on the control board). If credit exists when entering the Service Mode, it will be restored when the machine is returned to the Sales Mode.

## Key Functions while in Service Mode:

Key (A ) = Scrolls UP through a menu, sub-menu
Key ( B ) = ENTERS a menu, sub-menu or routine within a menu
Key ( C ) = Scrolls DOWN through a menu, sub-menu
Key ( D ) = SAVES a change within sub-menus or routines
Key ( E ) = EXITS down a level from a menu, sub-menu or routine without making a change.


The following three diagrams illustrate the three menu levels and the sub-menu levels of each main menu. Use the (A) and (C ) keys to scroll through each menu or submenu. use the ( A ) key to move from menu to sub-menu levels.


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## NOTE

A quick way to access Menu levels 2 \& 3 :
Press Service Mode Button. Diagnose will display.
Press (A) to display Menu 2. Press (B) to enter menu 2. Price will display.
Press (A) to display Menu 3. Press (B) to enter Menu 3. POS/ AUX will display.

Upon entering Service Mode the display will show Diagnose, which marks the beginning of MENU 1 of the Service Menu.

NOTE Pressing (E) will exit a menu or sub-menu item without saving any changes

## Exiting the Service Mode

To exit the Service Mode, push the Service Mode Button.
The controller will automatically exit the Service Mode if no key is pressed for approximately 25 seconds.

## MENU 1

NOTE
Press (A) or (C) to scroll through the Menu1 sub-Mode menu.
Diagnose Mode.......Displays Error codes
Motor Mode.............Counts and Configures motors
Account Mode ........ Account Mode is used to display various types of cash and vend totals
Coin Mode .............. Coin mode is used to load or unload the coin mech coin tubes and to set Unconditional Acceptance and Exact Change
Test Vend Mode..... Test Vend cycles each selection or range of selections to assure that they are working properly

With DIAGNOSE displayed
Press ( B ) to enter Errors Mode. VM C OK (Vendor Motor Configuration) will be displayed.
Press ( B ) again to display error codes. If there are no errors, the display will scroll through:

| VMC | OK |
| :--- | :--- |
| Changer | OK |
| Validat | OK |
| Reader | OK |

If the display reads for example: (Reader $\quad \mathbf{8})$ the controller can not locate a card reader. See the following table for error codes.

Error Codes

| CODE | ERROR DETAIL |
| :---: | :---: |
| Changer 3 | Controller cannot locate the Coin Mechanism |
| Validat 7 | Controller cannot locate the Validator |
| Reader 8 | Controller cannot locate the Card Reader |
| SELS | SS 1 - SS 12 (select switch closed) |
| CHAr | CC (changer communication) <br> TS (Changer Tube Sensor) <br> IC (Inlet Chute blocked) <br> t J (Changer Tube jammed) <br> Cr Ch (Changer ROM Checksum) |
| ACCE | EE (excessive escrow) <br> nJ (Coin Acceptor jammed) <br> LA (low acceptance rate) |
| Chut | CS (Chute Sensor always on) |
| St S | DAxx (column double assigned UAxx (column unassigned) |


| CODE | $\quad$ ERROR DETAIL |
| :--- | :--- |
| bUAL | bS (Bill Validator Sensor) |
|  | biLL (Bill Validator Motor) |
|  | bJ (bill jammed) |
|  |  |
|  | bFUL (full Bill Cash Box) |
|  | bC (Bill Validator communication) |
| FriG (sensor) | SEnS (Temperature Sensor) |
|  | CoLd (sensing temperature 3 degrees under Cut out) |
|  | CnPr (not cooling-within 30 min. of Cut in) |
|  | ACL (less than 95 volts for more than 30 minutes) |

Press ( E ) to return to DIAGNOSE display.
Press ( C ) to move to Motor Mode. mot or will be displayed.

## MOTOR MODE

Motor mode is used to display the number of working motors or to configure the vendor to the currently working motors.

Press ( B ) to enter motors mode. M OTORS will be displayed.

## NOTE

Press (A) or (C) to scroll through the Motor Mode sub-menu.
Motors ............................Motor Count of working motors
Configure.........................Configure vendor to working motors
Press ( $B$ ) again to display the number of working motors.
Press ( E ) to return to the M OTORS display.
Press ( C ) to enter configuration mode. CONFIG will be displayed.
Press ( B ) to automatically configure machine to the currently working motors. After a short pauseCONFigur eD will be displayed.
Press ( E ) to exit back to CONFIG.
Press ( $E$ ) again to return to M OTOR.
From there press ( C ) to move to Account mode. Account will display.

## ACCOUNT MODE

Account Mode is used to display various types of cash and vend totals.
Press ( $B$ ) to enter Account Mode HIST SALES will be displayed.
Press ( A ) or (C) to scroll through the Account Mode sub menu.
Historical Sales............ Total sales since initialization
Historical Count ...............Total vends since initialization
Reset Sales ................ Total sales since last reset
Reset Count.....................Total vends since last reset
RDR Sales.................. Card Reader Sales
Set Range........................Defines a range for cash and vend counts
Range Cash................ Total sales for defined range since last reset
Range Vends ................. Total vends for defined range since last reset
Clear........................... Clears all resettable counts above

## HISTORICAL SALES

Displays the total amount of sales (by dollar) since initialization of the control board.

Press (B) to display the amount of sales since initialization.
Press ( E ) to return to the HIST SALES display.
Press ( C ) to move to historical count. HIST COUNT will be displayed.

## HISTORICAL COUNT

Displays the total number of vended products since initialization of the control board.

Press ( B ) to display vended products since initialization.
Press ( E ) to return to the HIST COUNT display.
Press ( C ) to move to Resettable Sales. RES SALES will be displayed.

## RESETTABLE SALES

Displays the total sales (in dollars) since the last reset.
Press ( B ) to display the total sales.
Press (E) to return to the RES SALES display.
Press ( C ) to move to Resettable Count. RES COUNT will be displayed.

## RESETTABLE VEND COUNT

Displays the total vends since the last reset.
Press ( B ) to display number of vended products.
Press (E) to return to the RES COUNT display.
Press ( C ) to move to Card Reader Sales. RDR SALES will be displayed.

## RDR SALES

Displays the total card reader sales.
Press ( B ) to display the Card Reader Sales. (optional hardware required).
Press (E) to return to the RDR SALES display.
Press (C) to move to Set Range. SET RANGE will be displayed.

## SET RANGE

The operator uses Set Range to define a specific range of selections to display total cash or vends since last reset. Use the Range Cash or Range Vends below to display totals. Ranges can only be defined by row and not by selections.

Press ( B ) to display $\mathbf{S} \mathbf{R} / \mathbf{E R}$ and the current range. To change the range press the letter of the first selection to be specified and then the letter of the last selection to be specified. (For example: A - A for the top tray or A - C for the top three trays).
Press ( D ) to save range and return to the SET RANGE display.
Press (C) to move to Range Cash. RANGE CASH will be displayed.

