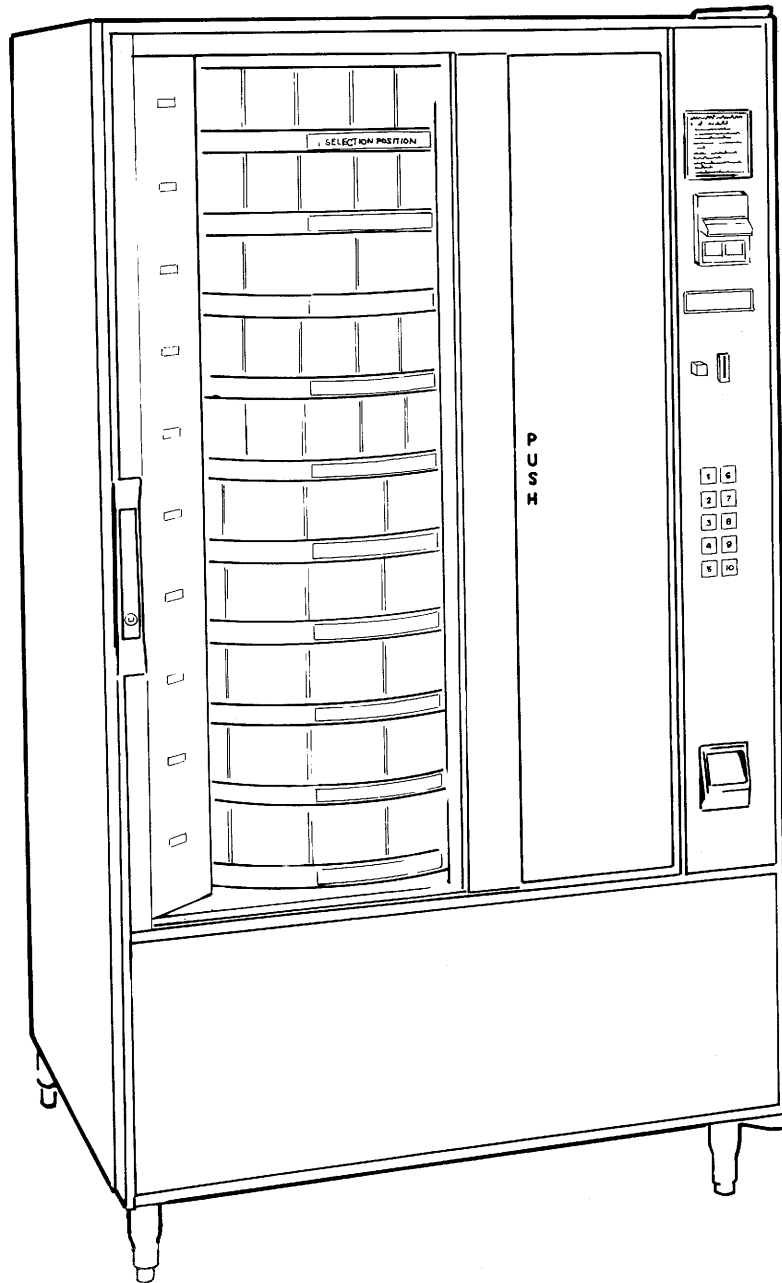


FOOD MERCHANDISER

SERVICE MANUAL



MODEL: 3005

PART NUMBER 4200258

REV. NOV. 1988

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SPECIFICATIONS

General:

Depth: 29 1/2
Width: 40 1/2
Height: 72 7/8
New Weight:
Shipping Weight: 805 lbs.
Power Requirements: 120 Vac - 60 Hertz
-(Minimum 20 Amp Circuit)
Operating Amperage: 10.8 Amps

Vend Capacity:

10 Selections - 5¢ to \$12.75 Vend Price
Total Items: 470 Maximum - 50 Minimum
Delivery Door: 1
Compartment Depth: 10 1/4 inches
Shelf Configurations: 6, 8, 12, 16, 24, 48
Shelf Compartment Heights: 3 1/2 inches

Operating Temperatures

26 to 40 F. Internal Cabinet (Health Timer
Cut out + 45° F°) (30 Minute Clock)

Coin Mechanism:

Mars TRC-6000
Coinco C 300

Refrigeration System:

Type: Automatic "Rapid Cool" or
Recovery System,
1/2 HP Compressor
Charge Freon 12 - 46 oz. Required
High Side Pressure: 150 psi
Low Side Pressure: 15 psi

Optional Equipment:

Dollar Bill Validator
Discount Clock
Cash Counter

INSTALLATION

Installation Procedure:

The Food Mart is shipped in one carton with all components assembled and ready for installation. The carton should be opened carefully not to damage the Vendor. Inspect the interior and exterior of the cabinet for damage. In case of damage to the Vendor notify the **DELIVERING CARRIER** immediately to examine the Vendor regardless of the external condition of the shipping carton. Do not destroy the packing materials or carton until the carrier's agent has examined them.

Keys Are Taped

In The Coin Return Cup:

When received, the keys for the outer door will be taped in the Coin Return Cup.

The Food Mart can be placed in operation after unpacking by following these steps:

Set Up Procedure:

1. Remove all tape and packing material from the Vendor.
 2. Check that the coin mechanism, fluorescent lamps, and circuit breakers are firmly in place and the main breaker is in the off position (zero showing on the breaker lever).
 3. Plug in the line cord to a 120-volt, 20 amp, 60 cycle, properly polarized three prong receptacle.
 4. After placing the vendor in location adjust the 4-leveling feet until the cabinet is level front to back and side to side, all levelers should touch the floor.
 5. Be sure to allow at least 4 inches between back of cabinet and wall for proper air circulation of the refrigeration unit.
 6. Determine the vend mode for the selection drum (see shopper and single step mode). Place proper identification label in the holder provided to the left of the selection drums.
 7. Determine the vend prices (see price setting) and set proper price on pricing disks provided.
 8. Fill the coin mechanism change tubes with nickels, dimes, and quarters.
 9. Close the main door to reset the health control. This control is set to shut down the vendor after 30 minutes if the cabinet temperature exceeds 45 degrees.
- NOTE:** On initial start up in high ambient temperatures, it is normal to experience a shut down after the first 30 minutes. Simply open the main door (to reset health control) & shut main door. No further shut down should occur.
10. After internal cabinet has cooled down to below 45 degrees, load product into the selection drums.

