



TABLE TOP GLASSFRONT MERCHANDISER



MODEL:

3003-MDB

Service Manual

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Record the Model Number and Serial Number of your machine below.

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: _____

SERIAL NUMBER: _____

SPECIFICATIONS

Physical Dimensions

	INCHES	CM
Height:	23	58
Width:	22	56
Depth:	24-1/4	62

	POUNDS	KG
Weight:	70	26

Electrical

Power: 120 VAC, 60 Hz (Domestic)
220/230/240 VAC, 50/60 Hz (Int'l)

Transformer: 110VAC: 60Hz
220/230/240 VAC: 50/60Hz
24VAC, 75 VA

Operating Current .9 Amps

Capacity

Standard Configuration:

Two (2) trays

Three (3) to six (6) selections per tray

Both trays are configurable from candy to snack and vice versa.

Additional helix sizes available through VendNet™ Parts Department, see the Introduction section of this manual.

Coinage

MDB version - any MDB peripheral device

INTERNATIONAL

DOMESTIC

Global

Mars TRC-6010

Coinco L-Plus

Coinco 9302L

INTRODUCTION

This manual contains service and installation guidelines and instructions pertaining to the **Table Top Glassfront Merchandiser - Model 3003-MDB**. Also included are various options, features and accessories that are offered.

Features and Options

- Multi Drop Bus (MDB) coin handling mechanism
- DEX/UCS for MIS data transfer using the Vending Industry Data Transfer Standard
- Self-diagnostics and cash accountability
- Force Vend, Multi Vend features
- Motorized delivery, electronically controlled

CAUTION:

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

- Audible feedback indicates when a product has been vended or when an error condition exists.
- No change or loss of program/memory because a 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 of the Table Top Glassfront is “First-in, first-out”, eliminating the need for stock rotation. The product drawer features “Vend The Item You See”, therefore, a display item is not necessary.

The basic tray configurations can be changed by ordering additional parts, for a maximum of six selections per tray. The trays are equipped with individual 24 volt DC motors and helixes for each selection. Each tray is equipped with a complete wiring harness for different drawer configurations. The top drawer may be filled in its normal vend position then raised and locked in the up position to fill the lower drawer. The selection capacity and product size may be varied by adding or deleting motors and helixes in each drawer.

Each machine is identified by a model number and a serial number. These numbers appear on the Identification Plate attached to the rear of the vendor. Record these numbers for your records (space provided after Table of Contents). All inquires and correspondence pertaining to this vendor should reference the model and serial numbers.

It is recommended that this manual be read thoroughly to familiarize the service person with the functions of all components, along with the features that are available. The initial setup 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 setup time will be minimized.

Should you have any questions pertaining to the information in the manual, replacement parts or the operation of the vendor you should contact your local distributor, or:

VendNet™
165 North 10th Street
Waukee, Iowa 50263 - USA
Phone: 515-274-3641
Parts Fax: 515-987-4447
Sales Fax: 515-274-0390
E-Mail: VendNet@Ecity.net

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 and the delivering carrier has accepted this vendor as their 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 packaging 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 packaging material directly to the delivering carrier on a hidden damage report.

Open the outer door and remove all internal packing material. The keys to the vendor are located in the bag taped to the coin up assembly.

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

INSTALLATION INSTRUCTIONS

The vendor can be mounted to a tabletop surface. The service package includes two #10 wood screws to fasten up through holes in a table surface into bosses molded into the vendor's base. The bosses are located on the bottom of the vendor and are 11 inches apart (front to back).

Table 1: Service Package Contents

DESCRIPTION	QUANTITY
Service Manual	1
#10 Wood Screws	2
Minors Forbidden Label	1
Product Ejectors	6
Price Sheet .25-.60	1
Price Sheet .65-1.00	1
Price Sheet 1.05-1.40	1
Safety Manual	1

Grounding & Electrical

WARNING:

**Extension cords can cause problems.
DO NOT USE EXTENSION CORDS.**

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.

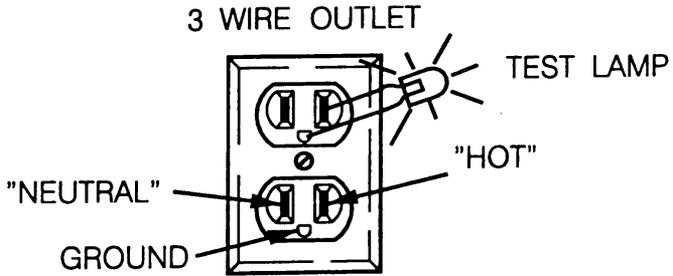
To correct negative voltage, amperage, polarity, or ground checks, consult a licensed electrician.

120 Volt Vendors,

See Figure 1

Power source must be 120 VAC ($\pm 10\%$) 60 Cycle (Hz).

1. **Voltage Check:** Connect the AC multimeter probes to the hot and neutral terminals. It should indicate 108 to 132 volts AC.
2. **Polarity and Ground Check:** When the AC multimeter probes are connected to the hot and ground terminals, it should indicate 108 to 132 volts AC
3. **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 5 amps or greater.



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Figure 1. 120 Volt Outlet

NOTE:

The hot side of the outlet should always be counter-clockwise from the ground terminal. The neutral terminal will be clockwise from the ground terminal.

220/230/240 Volt Vendors

See Figure 2.

Power source must be 220/230/240 VAC ($\pm 10\%$) 50/60 Cycle (Hz).