## RANGE CASH

Displays the total sales (by dollar) for the defined range.
Press ( B ) to display total sales of the defined range.
Press (E) to return to the RANGE CASH display.
Press (C) to move on to RANGE VENDS.

## RANGE VENDS

Displays the number of vended products for the defined range.
Press ( B ) to display the number of vended products over the defined range.
Press (E) to return to the RANGE VENDS display.
Press (C) to move to Clear. clear will display.

## CLEAR

Clears all resettable values.
Press ( B ). Cl ear ed will display.
Press (E) to return to the $\mathbf{I}$ ear display.
Press (E) to exit Account sub-menu. Account will display
Press ( C ) to move to Coin Mode. coin will display.

## COIN MODE

Coin mode is used to load or unload the coin mech coin tubes and to set Unconditional Acceptance and Exact Change values.

Press ( B ) to enter Coin mode. CP $\mathbf{O}$ (Coin Pay Out) will be displayed
Press ( A ) or (C) to scroll through the Coin Mode sub-menu.
CPO .......................... Coin Tube Payout
Tube Fill.........................Displays current amount in coin tubes
Unconditional Accept..... Sets the value for Unconditional Acceptance
Exact Change................ Sets value for Exact Change

## CPO (Coin Pay Out)

Pays out coins from the coin mech coin tubes.
Press ( B ) to display DIS PENSE. Press the number (1) key to dispense least significant coin, (2) key for next significant coin, or the (3) key for the most significant coin. On some coin mechs there is a fourth tube (the dollar coin for example). Use the number ( 4 ) key for this tube. Press and hold 1, 2, 3, or 4 to rapidly dispense coins.
Press ( E ) to exit dispense and return to the $\mathbf{C P} \mathbf{O}$ display.
Press (C) to move to Tube Fill. TUBE FILL will display.

## TUBE FILL

Display will show an increasing total as coins are entered through the coin mech.
Press ( B ). FILL COINS will be displayed briefly, followed by $\mathbf{0 0 . 0 0}$. The display will change as coins are entered through the coin mech.
NOTE
Manually ejecting coins will not subtract from the total. and exiting the Fill Coins mode will reset the counter back to 00.00 .

Press (E) to return to the TUBE FILL display.
Press ( C ) to move to Unconditional Acceptance. UNCON ACCP will display.

## UNCONDITIONAL ACCEPTANCE

Used to set the highest amount of currency in bills or coins that can be accepted without regard if the equivalent value in coins can be returned.

Press (B) to display the amount currently set for unconditional acceptance.
Change amount using numerical keys.
Press (D) to save change and return to UNCON ACCP display.
Press ( C ) to move to Exact Change.

## EXACT CHANGE

Sets the Exact Change value that controls the display of the Insert Exact Change message.

Press ( B ) to display the amount currently set for exact change.
Change amount using numerical keys. Press ( D ) to save change and return to

## Exact Change.

Press ( $E$ ) to exit Coin Mode sub-menu. coin will display.
Press (C) to move to Test Vend Mode. test vend will display.

## TEST VEND MODE

Test Vend cycles each selection or range of selections to assure that they are working properly - product will be vended in the process.

Press ( B ) to enter Test Vend Mode. SELECTION will be displayed.

## SELECTION

Use this option to test vend one selection at a time.
Press (B) to display SELECT and -- .-. Enter the desired selection ("B3" for example). The current price of the chosen selection will be displayed and the selection will vend. A triple beep indicates that the selection did not properly vend. After the test vend, the display will return to SELECTION.
Press ( $B$ ) to repeat process or press ( C ) to move to Range.

## RANGE

Use this option to test vend a range of selections by rows at a time. The range is settable by the operator.

Press (B) to display SR/ER (Start Range/End Range) and the current range of rows set to be automatically test vended. Change the range by entering the first row to be tested followed by the last row to be tested.
(For example: "A - A" or "B - D")
Press ( D ) to begin test vend. At the end of the test, the display will return to TEST VEND.
Press ( C ) to move to MENU 2. Menu $\mathbf{2}$ will be displayed.

## MENU 2

Press ( B ) to enter MENU 2. Price will be displayed.

```
Press (A ) or ( C ) to scroll through the Menu 2 sub-menu modes.
    Price Mode....................Sets prices by selection, range or by combo
    Options Mode ...............Sets vending options
    Promo Vend Mode.........Turn promo vend on or off and set range
    Configuration Mode ........Configures vendor to original defaults
    Menu 3..........................Enters Menu }3\mathrm{ Modes
```


## PRICE MODE

Price Mode is used to set the selection prices by selection, range of selections or combo prices.

Press ( B ) to display SELECTION.
NOTE
Press (A) or (C) to scroll through the Price Mode sub-menu.
Selection.........................Sets prices by Selection
Range.............................Sets prices by Range
Combo............................Sets Combo prices

## SELECTION

## Set prices by single selection.

Press ( B ). SELECT will be displayed followed by - - . Enter desired selection (B4 for example). The selection number and its current price will be displayed. Enter the desired price.
Press ( D ) to save change and return to SELECTION display.
Press ( B ) to repeat process for other selection changes.
Press (C) to move to Range. range will be displayed.

## RANGE

## Sets the same price for a range (by row only) of selections.

Press (B) to SR/ER (Start Range/End Range) will be displayed followed by the current range of selections to be priced. Change the range by entering the first row to be priced followed by the last row to be priced. (Range pricing must be by row rather than selection - Row D-Row E, not D3-E5) Each row will be displayed along with its current price.
After the pricing is complete, press (D) to save changes or press (E) to return to the RANGE display without changes.
Press ( C ) to move to Combo, Combo will be displayed.

Combo Vend is used to set up a combination of products to be purchased at a single combined price. A maximum of five products can be combined in a combo vend. Five Combo selections can be programmed into the vendor. (Example: a "combo" meal of a bag of chips plus a drink and a candy bar for one price).
NOTE
A sign of some kind will have to be posted on the front of the vendor to indicate Combo packaged "meals" and the price of the combined selection.

## CAUTION:

Be sure the vendor is configured to the currently working motors. See page 16. For combo vend use a selection number that is not in the vendor configuration, this is typically the even-numbered selections on a snack tray.
Press (B) to display SELECT - - Enter the selection number chosen for the combo vend (A4, for instance). Current price for the combined items will be displayed. Change the price as desired using the numerical keys.

NOTE
You must use a selection number that is not included in the current motor configuration.

Press ( $D$ ) to save changes and to display COM B O1. At this point use the ( $A$ ) and ( C ) keys to choose which combo of 1 to 5 to assign selection A4.
Press ( B ). The display will show RG1. Up to 5 ranges of selections can be entered under each combo. (C1 to C6, for example.)
Press ( B ) again to display RG1 plus a *. Enter the $1^{\text {st }}$ range to be included in the Combo selection of A4.
Press ( D ) to save range 1. The display will show $\mathbf{R G 2}$.
Press (B) again to display RG2 plus a *. Enter the $2^{\text {nd }}$ range to be included in the Combo selection of A4. (J4 to J6, for example. canned drinks only).
Press ( D ) to save range 2. The display will show RG3.
Press (B) again to display RG3 plus a *. to enter the $3^{\text {rd }}$ range. Repeat above to continue with ranges $4 \& 5$ or press (EX) to move back out to COM BO.
Press ( $E$ ) to move back to the PRICE display.
From there press ( C ) to move to Options. Options will be displayed.