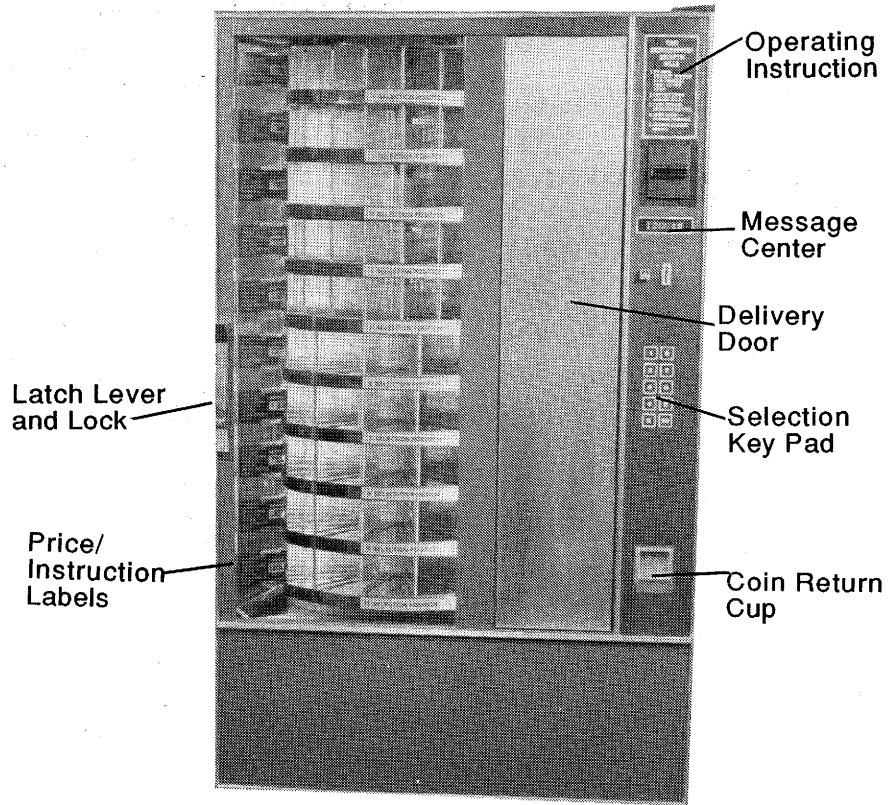


Figure 1

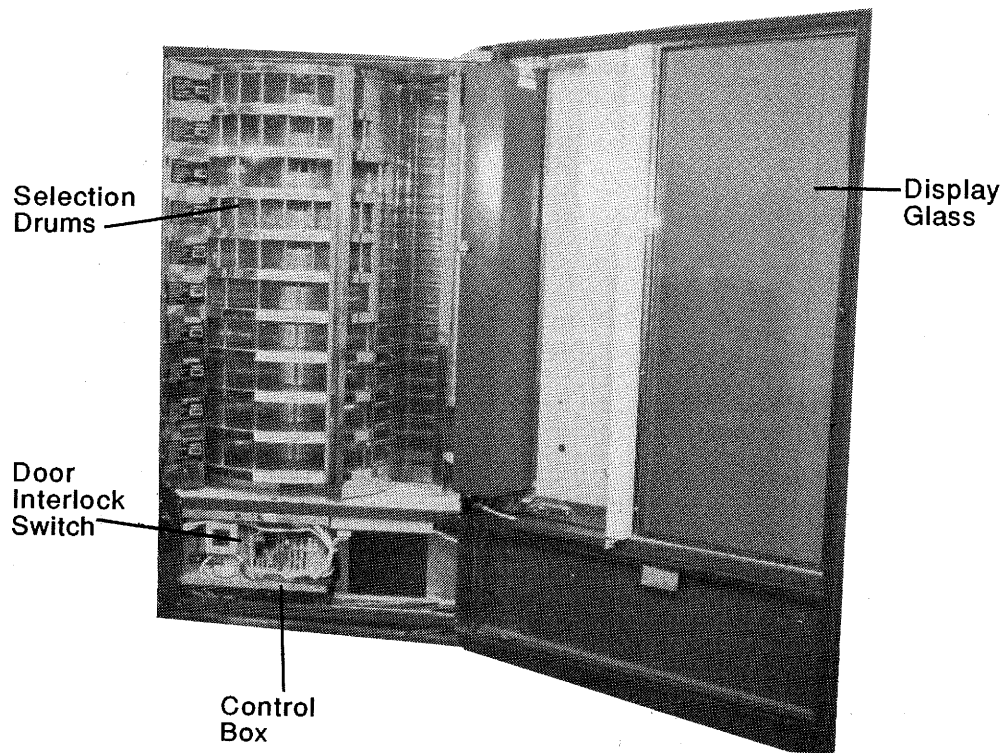


Figure 2

COMPONENTS

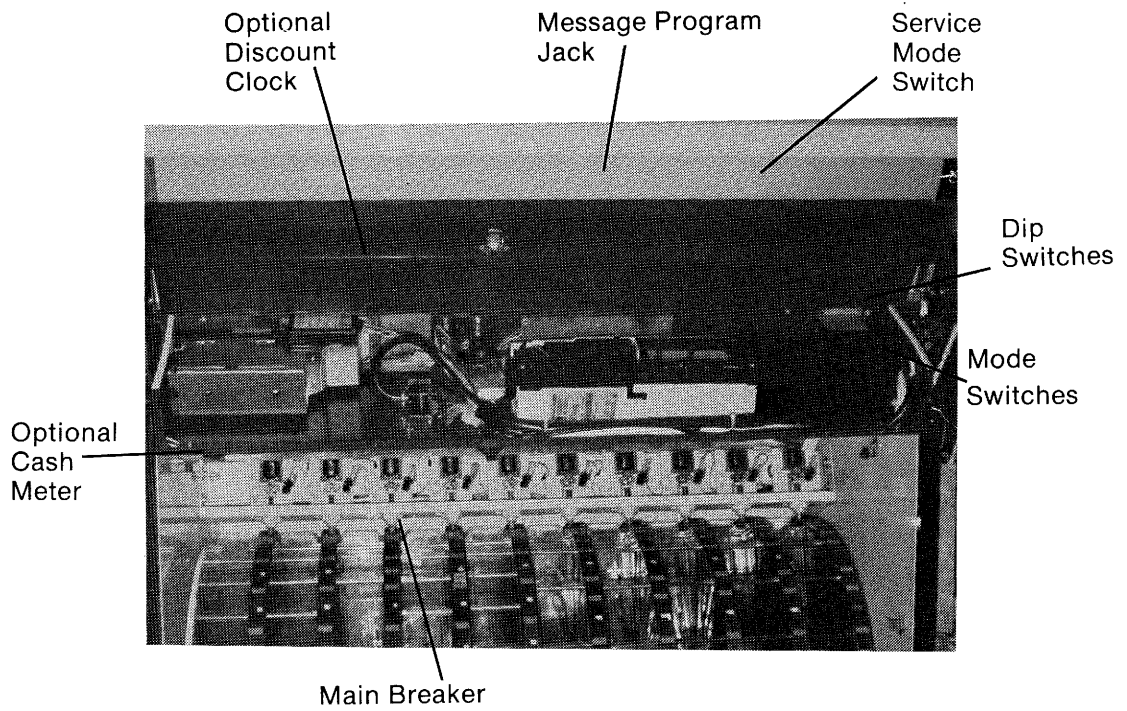


Figure 3

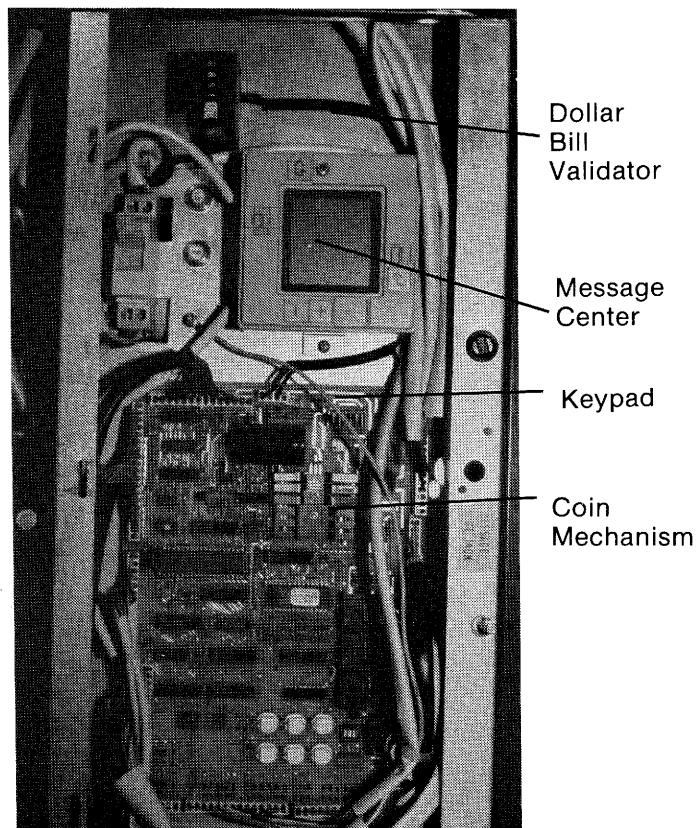


Figure 4

COMPONENTS

Message Center:

The message center located on the outer door above the selection buttons will display the following messages during operation of the machine:

Operating Mode:

1. Make other choice
2. Check choice price
3. Use exact change
4. 64 Character Programmable message
5. Selling price
6. Credit
7. Use coins only
8. Call for repair

Service Mode:

- | | |
|-----------|-----------|
| 1. Health | 5. Shop |
| 2. Turret | 6. Test |
| 3. P | 7. Ready |
| 4. D | 8. S Door |

NOTE: These messages will be displayed if a failure was detected prior to placing the machine in the Service Mode.

Selection Key Pad: Figure 1

The Selection Key Pad located on the outer door and numbered 1 through 10 is used to select and to purchase products when machine is in the Vend Mode. In the Service Mode, the Key Pad is used to establish prices for selections and to program functions.

Coin Return:

The Coin Return Button located on the outer door is used to clear jammed coins from the Coin Mechanism and to return money deposited.

Coin Entrance Slot:

The Coin Entrance Slot is used by the customer to deposit money into the Vendor to establish credit for a purchase. This slot channels the money deposited to the Coin Mechanism.

Coin Return Cup: Figure 1

The Coin Return Cup located on the outer door is used to return money deposited and return change to the customer on over-deposit.

Operating Instructions: Figure 1

The operating instruction panel is located on the outer door above the message center and is used to instruct the customer the proper use of the Vendor.

Delivery Door: Figure 1

The Delivery Door, located to the left of the selection buttons, is used by the customer to receive the product purchased. The Delivery Door is mechanically locked until the customer purchases a product.

Display Glass: Figure 2

The Display Glass is a thermopane insulated safety glass and allows the customer to visually select the item to purchase.

Price/Instruction Labels: Figure 1

Displays prices and vend mode (Shopper, First In-First Out, Merchandise Mode) instructions.

Latch Lever and Lock: Figure 1

The Latch Lever and Lock are located on the left side of the outer door. The lever is a single latch type and contains a locking key cylinder.