1. **Voltage Check:** When the AC multimeter probes are connected to the hot and neutral terminals, it should indicate 207 to 253 volts AC
2. **Polarity and Ground Check:** When the AC multimeter probes are connected to the hot and ground terminals, it should indicate 207 to 253 volts AC
3. **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 3 amps or greater.

NOTE:

If the receptacle is not properly grounded or polarized, contact a licensed electrician to correctly polarize and/or ground the receptacle to ensure safe operation.

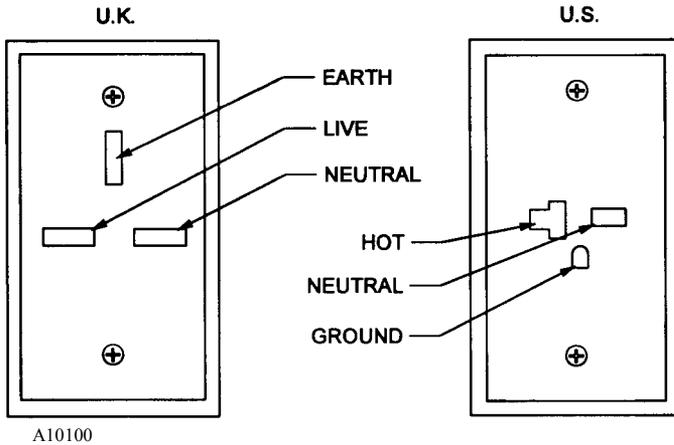


Figure 2. Two Types of 230 Volt Outlets

INSTALLATION CHECK LIST

1. All external and internal packaging removed.
2. Recorded model and serial numbers from Identification Plate on back of cabinet (space provided at end of Table of Contents).
3. Consulted local, state and country codes and regulations before installation of the vendor.
4. Tested for proper grounding and ratings of outlet to be used by vendor.
5. Refer to Setup for continuation of installation.

SET UP

The Table Top Glassfront Merchandiser control system must be set up for use prior to placing the vendor in operation. The control system controls the pricing, motor control, accounting information, and vend options within the machine. It also monitors errors or failures that may occur and relays that information through the display.

After the machine is set up to vend, it must be properly loaded to assure proper vending of product. The proper loading of product is essential to a proper vend and satisfaction of the buying customer.

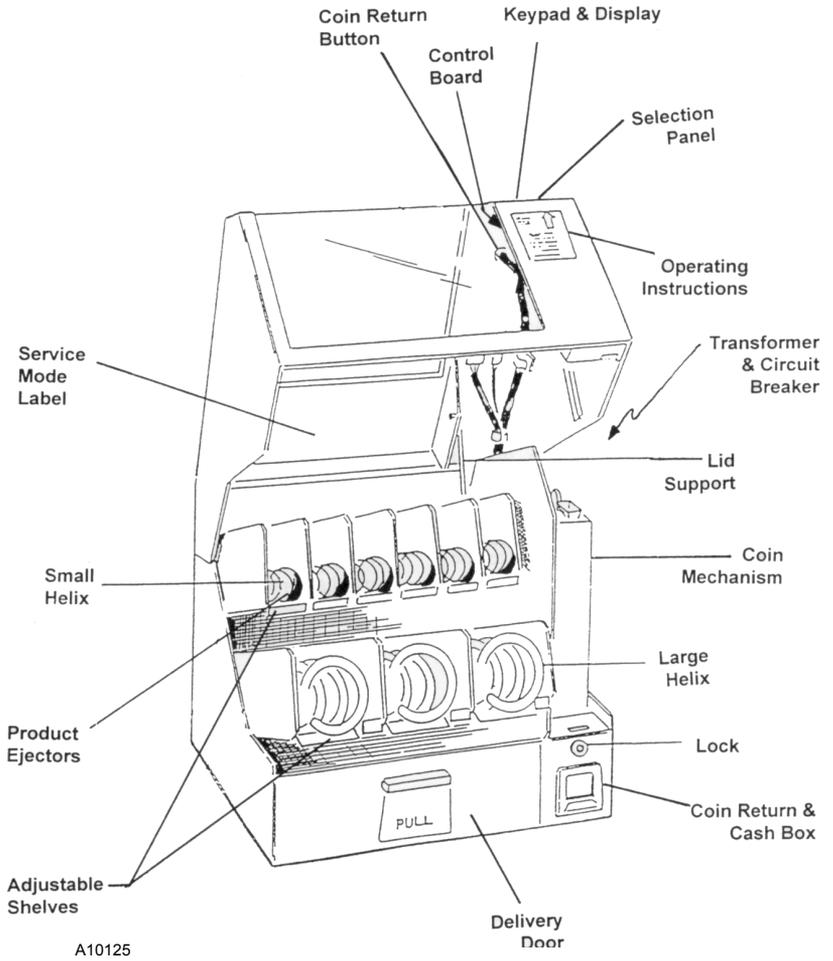


Figure 3. Tabletop Components

COMPONENTS & FUNCTIONS

See Figure 3.

Coin Return Button

When depressed, the coin return button located on the top cover activates the coin acceptor to scavenge or clear the acceptor of any damaged or stuck coins. By pressing the coin return button with credit displayed (if Force Vend is off), the controller will signal the coin mechanism to return the held credit. The coins will be channeled through the coin mechanism to the coin return cup located in the base of the vendor.