## OPTIONS MODE

Options Mode is used to set various options on the coin mech and the validator.
Press ( B ). BILL SCROW will be displayed.
Press ( $A$ ) or (C) to scroll through the Options Mode sub-menu.
Bill Escrow ..............Turn Bill Escrow ON or OFF
Force Vend................Turn Force Vend ON or OFF
Max Change ...........Turn Max Change ON or OFF and set a value
Multi Vend ...................Turn Multi Vend ON or OFF
Free Product..........Turn Free Product ON or OFF and set a interval

## BILL ESCROW

This Option can be turned ON or OFF. With Bill Escrow ON and bill is accepted that matches or exceeds maximum credit value, the bill will be held in "escrow", and not stacked, so that it will be available for return.

Press ( B ). ESCRO OFF or ON will be displayed. Use the ( B ) key to toggle between OFF and ON.

Press (D) to save change and return to Bill scrow or
Press (E) to return to Bill scrow without changes.
Press (C) to go to Force Vend. Force vend will be displayed.

## FORCE VEND

This Option can be turned ON or OFF. With Force Vend ON, once credit is deposited a vend must take place, and change is only given after a vend. With Force Vend OFF the vendor can be used as change machine.

Press ( B ) to set Force Vend option. F VND OFF or ON will be displayed. Use the ( B ) key to toggle between OFF and ON.
Press ( $D$ ) to save the change or press ( $E$ ) to return to F ORCE VEND display without making a change.
Press ( C ) to go to Max Change. M AX CHANGE will be displayed.

## MAX CHANGE

This Option can be turned ON or OFF. With Max Change ON this feature allows the vendor operator to control the maximum amount of credit to be returned as change at the end of a vend.

Press ( B ) to display OF F or ON. Use the ( B ) key to toggle between OFF and ON or to change the value press ( C ) to display value.
Press ( D ) to save the change. Val ue will display.
Press ( B ). Use the numerical keys to change the value.
Press ( D ) to save the change and return to Val ue display.
Press ( E ) to return to $\boldsymbol{m a x} \mathbf{c h a n g e}$ display without making a change.
Press (C) to go to Multi Vend. multivend will be displayed.

## MULTI VEND

This Option can be turned ON or OFF. With Multi Vend ON instead of immediately returning the change after a vend, the credit will remain on the display for up to 25 seconds. This allows for a second vend on one line of credit. To receive change on an over-deposit, the coin return button must be pressed. If a coin return is not requested within 25 seconds the change will then be returned automatically.

Press ( B ) to display OFF or ON. Use the ( B ) key to toggle between OFF and ON.
Press ( D ) to save changes and return toM ULTI VEND display. Or press ( E ) to return to M ULTI VEND without changes.
Press (C) to go to Free Product. FREE PROD will be displayed.

## FREE PRODUCT

At a set interval of vends a single free vend will be dispensed upon making a selection, and payment will be returned. Set to 0 to turn off.

Press ( $B$ ). FREE will be displayed along with the current interval at which a Free Vend occurs. Enter new interval (Must be between 2 and 255).
Press ( D ) to save interval. FREE PRODUCT will be displayed.
Press (E) to move out to Options.
Press ( C ) to move to Promo Vend

## PROMO VEND MODE

This option allows the customer to receive an additional product "free" when purchasing another. A maximum of two (2) promotional items can be programmed into each vendor with a choice of which two rows to assign to the promo vend . The promotional or free item will always be dispensed from the \#2 selection of a row. The primary product will be dispensed from the \#1 selection of a row. When enabled, purchasing selection ' 1 ' from one of the two possible promotional rows will result in both selection ' 1 ' and ' 2 ' of that row to vend sequentially. Individual vends from selection " 2 " can be obtained while in promo vend if these selections are depressed with adequate credit inserted.

Press (B). Of $\mathbf{f}$ or $\mathbf{O n}$ will be displayed. Use the ( B ) key to toggle between OFF and ON.
Press ( D ) to save change and return to OFF or ON.
Press (C) to move to Range. range will be displayed.

## RANGE

Range is used to set which rows to operate as Promo Vends. Maximum of two rows can be set at a time.

Press ( B ) to select rows. SR/ ER (Start Range/End Range) will be displayed followed by the current set rows. Change the rows by entering the first row letter followed by the second row letter.

Press ( D ) to save changes or press ( E ) to return to the RANGE display without changes.
Press (E) to move out to PROM OVEND.
Press ( C ) to move to Configuration. CONFIG will display or press ( A ) to move to Options Mode.

## CONFIGURATION MODE

Configuration Mode is used to return the vendor to original factory settings under each of the following areas.

Press ( B ). DEFAULT will be displayed.
Options ......................Configures options settings to default ON or OFF

## DEFAULT

This action configures the factory default settings.
Press ( B ). CONFigur eD will be displayed.
Press ( E ) to return to the DEF AULT display.
Press (C) to go to Messages. messages will be displayed.

## MESSAGES

This action configures POS Messages to the default settings (messages only).
Press ( B ). CONFigur eD will be displayed.
Press ( E ) to return to the $\mathbf{m} \mathbf{e s} \mathbf{s}$ ages display.
Press (C) to go to Options. options will be displayed.

## OPTIONS

## This action configures the Options to the ON or OFF default settings.

Press ( B ). CONFigur eD will be displayed.
Press (E) to return to the options display.
Press ( C ) to go to Default. DEFAULT will be displayed (the beginning of this sub menu listing).
Press ( $E$ ) to move out this sub menu to Configuration Mode.
Press ( C ) to move to MENU 3. menu $\mathbf{3}$ will be displayed or press ( A ) to move to Promo Vend Mode the beginning of Menu 2.

## MENU 3

Press ( $B$ ) to enter the Menu 3 listing of procedures POS/ AUX will be displayed.

Press (A) or (C) to scroll through the MENU 3 menu.
POS/AUX Mode........... Set the Point of Sale and Auxiliary scrolling messages. Set language of display
Time/Date Mode .......... Sets the time and date
Shutdown Mode........... Sets periods of vending shutdown
Temperature Mode ...... Adjust temperature settings and Temp Sensors
Discount Mode............. Turns Discount Mode OFF and ON and sets a range of selections for discount.
Autoreinstate Mode ..... Auto
Coupon/Token Mode ... Enables the vendor to accept coupons or tokens
Can/Bottle Mode.......... Sets the can/bottle columns for single or double

## POS/AUX MODE

Press ( B ) to set POS (Point-of-Sale Message). P OS will be displayed.
Press (A) or (C) to scroll through the POS/AUX Mode sub-menu.
POS ...............................Enter a new Point-of-Sale message
Language .......................Set Display Language for
AUX ................................Enter a Auxiliary Message

## POS (Point-of-Sale message)

The scrolling Point of Sales message can be changed using this mode. Messages can include up to 105 characters including spaces. When entering a new message, all inputs will overwrite the previous message.