NOTE: The key for the lock will be taped in the Coin Return Cup when received.

To unlock the Vendor insert the key into lock cylinder and turn key. The Latch Lever will come out pivoting from top edge. Lift up on the lever and pull out on the door.

NOTE: When closing door, to assure proper engagement, lift up the lever and push door closed before latching.

Coin Mechanism: Figure 4

The Coin Mechanism is mounted on studs on the inside of the outer door in an enclosure. There are two Coin Mechanism receptacles. (Mars & Coinco)

Cash Box:

The Cash Box is located below the Coin Mechanism in locking cabinet. The coin return chute is part of the Cash Box and must be positioned properly to align with the Coin Return Cup.

COMPONENTS (Continued)

Door Interlock Switch: (3 Position Switch) Figure 2

The Door Interlock Switch is located in the lower cabinet and is activated by closing the outer door. This switch when held closed by the outer door puts the Vendor in the Sales Mode. When the door is opened, the switch is de-activated and puts the Vendor in the Service Mode. The Service Mode can be bypassed by pulling out the switch and activator, to put Vendor in the sales mode with the door opened.

Control Box: Figure 2

The Control Box located in the lower portion inside cabinet contains the electronic Control Board, circuit breakers, mode switches, (See Control Box functions) Health Timer and Optional Discount Clock.

Display Lamps:

There are three Display Lights, one on the outer door, two inside the refrigerated cabinet.

Selection Drums Figure 2

There are 10 Selection Drums. Each drum can vary in compartments from 6, 8, 12, 16, 24, to 48. (See Selection Drum Adjustments)

Home Position Switches:

The Home Position Switches are located in the refrigerated cabinet behind the front display lights. These switches are used by the controller to position the selection drums to their starting or home position.

NOTE: On each drum edge there is a red plastic holder with a magnet enclosed. These magnets, when the drum rotates, causes the home positioning switches to open or close.

Drive Motor:

The Drive Motor is located in the lower cabinet and is used to rotate the Selection Drums when a selection number is depressed.

Dollar Bills Validator: (OPTIONAL)

The Dollar Bill Validator is located below the operating instruction on the outer door. See Validator selection for complete details

Unlatch Solenoids and Switch:

There are ten unlatch Solenoids used to control the rotation of the Selection Drums, (See Solenoid Adjustments.)