Keypad

The keypad, located on the top cover, is a self enclosed membrane switch panel. This eliminates the need for individual switches and wiring. The keypad is used to activate the vend circuit when making a selection and in the *Service Mode* to modify controller functions.

Vend Motors

The Table Top Glassfront incorporates the use of current limited DC Motors.

CAUTION:

Do not try to turn motors by hand, damage to the motor may result.

The vend motors are held in place by a “T” shaped section that slides up and down in the back portion of the trays. The motors are identical and can be changed with any other motor in the unit.

Delivery Drawer

The delivery drawer, located in the front of the main cabinet, is pulled forward or out after products are vended. When the drawer is pulled out an Anti-Theft guard comes forward, covering the drawer to prevent access to the other items in the vendor. The linkage for the Anti-Theft guard is under the bottom tray.

Coin Return Cup, Cash Box & Keyed Lock

The coin return cup and the cash box is a one-piece, two-compartment slide-in assembly. The front portion is the coin return cup and the back portion is the cash box area. Incorporated in the front of the assembly is a keyed lock for the drawer and lid assemblies. In the closed or locked position the keyed lock will secure the coin return and cash box assembly and activate the locking assembly for the lid of the vendor. The keys for this lock will be shipped taped inside the coin return cup.

Display

The display is a four-digit, seven-segment display that is integral to the controller and cannot be replaced without replacing the entire controller. The display is used as the informational center for the controller to convey information in both *Sale* and *Service Modes*.

Transformer

The transformer is located in the base of the cabinet on the right side. It can be accessed from the back of the cabinet by first unplugging the machine then removing four screws on the vented back screen displaying the underside of the transformer.

Circuit Breaker

The 3-amp circuit breaker, located on the transformer cover inside the cabinet cavity, protects the controller board and the coin mechanism.

Coin Mechanism

The coin mechanism is either a CoinCo 9302-GX MDB 24 volt coin mechanism or equivalent. The coin mechanism is shipped installed, however the coin mechanism packaging is used as additional packaging material within the main carton.

Filling The Coin Tubes

1. Unlock the top lid and raise the lid to full open position, and the lid support engages.
2. Fill nickels (approximately 68) in coin mechanism nickel tube.
3. Fill dimes (approximately 98) in coin mechanism dime tube.
4. Fill quarters (approximately 66) in coin mechanism quarter tube.
5. Correct change light will go out.
6. Disengage lid support and close lid.

CAUTION:

Never disconnect the coin mechanism or any electrical connection with the machine plugged in. Damage to the coin mechanism or controller may result.

Main Product Trays

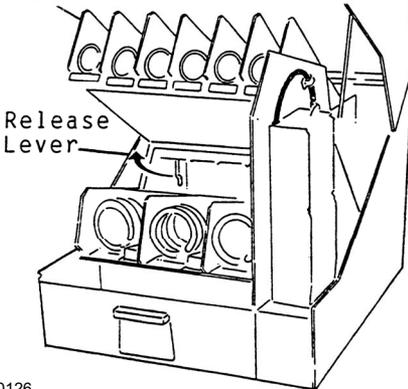
There are two (2) main product trays per machine, each capable of containing a maximum of 6 selection, depending on the configuration of the trays. Each selection has its own vend motor mounted to the back of the tray. Each tray has its own wiring harness and plug for connecting to the remainder of the circuit through the cabinet. The motors are the same on all trays. It is possible to change configuration in each tray by adding or removing motors and helixes.

NOTE:

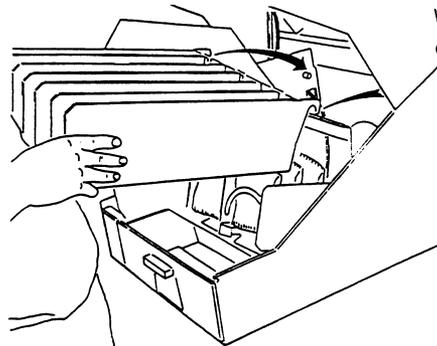
When changing configuration of the trays you will have to re-program the machine for the prices and selections altered.

Removal Of Product Trays

The two (2) product trays are held in place on mounting pins on each side of the tray. See Figure 4.



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Figure 4. Tray Mounting Pins

To remove the top tray:

1. Open the lid and engage the lid support.
2. Disconnect the plug connection for the top tray.
3. Pull forward on the release lever and hold forward.
4. Lift up on tray and pull out to remove.

To re-install the top tray:

1. Place tray in position on mounting pins.
2. Re-connect harness plug to tray.

To remove the bottom tray:

1. Remove the top tray as described in preceding section.
2. Disconnect harness plug from bottom tray.
3. Lift up on tray and pull tray forward out of cabinet.

To re-install the bottom tray:

1. Place bottom tray in position on mounting pins.
2. Re-connect plug to wiring harness.

Tray Configurations

The selection helixes and motors may be changed to accommodate different sizes and shapes of products. One large helix may be replaced with two (2) small helixes or two (2) small helixes may be replaced by one (1) large helix.

To change two small helixes to one large helix:

1. Remove tray.
2. Remove the two small helixes to be changed.
3. Remove center divider by lifting up and removing from tray.
4. Remove the two adjustable shelves.
5. Remove the vend motor to the right by disconnecting the wires and lifting out of the slot.
6. Move existing vend motor from the left slot to the center slot. Leave wiring connected.
7. Install wide adjustable shelf.
8. Install large helix.