## NOTE <br> If the max limit of 105 characters is entered, the new message is automatically saved and any subsequent characters entered will overwrite the $105^{\text {th }}$ character.

Press (B) again and MESSAGE will be displayed. AT THIS POINT THE MESSAGE KEYPAD LAYOUT IS IN EFFECT and a new message can be entered. See Figure 14. Enter each letter of the message according to the Keypad Format and the keypad overlay furnished with the vendor.
Press the service mode button to save the new message.

NOTE

To enter the lower letters or numbers on the keypad layout shown in figure 14, the SHIFT key or key ( H ) must be depressed first each time.
The keypad overlay can be found in the Service Packet that came with the vendor.


Figure 14 Keypad Overlay

## LANGUAGE

Use Language to set the default display messages to read in one of seven languages (ITALIAN, DUTCH, SPANISH, DANISH, ENGLISH, FRENCH, and GERMAN. and AUXILIARY).

Press ( B ) to display the default Point-Of-Sale language (English).
Press ( C ) to toggle through the available languages.
Press ( D ) to set desired language and return to LANGUAGE display.
Press ( C ) to move to Auxiliary Message. Aux will be displayed.

## AUXILIARY MESSAGES

During the normal operation of the vendor, default messages will be displayed, depending on the condition or function being performed. Use Auxiliary Messages sub-menu to set the eight auxiliary messages in any desired language.

## NOTE

> Press ( A ) or ( C ) to scroll through the Auxiliary Messages sub-menu.
> Message 1..... PLEASE INSERT EXACT MONEY (Max 30 characters)
> Message 2.....PLEASE INSERT MORE MONEY (Max 30 characters)
> Message $3 \ldots .$. MAKE ALTERNATE SELECTION (Max 25 characters)
> Message 4......PLEASE CALL SERVICE (Max 25 characters)
> Message 5.....VENDING OPERATION TO RESUME AT (Max 25 characters)
> Message 6.....MAKE SNACK SELECTION ONLY (Max 30 characters)
> Message 7.....THANK YOU (Max 10 characters)
> Message 8.....FREE ON US (Max 10 characters)

Press ( B ). Message $\mathbf{1}$ will be displayed.
Press ( B ) again to enter message mode and to begin setting Auxiliary Message 1.

[^0]Press the enter key twice to save message 1 . Mes sage $\mathbf{2}$ will display.
Repeat above steps to set all eight messages.
At any message number. Press ( E ) to return the a ux display.
Press ( E ) to return to AUX/ POS display.
Press ( C ) to move to Time/Date Mode.

## TIME/DATE MODE

## The Time/Date Mode is used to set the controller to the current time and date.

```
NOTE
Press ( A ) or ( C ) to scroll through the Time/Date sub-menu.
    Time
```

$\qquad$

``` Sets time of day in military time (24-hour format)
Date Sets day of the month
Month........................... Sets month of the year
Day ..............................Sets day of the week
Year
Sets the year
Daylight Savings.......... Sets daylight savings time and geographical location
```

Press ( B ). TIM E will be displayed.

## TIME

Press ( B ) again to display TIM E and the current setting in military time (24-hour format). Change setting using the numeric keys.

## NOTE

The controller operates on a 24 -hour format. Time displays as Timehh.mm (i.e. 17.14 is $5: 14 \mathrm{pm}$ ).

Press ( D ) to accept the new setting and return to TIM E display.
Press ( C ) to move to Date. Date will be displayed.

## DATE

Press ( B ) again to display DATE and the current day of the month. (1-31) Change setting using the numeric keys.
Press ( D ) to save the new setting and return to DATE display.
Press (C) to move to Month. Month will be displayed.

## MONTH

Press ( B ) and M ONTH plus the current month setting will display. Change to current month (1-12) using the numeric keys.
Press ( D ) to save the new setting and return to M ONTH display.
Press ( C ) to move to Year. YEAR will be displayed.

## YEAR

Press ( B ). YEAR and the current year setting will display (2 digit year).
Enter correct year using last two (2) digits, (00 for the year 2000).
Press ( D ) to save change and return to Y EAR display.
Press (C) to move to Daylight. daylight will be displayed.

## DAYLIGHT-SAVINGS TIME

## Turns Daylight-Savings time ON or OFF. And sets geographical location.

## NOTE

Press (A) or (C) to scroll through the Time/Date sub-menu.
North America $\qquad$ North-American Daylight-Savings time
OFF..............................Turns Daylight-Savings time OFF
Australia
Australia Daylight-Savings time
European..................... European Daylight-Savings time
Choosing a geographical location indicates that Daylight-Savings is ON.
Press (B) to set the geographical location or set to off.
Press ( D ) to save change and return to DAYLIGHT display.
Press ( E ) to move out to TIM E/ DATE display.
Press ( C ) to move to Shutdown Mode. Shut down will be displayed.

## SHUTDOWN MODE

This option shuts down the machine during specified intervals of the day. All vending functions of the machine will be disabled. Four programmable intervals per day are available. If set to on, during these time intervals the message vending operation to resume at hh:mm displays. (i.e. 9.05 = 9:05 am, $15.34=3: 34 \mathrm{pm}$ ). The controller must be set to the current time and date before specifying the intervals.

[^1]Press ( B ) to display $\mathbf{O N}$ or $\mathbf{O F} \mathbf{F}$.
Press ( B ) again to display ON or OFF with asterisk to right side of display.
Use the (B) button to toggle from one to the other.
Press ( D ) to save change and return to ON or OFF .
Press ( C ) to move to Time. Time will be displayed.

## TIME

Time is used to set Shutdown interval times. There are four (4) shutdown time periods that must be set (using military time, 24 hour clock).

Press ( B ). 1 STRT will be displayed followed by the current shutdown start time. Set first interval start time using numerical keys.
Press ( D ) to save and move to $\mathbf{1 S T O P}$. Set first interval stop time using numerical keys.
Press ( D ) to save and move to $\mathbf{2}$ START and so on. All four time periods must be set. Time periods not used should be set to 00.00 .
Saving the $4^{\text {th }}$ stop period will move back to Time display.
Press (C) to move to Day of the week. Day will be displayed.

## DAY

Sets the day of the week the shutdown period is active within a four week period.
Press ( $B$ ) to begin setting days for shut down procedure to be active. 1 SUN followed by OFF or ON will be displayed. Use (A) or (C) to toggle through the four weeks available for setting starting with Sun of each week.
Press ( B ) at a desired Sunday ( $1,2,3$, or 4 ). ( $\mathbf{4} \mathbf{S}$ UN, for example). Now the entire $4^{\text {th }}$ week is available for adjustment. At this point (A) or (C) cycles through the days of the week.
Press (B) at a desired day of the week. Then (A) or (C ) will toggle ON or OFF for that day.
Press ( D ) to save changes. Use the (A) or (C ) keys to move to other days of the week and repeat the change process.
Press ( D ) to save changes.
Press ( E ) two (2) times to move back to DAY display.
From there press ( C ) to move to RANGE.