The unlatch Solenoid in the "FI-FO" mode is operated by the Control Board when a selection number is depressed, with proper credit established, allowing the selected item to be advanced to the delivery area.

The Unlatch Solenoid (in the shopper mode) is operated by the Control Board when a selection number is depressed, for a pick and choose of the product. Then, with the proper credit established again by depressing the selection number to advanced the selected product to the delivery area.

NOTE: Items set on Shopper Mode, not at the stand by position, will be returned to the home position prior to any vend.

Solenoid Switch:

The Solenoid Switch is activated by the Unlatch Solenoid. In the closed or activated position the switch is in a stand by condition. If the Solenoid Switch is not held closed or activated by the solenoid at stand by, that selection will be put in a "Make Other Choice" condition by control board. This selection will be inoperative until cleared by placing the Vendor in the Service Mode. At this time the turret and the selection will be displayed in the Message Center.

NOTE: These failures should be recorded before any input or re-programming of the Controller is made. Closing the door or activating any program will remove this information from memory and the failure must be repeated before the Controller will display the information again.

To adjust the switch (see Solenoid Adjustment) check the switch actuator for proper form.

COMPONENTS (Continued)

Service Mode:

When the main door is opened and the door switch, located on the Control Box, is deactivated, the Vendor automatically enters the Service Mode. In the Service Mode the following diagnostic information will be displayed in the message center on the front of the main door. If any failures have been detected:

1. "HEALTH" - when the internal temperature of the cabinet raises above 45 degrees, the Health Control will disable the Coin Mechanism and the Dollar Bill Validator so they will not accept money. At this time "CALL FOR REPAIR" will be displayed in the message center. The health circuit on the Control Board allows a 30 minute delay after filling products.
2. "TURRET" - when a Drum Solenoid or switch is not adjusted properly or a drum is jammed and does not rotate, the Controller will place that selection out of order. The Message Center will display "Turret" and then the selection number that is defective.
3. S DOOR - indicates an electrical problem with the sales door switches or the sale door solenoid.

NOTE: These failures should be recorded before any input or re-programming of the controller is made. Closing the door or activating any program will remove this information from memory and the failure must be repeated before the controller will display this information again.

When the main door is closed, the door switch is actuated causing the Vendor to leave the Service Mode and enter the Vend Mode. Shopper drums that are left off the "Home Position" will be rotated back to their "Home Position".

Health Control and Health Thermostat:

These controls are used in the Food Mart Vendor to prevent the Vendor from selling products if the internal cabinet temperature rises above 45 degrees, or a power failure occurs.

The control system provides two terminals to connect to an external HEALTH CONTROL thermostat.

When the HEALTH THERMOSTAT has been OPENED due to a high internal temperature, the Coin Mechanism and Dollar Bill Validator WILL NOT ACCEPT MONEY. At this time the Message Center will display "CALL FOR REPAIR".

When the main door is opened the Control Circuit enters Service Mode. The Message Center will display "HEALTH".

When the main door switch is closed, the control will reset the Health Control timer.

Coin Dispensing Switches:

- A. When a Mars TRC 6000 Coin Mechanism is used the coin tube switches on the Control Board are used to empty the 5 cent, 10 cent, and 25 cent dispensing tubes.
- B. With a Coinco C300 Coin Mechanism the coin dispense switches will have no effect. The coin dispensing switches on the Coinco Coin Mechanism must be used to empty these coin tubes.

Test Vend Mode:

The "Test Vend" mode is used to set all drums on test and can be only used when in the Service Mode with the main door open.

The "Test Vend" mode is entered by depressing the mode switch (center left) once. When this mode is entered the Message Center will display the word "TEST". Pressing a selection number will then test vend that selection.

The Test Vend mode is automatically exited when selecting any other mode or closing main door to exit Service Mode.

COMPONENTS (Continued)

Shopper Mode:

This mode allows a "PICK AND CHOOSE" of a selection. By depressing a selection number that drum will rotate allowing the customer to pick the product to purchase.

Procedure To Set Shopper Mode

1. Depress the center left mode switch, on the Control Board, "TWICE".
2. The Message Center will display the word "SHOP".
3. Depress the selection number for the selection to be set to Shopper Mode. If the selection number appears in the display. That selection is set to Shopper Mode.
4. If the display is blank depress the same selection number and the number will appear in the Message Center. If the selection number is left on the Message Center and by depressing another selection number, entering a different mode or exiting the Service Mode, that selection will be stored in memory as a "SHOPPER MODE".

NOTE: When setting Shopper Mode, the word "Shop" plus a selection number appearing in the Message Center means that selection is set to a shopper drum.

NOTE: If the selection number is not showing and another selection number is depressed, or another mode is selected or the door is closed exiting the Service Mode, that selection will be stored in the memory as "First-In," "First-Out" (FI-FO) mode.

Single Step Mode:

The Single Step Mode is also referred to as "FI-FO" (first-in first-out) operation. The "FI-FO" operation makes the Vendor vend the "NEXT ITEM ONLY"

The "FI-FO" operation allows the Vendor to advance a Selection Drum one compartment when purchasing a product.

Procedure To Set Single Step Operation:

1. Depress the center left mode switch, on the Control Board, twice.
2. The Message Center will display the word "SHOP".
3. Depress the selection number to be set to the single step operation.
4. Notice, the Message Center to the right of the word "SHOP" should be the selection number. If no number appears next to the word "SHOP", that selection is set to the SINGLE STEP OPERATION.
5. If a selection number appears next to the word "SHOP" depress the same selection number the second time and the number will disappear, setting that selection to a SINGLE STEP OPERATION.
6. Repeat steps 3 through 5 to set other selection the SINGLE STEP OPERATION.

Merchandise Mode: (Special Sale)

In the Merchandise Mode or special sales selection, number 4 will operate in conjunction with selection number 3 in a single step operation. In this mode when selection number 3 is depressed selection number 4 will also rotate to the vend position when proper credit is established and selection number 3 is vended. Selection number 4 may be selected and will vend only the item in the number 4 selection.

Procedure To Set Merchandise Mode: (Selections 3 and 4):

1. Locate the number 2 dip switch on the Control Board (See figure 5) and set #2 dip switch to the "on position.
2. With the number 2 dip switch in the "OFF POSITION", selections 3 and 4 will function independently and may be set to either "FI-FO" or "SHOPPER MODE".

NOTE: When the vendor is set to OPERATE in the Merchandise Mode, the Shopper Function for Selections 3 and 4 is disabled. Selections 3 and 4 cannot be shopped when set in Merchandise Mode.