NOTE:

For some narrow snack selections it will be necessary to rotate helixes to different starting positions. The spline on the helix shaft allows for the helix to be indexed every 20 degrees of rotation.

9. Reinstall tray.
10. Set vend price.
11. Test vend the selection.

Changing one large helix to two small helixes:

1. Remove tray.
2. Remove the large helix to be changed by pulling forward on the hub of the helix.
3. Remove the wide adjustable shelf.
4. Move the vend motor from the center slot to the left slot and leave wires connected.
5. Install new vend motor in the right hand slot and connect existing harness wires to the proper terminals.

CAUTION:

Make sure when connecting the wires to the new motor that the wires are connected to the proper terminals. Improper wiring could damage motor and the controller board.(See the Schematic at the back of this manual.)

6. Install new narrow adjustable shelves.
7. Install new small helixes by inserting into motor and pressing helix spline inward towards motor.

NOTE:

For some narrow candy selections it will be necessary to index helixes to different starting positions. The spline on the helix shaft allows for the helix to be indexed every 20 degrees of rotation.

8. Re-install tray.
9. Set the vend price for the new selections.
10. Test vend selections.

Adjustable Shelves

Under each selection helix is an adjustable aluminum shelf.

Proper positioning of each adjustable shelf is critical to assuring successful vends. The shelf should be adjusted out far enough to prevent the product from dropping off the front of the tray unintentionally, but back far enough to assure the product will drop free of the tray front when vended.

Each shelf can be moved in and out to assure proper vending. The shelf is held to the back of the product tray by a screw and a rubber bushing. If the shelf is difficult to move, loosen the screw with a Phillips screwdriver, adjust, and re-tighten.

Product Ejectors

Product ejectors are used to provide additional push for products that may still hang on the front of the trays even after the adjustable shelves have been adjusted.

Six (6) product ejectors are included in the service package. The product ejectors are half-moon shaped black plastic that snap fit onto the ends of the helices. The curvature of the ejectors matches that of the helices for easy assembly. The attachment of the ejector can be timed (by placing at different clock positions, such as 3:00), to push the product from the tray earlier than a normal rotation would.

By adjusting the product shelves, helix timing and adding product ejectors, virtually any product can be vended if it fits in the helix spaces. If a product is “jammed” into the helix space, it is too big and will probably have vend failures.

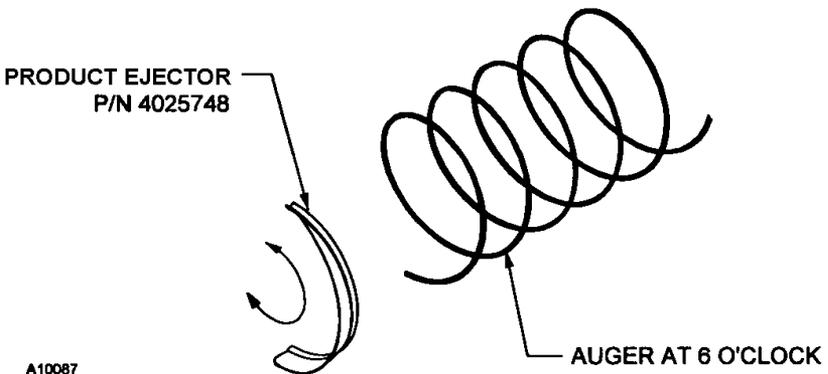


Figure 5. Product Ejectors

LOADING INSTRUCTIONS

The small diameter selection helixes will hold 11, 14, or 16 items between the loops or spaces, depending on which helix is installed. The large diameter selection helix will hold eight (8) items between the loops and spaces.

When loading products into the helixes, start at the last space or loop and place the products toward the front making sure to place a product into each “space” of the helix.

Loading Top Tray

With the lid in a full open position and the lid support engaged, the top tray may be loaded with the product. Fill the product in the selection helix starting at the back and filling forward, making sure to place an item in every loop or space of the helix.

Loading Bottom Tray

With the lid in a full open position and the lid support engaged, tilt the top tray up and lock it in position with the locking lever. See Figure 7. Pull the bottom tray forward in the vendor to reach the back of the selection helix loops (or spaces) for ease of filling items into the helixes.

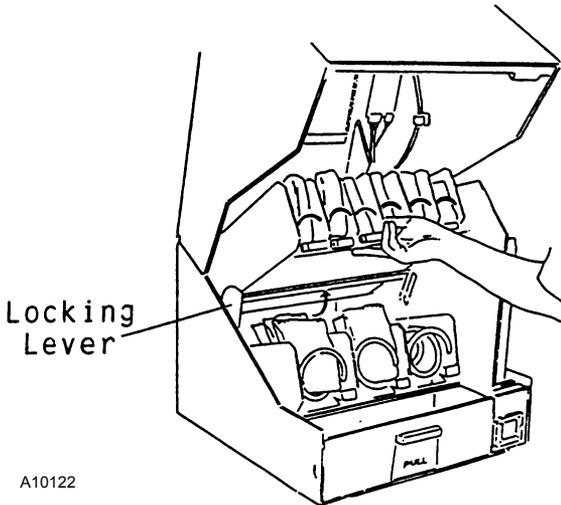
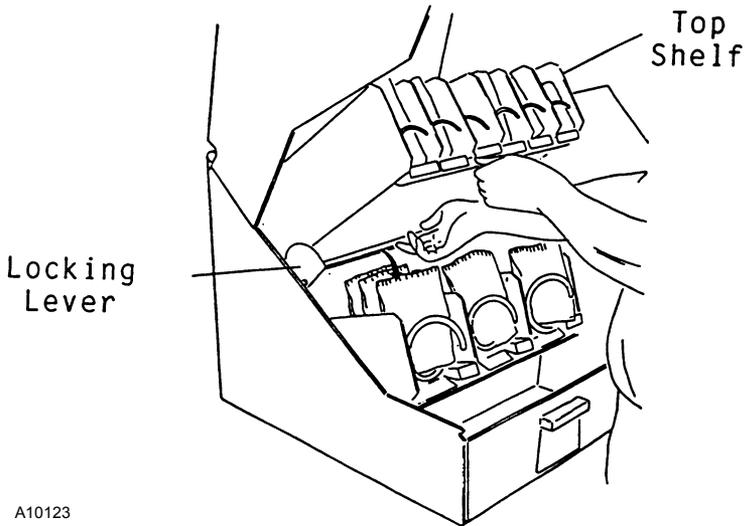