## RANGE

## Sets the range of selections to be affected by the shutdown.

Press ( B ). $\mathbf{S R} / \mathbf{E R}$ will be displayed followed by the row range.
Enter the row changes. Press ( D ) to confirm changes and move back to RANGE . Press ( E ) again to move back to SHUTDOWN.
Press ( C ) to move on to Temperature.

## TEMPERATURE MODE

Temperature Mode is used to set the operating parameters of the sensors and the refrigeration unit.
Press (A) or (C) to scroll through the Temperature Mode sub-menu.
Degree.................... Sets the display to read in Fahrenheit or Celsius

Temp Sensor $1 \ldots \ldots . . .$| Located in the drink compartment and can be turned OFF |
| :--- |
| or ON |

Temp Sensor 2........... Located in the snack compartment and can be turned OFF
or ON
Defrost........................ Set defrost parameters for refrigeration unit

Press ( B ) to begin temperature control routines.
Press ( B ) again to display DE GREE will be displayed followed by $\mathbf{F}$ for Fahrenheit or $\mathbf{C}$ for Celsius plus an asterisk at the right side of the display. Toggle between the two using ( $B$ ).
Press ( D ) to confirm choice.
Press (C) to move to Sensor 1 . sens or $\mathbf{1}$ will be displayed

## SENSOR 1

## Turns Temperature Sensor 1 ON or OFF. Sensor 1 is located in the canned drink compartment.

Press ( A ) or ( C ) to scroll through the Sensor 1 sub-menu.
Set Point ....................... Sets the set point of sensor 1
Delta ...................... Sets the Delta of sensor 1
Health Safety ................ Sets H/S parameters for sensor 1

Press ( C ). ON or OFF will be displayed.
Press ( $B$ ) again to display an asterisk to the right side of the display. Use ( $B$ ) to toggle between the two.
Press ( D ) to confirm choice.
Press (C) to move on to Set Point. Set point will be displayed.

## SET POINT

## Used to set the Temperature Set Point of Sensor 1.

Press ( B ). The current temperature setting will be displayed. Enter the desired temperature using the (A) and (C) keys.
Press ( D ) to save changes and return to SET POINT.
Press ( C ) to move on to Delta. DELTA will be displayed.

Delta determines the temperature swing around the temperature set point. The cut-off value is equal to the set point minus half of this value. The cut-in temperature is equal to the set point plus half of this value.

Press ( $B$ ). The current delta setting will be displayed.
Enter the desired delta using the (A) and (C) keys.
Press ( D ) to confirm changes and return to DELTA display.
Press ( C ) to move to Health Safety. h/s will be displayed.

## HEALTH SAFETY

This is a "Health Safety" feature that prevents the sale of perishable food items if the temperature inside the cabinet area exceeds $41^{\circ} \mathrm{F}\left(5^{\circ} \mathrm{C}\right)$. If the can/bottle rack is used to vend perishable food ( $32^{\circ} \mathrm{F}$ to $41^{\circ} \mathrm{F}$ ), then the Health/Safety must be set appropriately for the corresponding selections. If not vending perishable food, then this feature should be turned off at all times.

## NOTE

Press (A) or (C) to scroll through the Sensor 1 Health/Safety sub-menu.
Level.
Set H/S to none, frozen, slack or cold
Range........................... Sets a range of rows for H/S
Press ( B ). LEVEL will be displayed.
Press ( B ) again to display NONE plus an asterisk to the right side of the display.
Use (A) or (C) to toggle through the choices of Frozen, None, Slack or Cold.
Press ( D ) to confirm choice and return to LEVEL display.
Press (C) to move on to range. RANGE will be displayed.
Press ( B ). SR/ ER (start of range/end of range) will be displayed. Enter range of rows (A-B for example).
Press ( D ) to save choice and return to RANGE .
Press ( E ) to move to Sensor 2. SENS OR2 will be displayed.

## SENSOR 2

Turns Temperature Sensor 2 ON or OFF. Sensor 2 is located in the snack side of the cabinet.

Press (C). ON or OFF will be displayed.
Press ( B ) again to display an asterisk to the right side of the display. Use ( B ) to toggle between the two.
Press ( D ) to confirm choice.
Press (C) to move on to Set Point. Set point will be displayed.

## SET POINT

## Used to set the Temperature Set Point of Sensor 2.

Press ( B ). The current temperature setting will be displayed. Enter the desired temperature using the (A) and (C) keys.
Press ( D ) to save changes and return to SET POINT.
Press ( C ) to move on to Delta. DELTA will be displayed.

## DELTA

Delta determines the temperature swing around the temperature set point for sensor 2. The cut-off value is equal to the set point minus half of this value. Thecut in temperature is equal to the set point plus half of this value.

Press ( B ). The current delta setting will be displayed.
Enter the desired delta using the (A) and (C) keys.
Press ( D ) to confirm changes and return to DELTA display.
Press ( C ) to move to Health Safety. h/s will be displayed.

## HEALTH SAFETY

This is a "Health Safety" feature that prevents the sale of perishable food items if the temperature inside the cabinet area exceeds $41^{\circ} \mathrm{F}\left(5^{\circ} \mathrm{C}\right)$. If the can/bottle rack is used to vend perishable food ( $32^{\circ} \mathrm{F}$ to $41^{\circ} \mathrm{F}$ ), then the Health/Safety must be set appropriately for the corresponding selections. If not vending perishable food, then this feature should be turned off at all times.
Press (A ) or ( C ) to scroll through the Sensor 2 Health/Safety sub-menu.
Level.......................... Set H/S to none, frozen, slack or cold
Range..................... Set a range of rows for H/S

Press ( B ). LEVEL will be displayed.
Press ( B ) again to display NONE plus an asterisk to the right side of the display.
Use (A) or (C) to toggle through the choices of Frozen, None, Slack or Cold.
Press ( D ) to confirm choice and return to LEVEL display.
Press ( C ) to move to range. RANGE will be displayed.
Press (B).SR/ER (start of range/end of range) will be displayed. Enter range of rows (A-B for example).
Press ( $D$ ) to save choice and return to RANGE .
Press ( E ) to move to Defrost. defrost will be displayed.

## DEFROST

This feature controls the amount of time the system remains in a defrost cycle. The factory setting (default) is 15 minutes for duration. The maximum defrost time is $\mathbf{6 0}$ minutes and the minimum is 10 minutes. The factory setting (default) for the period.