COMPONENTS (Continued)

Price Setting:

When using a Mars TRC 6000 the maximum price that can be set is \$12.70. When using a Coinco C 300 the maximum price that can be set is \$3.15. Setting the price for a selection at \$0.00 will set the selection to "Free Vend".

Price setting is accomplished by using the price setting switch on the Control Board and depressing a selection number for the selection to be priced on the front door.

Price Setting Procedure:

1. Locate the Price setting switch on the Control Board (bottom left button). See figure 3. Depress button ONCE. At this time Message Control displays the letter "P" on the left side of display.
2. Push the selection number to be priced. (This will display the current selling price.)
3. Pushing and holding the same selection number the SECOND time will increase the selling price in 5 cent increments. (As long as you hold the selection number in, the selling price will increase 5 cents at a time.) Release the selection number when the desired selling price is showing in the display.
4. Push and hold the same selection number the THIRD time. This will decrease the selling price in 5 cent decrements. (As long as you hold the selection number in, the selling price will decrease 5 cents at a time.) Release the selection number when the desired selling price appears in the display.
5. Continued pushing of the same selection number will alternate between increasing and decreasing of the selling price.
6. Once the proper selling price is displayed, in the Message Center, the price is set for that selection, go to the next selection and continue with another selection number in the same manner to set the remaining selling prices.

NOTE: When the message display indicates \$00.00 three beeps will sound.

Each time the price is increased or decreased one beep will sound.

7. Pushing another selection number, or the price setting button or closing the main door will result in the saving of the last selling price set for the selection.

Discount Price Setting: (See Discount Timer)

1. Depress or push the price setting button twice. This will make the Control System enter a Discount Price Setting.
2. The letter "D" will be displayed in the Message Display.
3. The selling prices are set in the same manner as primary price setting.

Operation Sequence:

1. Home Position:

There is a Home Position for each drum (which is marked with a red plastic plug). This compartment should always be left empty and always positioned to the right of the red selection strip on the turret grill. This is to make sure when a selection is made all drums except for the one selected will have an empty position exposed when the delivery door is opened.

2. FI-FO: (First-in - First-out)

In the FI-FO mode, the drum will advance one position when the proper credit is accumulated and a selection number is depressed.

3. Shopper:

In the Shopper Mode, before a credit is accumulated, the drum can be rotated by depressing a selection number. After a credit is established, the drum will advance one position by depressing the selection number.

A shopper selection will be automatically returned to the Home Position when another selection number is depressed.

NOTE: The Home Position for each drum is always left empty.

4. With the Coin Mechanism payout tubes filled the Message Center will be showing the programmed message.

5. Depress Selection Number:

Message Center displays "Price" and current selling price.

COMPONENTS (Continued)

6. Deposit Money To Equal or Exceed A Selling Price:

Message Center will display "Credit" and the amount of credit accumulated.

7. Depress A Selection Number:

A normal vend will rotate the Selection Drum and unlock Delivery Door. The Message Center will display "Open Door".

8. If a normal vend cannot take place, a message will be displayed in the Message Center.

A. "CHECK CHOICE PRICE":

Insufficient credit will cause this message to appear in the display. Additional coins may be deposited to establish the correct credit or push coin return to cancel credit and receive money back.

B. "USE EXACT CHANGE":

In the event the Coin Mechanism cannot make change for the amount of credit established, this message will appear in the Message Display.

NOTE: By pushing in on the Coin Return Button the amount of money deposited will be returned to the Coin Return Cup.

C. "MAKE OTHER CHOICE":

This message will appear in the Message Display when an Unlatch Solenoid or Solenoid Switch is defective or out of adjustment.

B. "USE COINS ONLY":

This message will appear in the Message Display when the DOLLAR BILL VALIDATOR is disabled or not functioning.

9. Message Display:

All messages will scroll across the display three times or until another action takes place.

EXAMPLE: Depressing another selection number or depressing the Coin Return Button.

10. Delivery Door Opened:

A normal vend will allow the Delivery Door to be opened showing the selected item only to the customer. The Delivery Door open switch will cancel credit when the Unlatched Solenoid switch returns to the closed position. At this time change will be paid out by the Coin Mechanism.

11. Delivery Door Locked:

After the item has been removed from the drum and the Delivery Door closes, the Control Board detects the Delivery Door switch closing and de-activates or releases the Delivery Door lock solenoid to lock the Delivery Door.

12. "THANK YOU"

The end of the vend cycle will cause the optional cash meter to count the value of the vend and message "THANK YOU" will be displayed in the Message Center followed by the standard programmed message.

ADJUSTMENTS

Discount Timer: (optional) (Figure 5)

An optional Discount Timer is used to reduce the selling price for various products at pre-determined time. The Discount Timer mounts to the Control box and is connected to the Controller at Pins P-11. The control system will respond to the Discount Timer at the time programmed to discount the selling price. Procedures to set the discount clock follows:

ADJUSTMENTS (Continued)

DISCOUNT CLOCK:

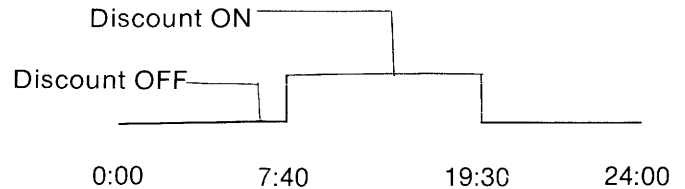
Be sure to create timing chart before programming.

EXAMPLE: Setting ON and OFF programs.

Set manual program switches to "OFF" position.

In this example, the first circuit is programmed to turn On at 7:40 and OFF at 19:30. This circuit is operated from Monday through Friday and stopped on Saturday and Sunday.

TIMING CHART FOR EXAMPLE PROGRAM 1



*Creating timing chart
PROGRAM 1


*Writing program
In the figure, the indicators and digits shown in blue are blinking.


1) Setting current time


To set the current time, "day of the week", "hour", and "minute" must be specified.

First, PUSH AND HOLD THE MODE SWITCH (approx. 3 seconds) until the TIM ADJ indicator is displayed as shown on the right. Set 11:15 on Tuesday, the current time in example 1.

Start with setting the day of the week. The blinking indicates the parameter that can be set. Set the current day of the week to Tuesday by pressing the "+" or "-" key.