Figure 6. Locking Lever

To Close Vendor After Loading

1. Push bottom tray back into the vend position in the cabinet.
2. Raise up on the top tray and push down on the locking lever. See Figure 7.
3. Lower top tray to the vend position, resting on the support pins.
4. Push up on lid and release the lid support by pulling forward on the support. Carefully lower the lid to the closed position.
5. Secure the lid and lock in place by using keyed lock in the coin return and cash box assembly.



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Figure 7. Locking Lever

NOTE:

Product must not be forced into the helix spaces. All product should fit freely. The width of the product must be greater than the diameter of the snack helix. If the product is smaller it may fall through the helix when the product is in the front vend position.

CONTROLLER FUNCTIONS

There are two modes of operation.

Sales Mode: The vendor accepts deposits, pays out change, and dispenses product to the customer. The digital display and the LEDs are used to communicate with the operator and the customer.

Service Mode: Used by the operator to program and service the machine. The digital display is used to communicate with the operator.

Sales Mode

.00 displays. The decimal point position is determined by the coin mechanism attached.

When no credit has been established and a key is pressed, the price for that selection displays for approximately three seconds.

When credit is deposited the amount displays. Four digits are available. The credit value displays until either a vend or a coin return command occurs.

Vend Cycle

After a selection is made, the controller will determine if sufficient credit is available and the status of the selection. If the accumulated credit is greater than or equal to the price of the selection a vend attempt will be shown on the display. If credit is less than the selection price, the price will be flashed for 3 seconds or until a new selection key is pressed.

After a successful vend, the amount of change to be returned will be displayed until all coinage is paid back.

If the motor is flagged as bad, the MAKE ALTERNATE SELECTION LED flashes for 3 seconds or until a new selection key is pressed.

If a selection is made and a vend cannot take place, (assuming that sufficient credit and change are available) the MAKE ALTERNATE SELECTION LED flashes.

LEDs

If the payout tubes in the coin mechanism are below the low-level sensors, the USE CORRECT CHANGE LED will light continuously unless the No Cheat Mode is enabled. See No Cheat Mode in this Options section.

If no motors have been assigned or if the motor has been recorded as faulty, the MAKE ALTERNATE SELECTION LED flashes for 3-seconds or until a new selection is made.

Jammed Motor Condition

The controller will not run motors that have been flagged as “jammed” or that 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 nine (9) seconds.

Motors flagged as jammed must be successfully run in the *Service Mode* to be reset. Follow the instructions outlined in Test Vend Selections section of this manual.

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 selection vended. The counter rollovers occur at 99,999,999 and \$999,999.95 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.

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 99,999,999 and \$999,999.95 respectively.

NOTE

Test vends are not included in the resettable 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 service mode button once. The controller is located on the inside of the cabinet top directly behind the front display area. The service mode button is located on the top left corner of the controller. See Figure 8.

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 twenty five (25) seconds.

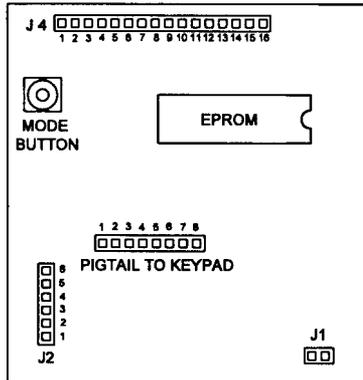
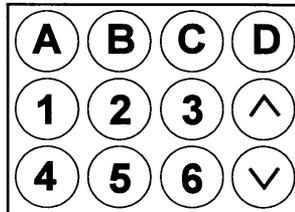


Figure 8. Service Mode Button Location

Service Modes

Push the service mode button once to enter the base menu of the *Service Mode*. **Cnt** displays, to access the other modes (See Table 3) press [^] and the [v] (up and down arrows) to scroll through the available modes. See Figure 9 for the keypad layout.



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Figure 9. Keypad Layout

Table 3. Service Modes Functions

DISPLAY SHOWS ¹	FUNCTION
Cnt	Motor Count
Coin	Coin Dispensing
SALE	Total Sales (Vend Count)
CASH	Cash Count
rSLE	Resettable Total Sales(Vend Count)
rCSH	Resettable Cash Count
Clr	Clear Resettable Values
PrC	Price Setting
SLCt	Single Motor Test
tESt	All Motor Test
FC x	Force Vend
UL x	Multi Vend
CH x	No Cheat
ES x	Note (Bill) Escrow (Not available)
1. X is the current status of the function (y = enabled, n = disabled)	

MOTOR COUNT

The total number of functional motors will be displayed when **Cnt** is displayed and any key except the [**^**] or [**v**] is pressed. Any new motors located during the motor count will be added to the current configuration. The controller will test each motor in the configuration. To access the other service mode functions, press [**^**] to scroll up or [**v**] to scroll down.