Press ( B ). DURATION will be displayed.
Press ( $B$ ) again and the current duration of defrost in minutes (10 to 60 ) will be displayed. Use the (A) or (C) key to adjust the duration.
Press ( D ) to save changes and return to DURATION display.
Press (C) to move on to Period. per iod will displayed.
Press ( B ). The display will show the current setting for the period. Use (A) or (C) keys to adjust this time period in half hour increments from $1 / 2 \mathrm{hr}$ to 24 hrs .
Press ( D ) to confirm changes and return to PERIOD display.
Press (E) to return to DEFROST display.
Press (E) again to move out to TEM PERATURE display.
Then press ( C ) to move to Discount Mode. DIS COUNT will be displayed.

## DISCOUNT MODE

This procedure enables the machine to charge a different price for selections at different times or on different days-Sundays, for example.

ON or OFF......Turns discount mode ON or OFF
Time................Sets time period of the day discount will be in effect
Day ................. Sets the day of the week discount will be in effect
Range.............Sets the range of selection for the discount
Value..............Sets the value to be discounted from the regular set price
Press (B). ON or OFF will be displayed.
Press ( B ) again to display an asterisk to the right side of the display. Toggle ON or OFF using the ( B ) key.
Press ( $D$ ) to confirm any changes and return to $\mathbf{O N}$ or OFF.
Press (C) to move on to Time. time will be displayed.

## TIME

## Sets the time of day that the discount mode is in effect.

Press ( B ). STRT will be displayed followed by the starting time for discount. Set the new time using number keys (military time-24-hour clock).
Press ( D ) to confirm change and move to 1STOP. Repeat changing process.
Press ( D ) to confirm changes and return to TIME. Press ( C ) to move on to DAY.

## DAY

## Sets the day of the week that the discount mode will be in effect.

Press ( B ). SUN will be displayed followed by ON or OFF. Use the ( A ) or ( C ) key to change day.
Press ( $B$ ) to enter a day to turn ON or OFF.
Press (A) or (C) to toggle from OFF to ON.

Press ( D ) to save change. Use the (A) or ( C ) key to move to another day.
Repeat process as needed. When finished with all changes, press ( E ) to move back out to DAY.
Press ( C ) to move to Range. RANGE will be displayed.

## RANGE

## Sets the range of selections to be discounted.

Press ( B ). The current range of selections for discount pricing will be displayed. Use alpha and numeric keys to change range.
Press ( D ) to confirm changes and return to RANGE .
Press ( E ) to exit without making changes.
Press ( C ) to move on to Value. VALUE will be displayed.

## VALUE

Sets the amount to be discounted from the regular price -. 25 for example.
Press ( B ). The current discount value will be displayed. Set value using numeric keys.
Press ( D ) to save change and return to VALUE display.
Press ( E ) to move out to DIS COUNT display.
Press ( C ) to move to Auto-reinstatement Mode. AUTOREINST will be displayed.

## AUTO-REINSTATEMENT MODE

Use this feature for a satellite soft drink or similar vendor utilizing a sold out or empty switch. Normally, when an empty selection is detected during an attempted vend, that selection is recorded inoperative and requires resetting before it can be vended again. Satellite units utilize a range of selections within the controller. Programming this range of selections into the auto reinstatement will eliminate the necessity of manually resetting the controller after re-loading a selection that went into a sold out condition.

NOTE
Press (A) or (C) to scroll through the Auto-reinstatement Mode sub-menu.
ON or OFF......Turns Auto-reinstatement mode ON or OFF
Range............Sets he range of selections (by row) to be effected by Auto-
reinstatement

Press ( $B$ ) to set the auto-reinstatement of empty/jammed selections. OFF or ON will be displayed.
Press ( B ) again to display an asterisk to the right of the display. Use the ( B ) key to toggle between ON and OFF.
Press (D) to save change.
Press ( C ) to move on to Range. RANGE will be displayed.

## RANGE

Press ( B ). SR/ER will be displayed followed by the range of rows covered by auto-reinstatement. Enter the rows desired.
Press ( $D$ ) to save change and return to RANGE display.
Press ( E ) to back out to AUTOREINST.
Press ( C ) to move to Coupon/Token Mode. COUP N/ TOKN will be displayed.

## COUPON/TOKEN MODE

Enables the use of coupons or tokens-this option requires a Validator capable of accepting coupons or tokens.

## NOTE

Press ( A ) or ( C ) to scroll through the Coupon/Token Mode sub-menu.
Coupon Value.........Sets the value of coupons to be used with vendor
Coupon Range........Sets the range of coupons to be used with vendor
Token Value ...........Sets the value of tokens to be used with vendor
Token Range ..........Sets the range of tokens to be used with vendor
Press ( B ). COUP VALUE will be displayed.

## COUPON VALUE

Sets the value of a coupon to be used with this vendor. Up to five different coupons can be used.

Press ( B ). CV 1 will be displayed followed by the current coupon value. At this point (A) or (C ) to display each of 5 coupons (CV1-CV5).
Press ( $B$ ) at any coupon display. Change value using numeric keys.
Press ( D ) to save changes. COUP VALUE will again be displayed. Repeat above process to set other coupons.
Press (E) to move back out to COUP VALUE display.
Press ( C ) to move to Coupon Range COUP RANGE . will be displayed.

## COUPON RANGE

Sets a range of selections where the coupon is redeemable.
Press ( B ) to display C1R1 (Coupon1-Range1--representing the range of selections that will honor Coupon 1) and the current range.
Press ( B ) again. Enter or change range (C4-D6, for example).
Press (D) to save changes and move out to COUP RANGE display.
Press ( C ) to move to Token Value. TOKN VAL UE will be displayed.

## TOKEN VALUE

Sets the values of tokens to be used with this vendor. Up to 5 different tokens can be used.

Press ( B ). TV 1 (Token Value 1) will be displayed followed by the current value of Token 1. At this point ( A ) or ( C ) will toggle through all 5 tokens (TV1-TV5)
Press ( B ) at any token display. Change value using numeric keys.
Press ( D ) to save changes, TOKN VALUE will be displayed. Repeat the process to change value of other tokens.
Press ( C ) to move to Token Range. TOKN RANGE will be displayed.

## TOKEN RANGE

Sets the ranges of selections a Token can be used with.
Press ( B ) to display T1 R1 (Token1-Range1) and the current range.
Press ( B ) again. Enter or change range (C4-D6, for example).
Press ( D ) to save changes and move out to TOKN RANGE. Repeat the process to change range of other tokens.
Press (E) to move out to COUPN/ TOKN.
Press ( C ) to move on to Can/Bottle Mode. CAN/ BOTTLE will be displayed.

## CAN/BOTTLE MODE

When Can/Bottle Mode is ON, the Drop Sensor is enabled for vending of bottles or cans for the range selected. Set Can/Bottle Mode to OFF if bottles or cans will not be vended.

| Press ( A ) or (C) to scroll through the Can/Bottle Mode sub-menu. |
| :--- |
| OFF or ON............Turns Can/Bottle mode ON or OFF |
| Range.................... Sets the range of selections on the can /bottle rack that are |
| turned ON or OFF |
| Depth.................... Sets the depth of each selection on the can/bottle rack to |
| single or double |

Press ( B ). ON or OFF will be displayed. Use the ( B ) key to toggle between ON and OFF.