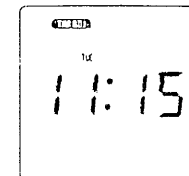
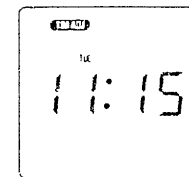
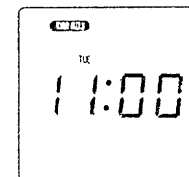
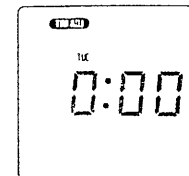
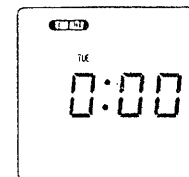
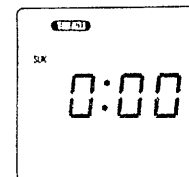
When "TUE" is displayed, press the Write  key to store the current day of the week in memory. Then the "hour" indicator will flash at this time and the "day of the week" indicator will stop blinking.

Set the current hour to 11 by pressing the "+" or "-" key, followed by the Write  key.

At this time, the "minute" indicator will blink. Set the current minute to 15 by pressing the "+" or "-" key, followed by the Write  key.

This completes the current time setting.

(Next, program the first circuit's operation)



Example 1

Current Time of Day


DISCOUNT CLOCK (Continued)




2) First circuit operation setting

To program the operation of the first circuit, "hour", "minute", and "output" must be specified.



Press the MODE key to set the discount clock in PROG 1 mode. The display will be as shown on the right.


Since the first circuit is turned "ON" at 7:40, set the "hour" to 7 by pressing the "+" or "-" key and store it in memory by pressing the Write key.

The "minute" will start blinking. Set it to 40 by using the "+" or "-" key and store it in memory by pressing the Write  key.

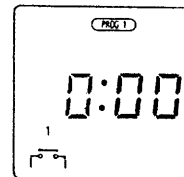
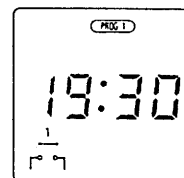
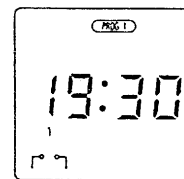
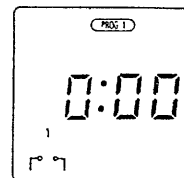
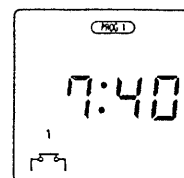
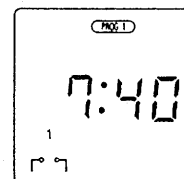
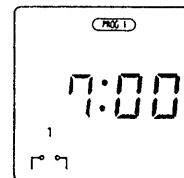
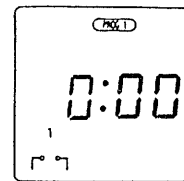
Now, the output status indicator will blink. Set the output to the "On" status with the "+" key followed by the Write  key. (If the "+" key is pressed twice at this time, the display will give an invalid indication (). Then if the Write  key is pressed, the program will be deleted.)

The display returns to the initial status as shown on the right and waits for the next program to be input.

Since the first circuit should be turned OFF at 19:30, set the hour to 19 and then the Write  Key and the minute to 30 by using the "+" or "-" key and then the Write  key.

Now the output status indicator starts blinking. Set the output of OFF status by the "-" key and store it in memory by the Write  key.

The display returns to the initial status and waits for the next program to be input. As the first circuit operation setting is completed, let us turn to the setting on the "day of the week".





DISCOUNT CLOCK (Continued)


3) First circuit day-of-the-week setting

By pressing the MODE key, set the discount clock in the DAY SET mode for program 1.

The display will be as shown on the right. The SUN indicator blinks. Press the "+" key to operate the first circuit on a particular day of the week and press the - key to stop it. The reverse video (i.e., white characters on a black background) of the day-of-the-week indicators indicates that the first circuit is operated on that day.

In example 1, since the circuit operation is to be stopped on Sunday, set accordingly with the "-" key and store the setting in the memory by pressing the Write  key.

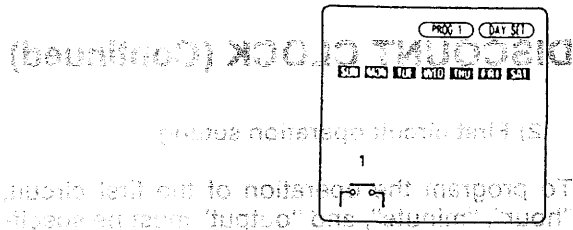
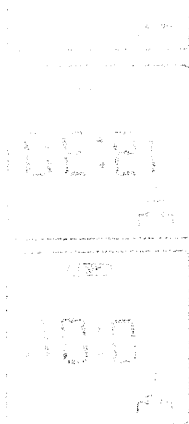
The MON indicator is blinking and indicating that the circuit is to be set on Monday. To program the circuit operation shown in example 1. Press the "+" key to operate the program on Monday. Press the Write  key. This applies to Monday through Friday; until the SAT indicator blinks.

As the first circuit is also not to be operated on Saturday, press the "-" key followed by the Write  key.

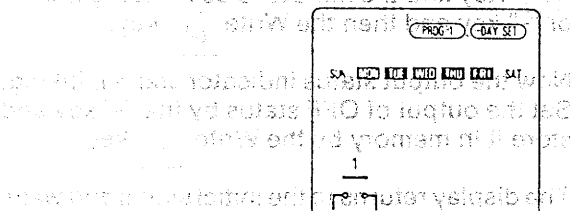
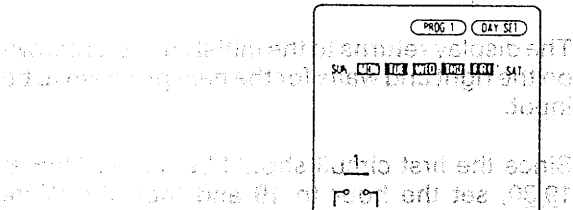
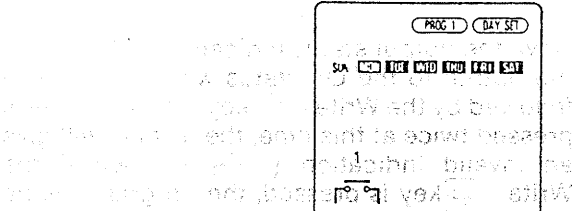
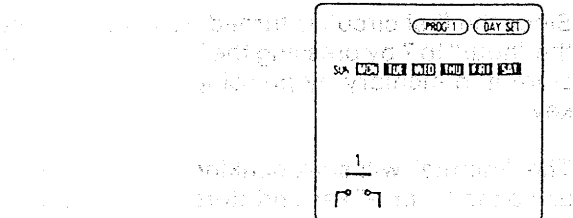
The SUN indicator blinks again. This completes the setting of all the days of the week for the first circuit.

Press the mode button three (3) times to return to clock run mode.

Set the manual switch on the discount clock for program 1 to the run position.



Press the MODE key to set the discount clock in the DAY SET mode. The display will be as shown on the right.



ADJUSTMENTS (Continued)

Dollar Bill Validator:

The Control Board will interface with the Mars Bill Validator.