COIN DISPENSING

With **Coin** showing in the display coins can be dispensed from the coin mechanism inventory tubes. See Table 4.

Table 4. Coin Dispensing

PRESS KEY	TO DISPENSE
[1]	lowest value coin
[2]	next lowest value coin
[3]	next greatest value coin
[4]	greatest value coin (if four coin tubes)

Coins can also be dispensed from the coin mechanism with optional payout switches.

To access the other service modes, press [**^**] to scroll up or [**v**] to scroll down.

TOTAL SALES (VEND COUNT)

When **SALE** shows in the display, enter one of the following:

- Single selection ([**A**][**1**] for example).
- Entire range (row), press the alpha key of that range (row) two times ([**B**][**B**] for example).
- Entire Machine, enter [**A**][**D**].

The values of the vend and cash counters will be displayed as eight digit numbers, with the first four digits of each counter displayed first for a period of 2 seconds and then the last four digits displaying for 2 seconds. The controller will then wait for another selection. See example.

EXAMPLE

Choose selection to display	
0000 displays for 2 seconds	0
8735 displays for 2 seconds	<u>8,735</u>
Indicates total vend count of	8,735

CASH COUNT

When **CASH** shows in the display, enter one of the following:

- Single selection ([**A**][**1**] for example).
- Entire range (row), press the alpha key of that range (row) two times ([**B**][**B**] for example).
- Entire Machine, enter [**A**][**D**].

The values of the vend and cash counters will be displayed as eight digit numbers, with the first four digits of each counter displayed first for a period of 2 seconds and then the last four digits displaying for 2 seconds. The controller will then wait for another selection. See example.

EXAMPLE

Choose selection to display	
0093 displays for 2 seconds	9,300.00
65.20 displays for 2 seconds	<u>65.20</u>
Indicates total cash sales of	9,365.20

RESETTABLE TOTAL SALES (VEND COUNT)

When **rSLE** shows in the display, enter one of the following:

- Single selection ([**A**][**1**] for example).
- Entire range (row), press the alpha key of that range (row) two times ([**B**][**B**] for example).
- Entire Machine, enter [**A**][**D**].

The values of the vend and cash counters will be displayed as eight digit numbers, with the first four digits of each counter displayed first for a period of 2 seconds and then the last four digits displaying for 2 seconds. The controller will then wait for another selection. See example.

EXAMPLE

Choose selection to display	
0000 displays for 2 seconds	0
0217 displays for 2 seconds	<u>217</u>
Indicates total vent count of	217

RESETTABLE CASH COUNT

When **rCSH** shows in the display, enter one of the following:

- Single selection ([**A**][**1**] for example).
- Entire range (row), press the alpha key of that range (row) two times ([**A**][**A**] for example).
- Entire Machine, enter [**A**][**D**].

The values of the vend and cash counters will be displayed as eight digit numbers, with the first four digits of each counter displayed first for a period of 2 seconds and then the last four digits displaying for 2 seconds. The controller will then wait for another selection. See example.

EXAMPLE

Choose selection to display	
0001 displays for 2 seconds	100.00
62.50 displays for 2 seconds	<u>62.50</u>
Indicates total cash sales of	162.50

CLEAR RESETTABLE VALUES

When **CLr** shows in the display, Press any key except the [**^**] or [**v**] to clear the resettable values. To access the other service mode functions, press [**^**] to scroll up or [**v**] to scroll down.

PRICE SETTING

With **PrC** showing in the display, enter the desired selection. The current price will be displayed. Press [**^**] to scroll the price up or [**v**] to scroll the price down, then press [**A**] to save the price.

Once the price has been saved the display will show **PrC** again and wait for another selection. To access the other *Service Modes*, press [**^**] to scroll up or [**v**] to scroll down. To exit the *Service Mode* press the Service Mode Button.

Vend prices can be verified in the *Sales Mode*. With no credit established, enter a selection to display the corresponding price. If the selection has no motors assigned, the **MAKE ALTERNATE SELECTION** LED will light.

SINGLE MOTOR TEST

With **SLCt** showing in the display, test a single selection by pressing the corresponding selection keys (A1 for example). Pressing either the [**^**] or [**v**] keys jumps the controller up (or down) to the next service mode function.

If during a test vend a selection motor fails, the display will flash **Fail** for two (2) seconds. Note any selection motors that fail and refer to the Troubleshooting section of the manual to diagnose vend failure(s).

ALL MOTOR TEST

With **tEst** showing in the display, press any key other than the [**^**] or [**v**] keys to test vend all selections starting with A1.

If during a test vend a selection motor fails, the display will flash **Fail** for Two (2) seconds, then continue on with the test sequence. Note any selection motors that fail and refer to the Troubleshooting section of the manual to diagnose vend failure(s).

FORCE VEND

This mode forces the customer to select a product if the accumulated credit is greater than or equal to the lowest programmed vend price in the machine.

If the customer's initial selection fails during the vend cycle, then the controller will allow the credit to be returned via the manual escrow return request. The Coin Return Button must be pushed.