Press ( D ) to save choice and return to ON or OF F .
Press ( C ) to move on to Range. RANGE will be displayed.

## RANGE

Sets the range of the can/bottle rack that is turned ON or OFF.
Press (B). SR/ER (Start Range/End Range) will be displayed, followed by the current range of rows included. Enter desired row designations using the alpha keys.

Press ( D ) to save changes and return to RANGE display.
Press ( C ) to move to Depth. DEPTH will be displayed.

## DEPTH

Sets the depth of each selection for single or double operation. Single is used for dispensing bottles and double is used for dispensing cans.

Press ( B ). SELECT will be displayed followed by the current selection.
Press ( B ) again, DOUBLE or SINGLE will be displayed. Use ( B ) to toggle between the two choices.
Press ( D ) to save choice and move back to SELECT followed by current selection. Use the (A) or (C) key to move to another selection. Repeat process as needed. When finished with all changes, press (E) to move back out to depth.
Press (E) to move out to CAN/ BOTTLE .

## CAUTION

When the selection is set at single depth - upon vending the motor continues to turn for a couple of seconds, positioning the next vend for faster delivery. However, if a product is double loaded in single-depth mode, double vending will result!

Press the Service Mode Button at any time during Service Mode to exit the Service Mode. Press ( D ) first to avoid losing any changes .

## DEX/UCS <br> DEX/UCS Information (requires hand-held computer)

If the vendor operation will be tracked using a DEX/UCS capable hand-held computer (HHC), please note the following:

The picture to the right shows the control panel cover. Just below the instructional decal is the plug-in port for the connecting cable from the hand-held computer.

Plug in HHC and the vendor will enter DEX/UCS mode (machine does nothave to be in Service Mode).

Plug the HHC into the vendor and the exchange of information will begin automatically.


The following is a list of DEX/UCS codes and their meanings.

| DEX FIELD | DEX FIELD DESCRIPTION |
| :--- | :--- |
| ID101 | Machine Serial Number |
| ID102 | Machine Model Number |
| VA101 | Value of all paid sales since initialization |
| VA103 | Value of all paid sales since last reset |
| CA302 | Value of cash to coin box since last reset |
| CA303 | Value of cash to tubes since last reset |
| CA304 | Value of bills in since last reset |
| CA401 | Value of cash dispensed since last reset |
| CA801 | Value of cash overpay since last reset |
| CA1401 | Bill value (\$1, 2, 5, 10, \& 20) |
| CA1403 | Number of bills to stacker since last reset |
| TA203 | Value of vend token sales since last reset |
| TA204 | Number of vend token vends since last reset |
| PA101 | Product Number |
| PA102 | Product Price |
| PA201 | Number of products vended since initialization |
| PA203 | Number of products vended since last reset |
| PA204 | Value of paid product since last reset |
| EA201 | Event ldentification |
| EA202 | Number of events since last reset |
| EA204 | User defined field |
| EA301 | Number of reads since initialization |
| EA302 | Date of this readout |
| EA303 | Time of this readout |
| EA304 | This terminal/interrogator identification |
| EA305 | Date of last readout |
| EA306 | Time of last readout |
| EA501 | Date of price setting |
| EA502 | Time of price setting |
|  |  |
|  |  |

## REFRIGERATION FUNCTIONS <br> \& OPERATION

## Refrigeration Control

NOTE
To prevent damage to the refrigeration unit when it is turned off or the power interrupted, the refrigeration unit will not restart for at least three minutes regardless of the temperature.

When the temperature is above the cut-in temperature programmed, the unit is turned on. When the refrigeration unit reaches the cut-out temperature, it is turned off.
If the refrigeration unit runs for more than two hours without reaching the cut-out temperature, the unit is turned off for the programmed ten (10) minute defrost time. It will then be turned on again automatically.

## Refrigeration Troubleshooting

If the refrigeration unit is turned off or the power is interrupted, the refrigeration unit will not start for at least three minutes regardless of the temperature. This is done to prevent damage to the refrigeration unit.

CAUTION:
Breaking the refrigerant joints or seals on the system voids the unit warranty. Failure to keep the condenser coil clean and free of dirt and dust and other similar debris voids the unit warranty.
Know and understand how the unit 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.
The sealed hermetic system should not be worked on outside the Factory Service Center. There are three things that can go wrong with a sealed system and should be repaired only at the Factory Service Center. These are:

- Low Charge - usually caused by leaks; look for oil around seals and welds. Unit will not cool properly. The capillary tube is frosted before it enters the evaporator inlet tube.
- Restriction in Systems (unit frosts, then melts) - not cooling properly
- Bad valves - unit does not cool properly-- noisy compressor


## Compressor will not start

Compressor has no power

- Machine not plugged in
- Tripped breaker or blown fuse
- Faulty wall outlet
- Short or open in power cord
- Temperature sensor circuit is open (check with a Multi-Meter)
- Improper wiring
- Low voltage: $5 \%$ below (check the power source with a Multi-Meter)
- Overload defective: Trips too fast (check overload with the Multi-Meter)
- Start relay defective (check start relay with the Multi-Meter)
- Compressor has open windings (check compressor windings with a Multi-Meter)
- Defective refrigeration relay
- Unplug power to the machine; remove the relay plate. Use an insulated jumper wire to short the wires on relay terminals 2 and 4 or 6 and 8 -- then restore power to the machine. The compressor should start, indicating a problem in the control circuit.
- Check relay terminals 1 to 0 with a Multi-Meter. Should have 24VDC applied to them.
- No DC voltage (check control board output terminal for a loose connection)


## Compressor trips on Overload

- Improper voltage: 5-10\% above, $5 \%$ below (check power source with Multi-Meter)
- Overload defective: Trips too fast (check overload with Multi-Meter)
- Relay defective: Won't open after starting (check relay with Multi-Meter)
- Compressor has shorted windings (check compressor windings with Multi-Meter)
- Short in other component: Isolate and eliminate each electrical component until short is found
- Compressor is too hot
- Dirty condenser
- Faulty condenser motor or blade
- Restricted airflow


## CAUTION:

Condenser must be kept clean of dirt and debris to allow for proper air circulation.