The Control Board allows use of U.S. currency of \$1, \$2, or \$5 bills and does provide a bill screw.

When using a Mars TRC 6000 or Coinco C300 Coin Mechanism the nickel and quarter pay out tubes must be filled with coins to allow the Dollar Bill Validator to work properly. In the validator escrow mode, if the Coin Mechanism pay out tubes become low on nickels or quarters, the Dollar Bill Validator will accept the bills. When a selection number is pushed the Message Display will show "USE EXACT CHANGE". By pushing the Coin Return Button the Validator will return the bill to the customer.

Dollar Bill Validator

Escrow Switch: Figure 6

The Dollar Validator Escrow Switch is located on the Control Board and is the number 1 dip switch. (See figure 6)

1. When the escrow switch is set to the "Off" position, the bill validator will accept bills **until the credit is equal to or greater than the highest selling price.** If the coin return is activated, change will be paid out to cancel the credit.
2. When the escrow switch is set to the "On" position, the bill validator will accept one bill and hold it in escrow. If the credit does not exceed or is greater than the highest selling price, the Coin Mechanism will accept coins until the credits are equal to or are greater than the highest selling price. The validator will not accept a second dollar bill. If the coin return is activated, the bill will be returned. If a selection is depressed that exceeds the vend price by \$2.00 or more, the bill will be returned and no vend will be made.

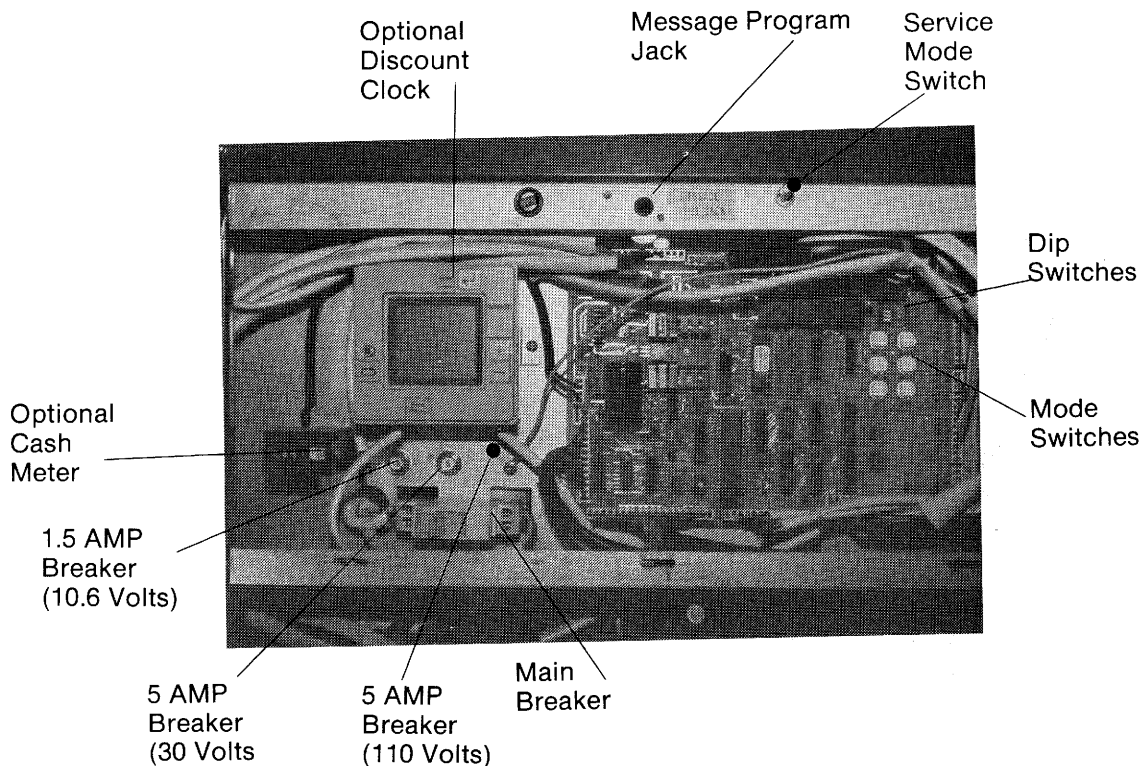


Figure 6

ADJUSTMENTS (Continued)

Unlatch Solenoid: Figure 9

The Unlatch Solenoid, when activated, opens the Solenoid Switch and through the control Board the Drum Motor starts and rotates the drum. When the Drum Motor starts the Unlatch Solenoid deactivates and as the drum turns, the latch pin engages an open slot. The solenoid closes the switch which stops the motor, cancels credit and unlatches the Delivery Door latch. (See figure 9)

To adjust the solenoid so the latch pins are in the proper position to the drum, loosen the large hexagon plastic nut around the latch pin. This will allow for positioning the solenoid and latch pin up and down in the center of the drum flange. As the latch pin rides against the drum flange (not engaged into a slot) it holds the solenoid back and keeps the solenoid switch opened. With the solenoid energized, there should be 1/8 clearance between the end of the plunger and the edge of the drum. (See figure 9)