When in the Force Vend Option, the display will show FC X. Press any key other than the [\wedge] or [\vee] keys to toggle the status of the option (*y = enabled, n = disabled*). Pressing either the [\wedge] or [\vee] keys saves the currently displayed status of the function and jumps the controller up (or down) to the next service mode function.

MULTI-VEND

This feature, when on, enables multiple purchases to be made as long as adequate credit is available. Instead of immediately returning the over-deposit after a vend, the credit displays. To receive change on an over-deposit the Coin Return button must be pushed.

When in the Multi-Vend Option, the display will show UL X. Press any key other than the [\wedge] or [\vee] keys to toggle the status of the option (*y = enabled, n = disabled*). Pressing either the [\wedge] or [\vee] keys saves the currently displayed status of the function and jumps the controller up (or down) to the next service mode function.

NO CHEAT

When a vend is attempted and there is not enough change in the coin mechanism to return exact change, the controller is said to be in exact change status. Whenever this condition occurs, a customer is at risk of not receiving exact change after a vend is made. To signal the customer of a potential loss, the USE EXACT CHANGE LED will be on.

When the controller is in exact change status and the No Cheat Option is enabled, and if a customer selects an item for which exact change can not be returned, the controller will return the accumulated credit and the selection will not be vended. The USE EXACT CHANGE LED will flash to signal the customer to use exact change for the desired selection.

When in the No Cheat Option, the display will show CH X. Press any key other than the [\wedge] or [\vee] keys to toggle the status of the option (*y = enabled, n = disabled*). Pressing either the [\wedge] or [\vee] keys saves the currently displayed status of the function and jumps the controller up (or down) to the next service mode function.

NOTE (BILL) ESCROW

Note (Bill) Escrow is not available

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 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.

The vend mechanisms must be kept clean. Any build-up can cause the mechanisms to malfunction.

Do not get the cleaning solution on electrical components.

To insure proper vending keep delivery area free 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.

BEFORE CALLING FOR SERVICE

Please check the following:

- 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 circuit breaker at the fuse box reset?
- Refer to the troubleshooting section.

PARTS ORDERING 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 model number and serial number of the machines.
5. Any special shipping instructions.
6. Carrier desired: air or air special, truck, parcel post, or rail.
7. Signature and date.
8. If a purchase order number is used, be sure that it is legible and visible.
9. Correct part number and description from the pertinent part and/or parts manual.

NOTE

When "Right" and "Left" are used with a part name, it is taken to mean that the person is facing the machine with the door closed.

10. Mail your order to VendNet™
 165 North 10th Street
 Waukee, Iowa 50263 - USA
 Phone: 515-274-3641
 Parts Fax: 515-987-4447
 Sales Fax: 515-274-0390
 E-Mail: VendNet@Ecity.net

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 the above address. VendNet™ will provide a copy for you, if available.

Do not wait to order until you receive the parts manual; instead use the most accurate description you can. Include the model number and serial number of the machine, the name of the assembly in which the part is used, and if practical, a sample part. Furnish any information to enable our Parts Department to pinpoint the exact part needed.

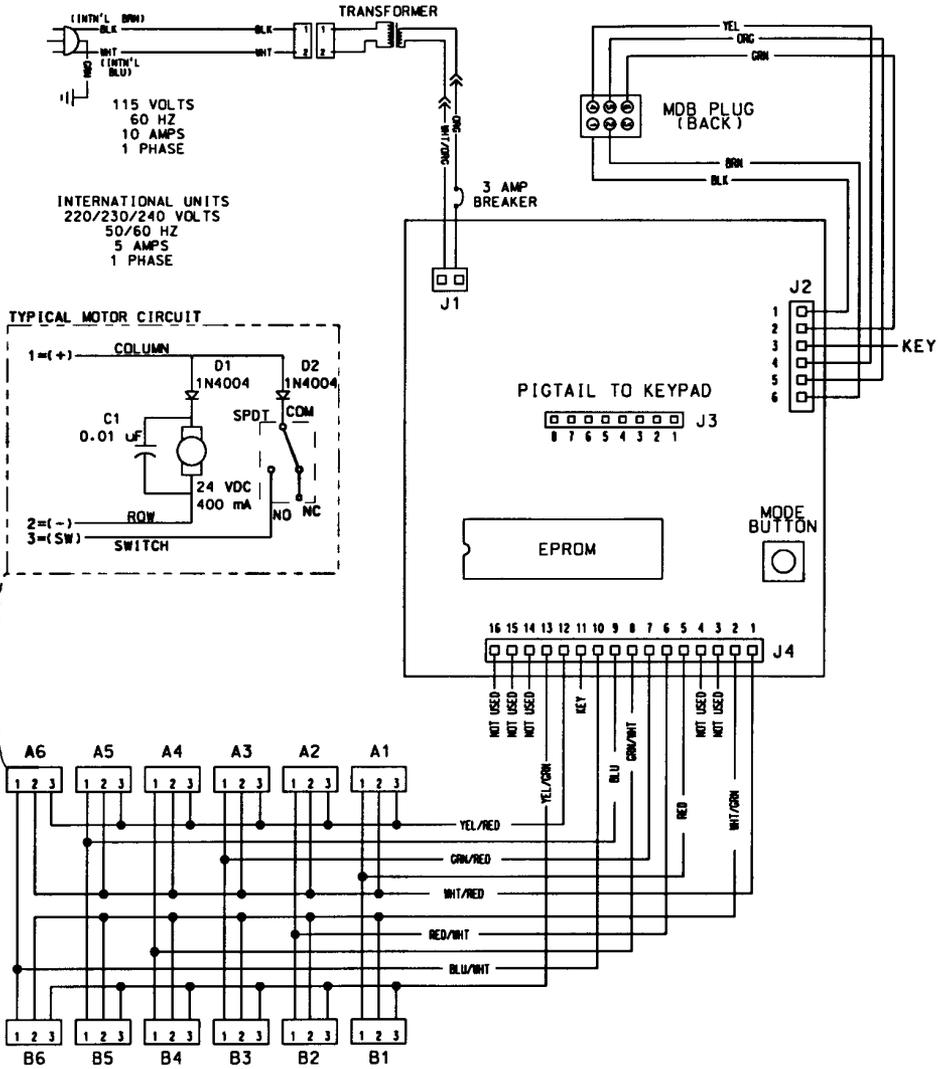
TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	CORRECTIVE ACTION
Vendor rejects all coins	Machine not plugged into outlet	Plug machine into wall outlet
	Circuit breaker tripped at supply	Reset circuit breaker
	Damaged or defective power cord	Repair or replace power cord
	Circuit breaker tripped in machine	Repair short causing the breaker to trip and reset breaker
	Two pin connector off of controller or loose	Connect two pin connector
	Broken or disconnected white/orange or orange wires from transformer to controller	Repair broken wire or reconnect wire
	Dirt or foreign material in coin acceptor	Clean the coin acceptor
	Six pin connector on controller to coin mechanism unplugged or bad contact or miss aligned with pins on the controller	Check six pin connector for continuity and bad connection to board
	Coin mechanism is not plugged into receptacle or loose connection	Check coin mechanism plug or tighten connections
	Bad coin mechanism	Replace coin mechanism
	Bad transformer	Replace transformer
	Bad controller	Check for burnt components or cracked controller