## Noisy or vibrating unit

- Components rubbing or touching each other
- Check fan blades and motor
- Loose shrouds and harness
- Copper tubing
- Loose or unsecured parts
- Dirty condenser fan blades
- Worn or aged compressor grommets
- Compressor
- Bad valves
- Slugging
- Bad windings (See Schematic)
- Low voltage


## Unit short cycles

- Temperature sensor defective or not mounted in the return air duct
- Defective control board
- Temperature setting set too warm (see "Refrigeration Settings" section of this manual)


## Unit operates long or continuously

- Temperature sensor defective or not mounted in the return air duct
- Refrigeration relay shorted
- Air flow restricted
- Faulty evaporator motor or blades causing coils to ice
- Loose connections on evaporator motor (1 motor not running.)
- Airflow blocked by product in front of evaporator or air duct openings
- Exhaust area blocked (machine too close to wall)
- Gasket leak around door
- Excessive load: After loading, unit runs longer to pull out excessive heat from product
- Shortage of refrigerant or restriction
- Bad controller
- Ambient air temperature and relative humidity exceed manufacturer's operational standards


## Refrigerated space too cold

- Temperature sensor defective (check with Multi-Meter)
- Refrigeration control setting too cold (see "Refrigeration Settings" section of this manual)
- Refrigeration relay bad (check with Multi-Meter)
- Faulty control board


## Refrigerated space too warm

- Temperature sensor defective (check with Multi-Meter)
- Refrigeration control setting too warm (see "Refrigeration Settings" section of this manual)
- Refrigeration relay bad
- Faulty control board
- Restricted evaporator space
- Evaporator motor or blades faulty, causing the coils to ice over the evaporator
- Condenser air flow restricted
- Plugged or dirty condenser
- Condenser motor or blades bad
- Blade stuck
- Condensing space restricted
- Unit placed too close to a wall
- Compressor - bad valves
- Capillary tube will start frosting 8 to 10 inches ( $20-25 \mathrm{~cm}$ ) past evaporator connection tube
- Check for oil around brazed connections


## Troubleshooting circuits with Multi-Meter

- To check the power source, use the voltage section of the Multi-Meter (should measure within $5-10 \%$ above, $5 \%$ below)
- Check overload


## CAUTION

Power must be off and fan circuit open.
Using the resistance section of the Multi-Meter, check terminals 1 and 3 for continuity. If no continuity is measured (infinity), overload may be tripped. Wait 10 minutes and try again. If still no continuity, overload is defective.

- Check relay (See Figure 15.) Unscrew lead terminals and remove relay from compressor. (NOTE: keep relay upright)
- Check terminals 1 and S, or L and S with the Multi-Meter. Replace relay if continuity exists.
- Check Temperature sensor with a Multi-Meter.
- Check compressor windings as shown in Figure 15.
- Check winding resistance with a Multi-Meter. If readings are not within 2 Ohms, the compressor is faulty. Use RX1 scale.


## WARNING:

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

Winding Resistance

| APPROX. RESISTANCE ACROSS TERMINALS |  |
| :---: | :---: |
| COMMON to START: | 12 Ohms |
| COMMON to RUN: | 2 Ohms |
| RUN to START: | 14 Ohms |
| COMMON to SHELL: | No Continuity |



Figure 15. Compressor Schematic

## CARE AND CLEANING SCHEDULE FOR PREVENTIVE MAINTENANCE

## Once a Month

## CAUTION:

Always disconnect power source BEFORE cleaning or servicing.

## Clean Cabinet Interior:

Wash with a cleaning solution of 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. Keep delivery slide area free of dirt and sticky substances. Remove and clean condensate drain hose to eliminate any deposits that may restrict condensate water flow.
Do not get the cleaning solution on electrical components.
Snack Compartment: The vend mechanisms and trays must be wiped clean of dirt and sticky substances. Any build-up can cause the mechanisms to malfunction.
Can/Bottle Compartment: The can/bottle racks must be wiped clean of dirt and sticky substances.

## Clean Cabinet Exterior:

Wash with a mild detergent and water, rinse and dry thoroughly. Clean occasionally with a quality car wax. Plastic exterior parts may be cleaned with a quality plastic cleaner.

## Every 60-days

## Clean Refrigeration Intake Screen:

Remove screen and clean dust and debris from screen using a soft bristle brush or a vacuum cleaner.

## Every 6-months

## Clean the condenser coil and rear exhaust screen:

Remove the Cover Assembly and clean the condenser coil of refrigeration unit using a soft bristle brush and/or vacuum cleaner.

Pull the refrigeration unit and clean the rear exhaust screen of dirt and debris.
Do not block the evaporator or any area of the airflow with product or supplies.

## PARTS ORDERING PROCEDURE

When ordering parts, include the following:

1. The model and serial numbers of the machine for which the parts are needed.
2. Shipping address
3. Address where the invoice should be sent.
4. The number of parts required.
5. Always refer to the pertinent parts and/or part manual for the correct part number and description of a specific part

NOTE
When RIGHT or LEFT is used with the name of a part, it is means the person is facing the machine with the door closed.
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.

Mail your order to:

> VendNet ${ }^{T M}$
> P. O. Box 488
> 165 North 10th Street
> Waukee, IA 50263-0488 USA

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 VendNet ${ }^{T M}$.
If you have any questions, check out our Website www.vendnetusa.com or call VendNe ${ }^{\mathrm{FM}}$. Ask for the Parts Department. We will be happy to assist you. Email: Vendnet@vendnetusa.com

## BEFORE CALLING FOR SERVICE

Please check the following

- Does your machine have at least 6 -inches of clear air space behind it?
- If the power is turned on at the fuse box, is the machine the only thing that doesn't work?
- Is the machine plugged directly into the outlet?


## WARNING:

> | Extension cords can cause problems. |
| :--- |
| DO NOT USE EXTENSION CORDS. |

- Is the evaporator coil free of dust and dirt?
- Is the condenser coil free of dust and dirt?
- Is the compressor free of dust? (A blanket of dust can prevent the compressor from cooling in between workouts).
- Is the circuit breaker at the fuse box reset?
- Are evaporator fans running? To check if fans are running take a small piece of paper in front of the evaporator coil and see if the evaporator fans will blow the paper away.
- Is the condenser fan running? Fold a sheet of $81 / 2^{\prime \prime} \times 11^{\prime \prime}$ paper in half. Place the paper in front of the condenser coils and see if it draws the paper to it.
- Is the shelf in front of the evaporator coil clear? (No tools, product, or other airrestricting items).
- Is the cold control set as specified?


## NOTE

Setting the temperature colder does not accelerate cooling of product.

## SCHEMATIC




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VendNet ${ }^{\text {TM }}$
165 North 10th Street
Waukee, Iowa 50263
United States of America
Number One in Quaility

|  | USA \& Canada | International |
| :---: | :---: | :---: |
| Service | $(800) 833-4411$ | $(515) \mathbf{2 7 4 - 3 6 4 1}$ |
| Parts | $(888)$ 259-9965 |  |
| Email | vendnet@vendnetusa.com |  |
| Web Site | www.vendnetusa.com |  |


[^0]:    AT THIS POINT THE MESSAGE KEY PAD LAYOUT IS IN EFFECT. See Figure 11. Enter each letter of the message according to the Keypad Format and the keypad overlay furnished with the vendor.

[^1]:    Press (A) or (C) to scroll through the Shutdown mode sub-menu.
    Time............. Sets shutdown interval times
    Day .............. Sets days of the week shutdown intervals are in effect
    Range.......... Sets the range of selections affected by shutdown intervals

    If the ON state is selected, four intervals with a start and a stop time for each, must be programmed. If an interval is not used, program the start and stop times to zeros (00.00)