PROBLEM	CAUSE	CORRECTIVE ACTION
Vendor accepts coins, will not vend	Connection to keypad loose or broken	Connect harness to the controller, check for loose or broken wire or connector
	Harness from the controller to trays disconnected, loose connection or broken wire	Connect harness to controller. Check for loose or broken wire
	Shelf harness disconnected, loose or broken	Check connections or wire breaks in harness
	Jammed vend motor	Check on product being too large or helix hub improperly aligned
	Wire connections to motor loose or disconnected	Check vend motor connections and for loose or broken wire(s)
	Selection price set wrong	Check selection for proper pricing
	Bad controller	Replace controller
Vends properly but does not return proper change amount	Selection price not set properly	Check selection price and price label
	Coin mechanism payout tubes jammed	Check for bent coins in the payout tubes of the coin mechanism
	Coin mechanism bad	Replace coin mechanism
	Bad controller	Replace controller
	Bad keypad	Replace keypad
Vend motors stopped during cycle	Product jammed in helix	Product too thick, need different helix or product
	Bad vend motor	Test vend motor in <i>Service Mode</i> (See “Single Motor Test” section)
	CAUTION: Do not attempt to turn motors by hand. Damage to the motor may result.	
	Vend motor switch or wiring loose or broken	Check the switch for continuity and harnessing for loose or broken wires

PROBLEM	CAUSE	CORRECTIVE ACTION
Product does not vend properly, hangs on front of shelf	Product too large for helix	Change product or helix
Product hangs up under helix at tray front	Product catches on helix front	Adjust timing of helix to properly get product off of shelf
	Product catches on helix front	Install product pusher to helix end
	Product catches on helix front	Adjust sliding shelf liner to release product properly
	Product loaded improperly	See Loading Instructions
Helix came out of vend motor during vend cycle	End cap missing from hub shaft behind motor	Replace end cap
Product delivery drawer binding	Foreign material in drawer tracks	Check tracks and clean
	Linkage broke or loose	Check linkage under bottom tray for breakage and missing or loose fasteners
	Drawer return spring not connected or broke	Check spring connection and replace if broken
	Anti-theft binding in track or not in track properly	Clean track if dirty, check for proper positioning of alignment pins in side tracks

SCHEMATIC



CONNECTOR INFORMATION		
J1	POWER INPUT (24 VAC)	
J2	MDB CONNECTION	
	PIN	DESCRIPTION
	1	MDB 34 VDC
	2	MDB DC POWER RTN
	3	KEY
	4	MDB SLAVE TXD
	5	MDB SLAVE RXD
	6	MDB COMMS COMMON
J3	KEYPAD CONNECTION	
	PIN	KEYS DESCRIPTION
	1	A. 1, 4
	2	B. 2, 5
	3	1, 2, 3, UP (ROW 2)
	4	4, 5, 6, DOWN (ROW 3)
	5	KEY
	6	A, B, C, D (ROW 1)
	7	C, 3, 6
	8	D, UP, DOWN
J4	MOTOR INTERFACE	
	PIN	DESCRIPTION
	1	ROW A
	2	ROW B
	3	ROW C (NOT USED)
	4	ROW D (NOT USED)
	5	COL 1
	6	COL 2
	7	COL 3
	8	COL 4
	9	COL 5
	10	COL 6
	11	KEY
	12	SWITCH A
	13	SWITCH B
	14	SWITCH C (NOT USED)
	15	SWITCH D (NOT USED)
	16	SOLDDOUT D (NOT USED)

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MODEL 3003 MDB
SCHEMATIC DIAGRAM
4208511
REVISION B