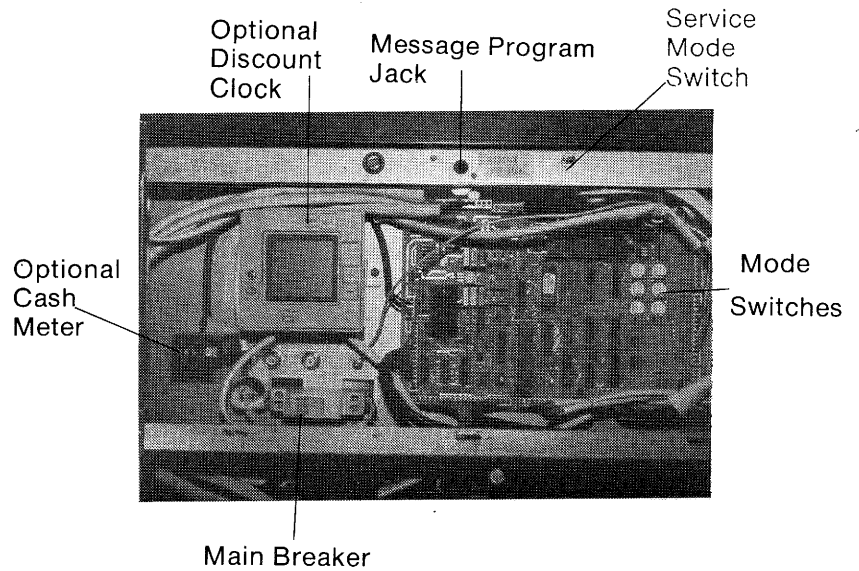


Figure 7

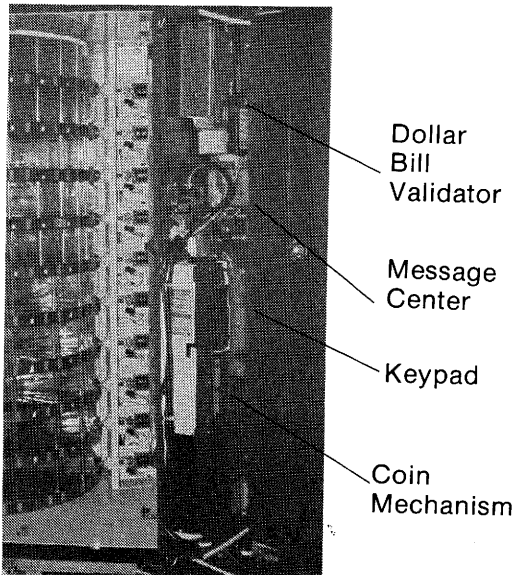


Figure 8

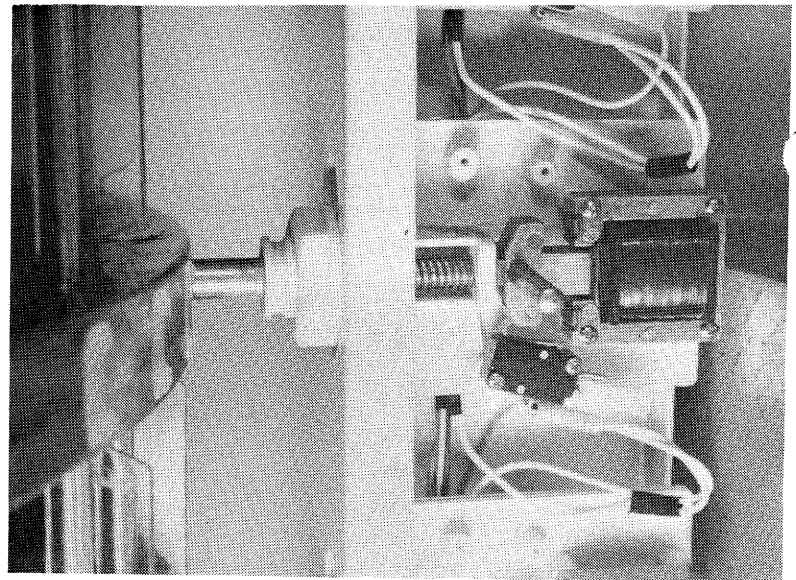
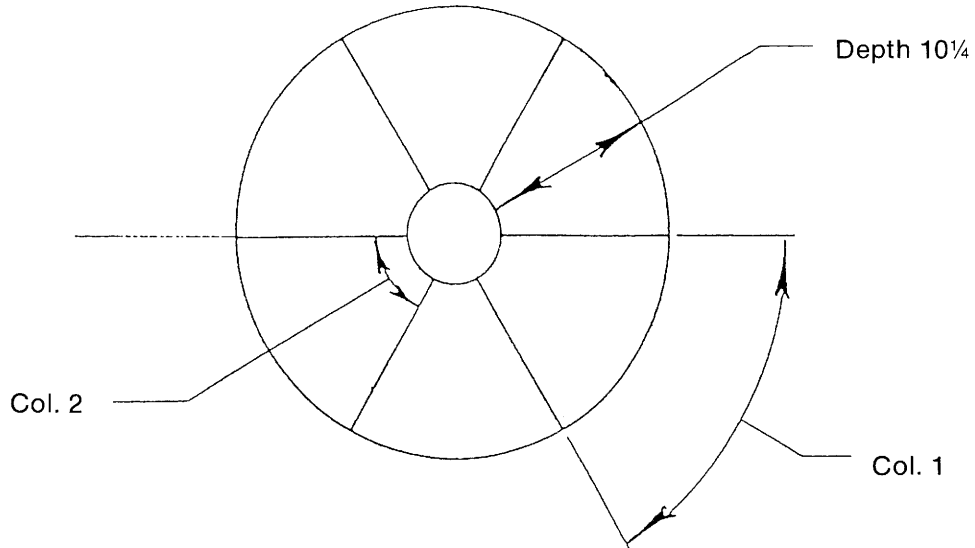


Figure 9

SELECTION DRUM COMPARTMENTS



NO. OF SELECTIONS	COL. 1 OUTSIDE WIDTH	COL. 2 INSIDE WIDTH
6	13	2 1/4
8	9 3/4	1 3/4
12	6 1/4	1
16	4 1/2	3/4
24	2 3/4	1/2
48	1 1/4	1/4

Height Of Tray 3 1/2"

ADJUSTMENTS

Selection Drum Compartments:

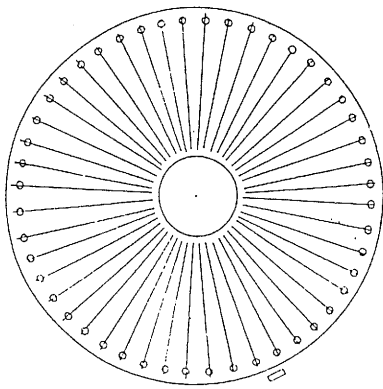
Figures 10 and 11

The Selection Drums provided in the Food Mart are pre-set for compartments size from the factory. It may be necessary to change the compartment sizes or spacing to accommodate various products. The Selection Drum and compartments can vary in spaces by adding or removing dividers. The number of spaces can vary from 6, 8, 12, 16, 24, and 48 spaces. When the compartment sizes are changed the sliding plates behind the Delivery Door must also be changed and solenoid blocking plugs added or deleted to match the compartment size. These sliding plates allow only one compartment to be exposed behind the Delivery Door.

NOTE: To change compartments the Selection Drum does not have to be removed from the Vendor.

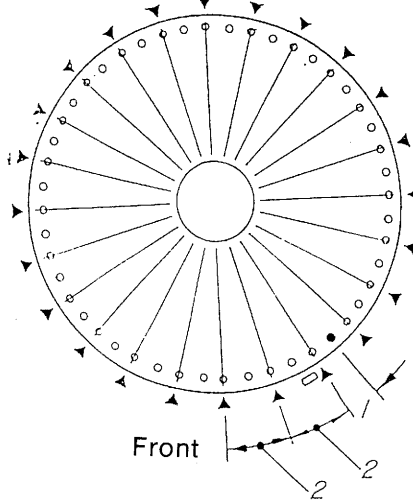
KEY	
○	Divider Hole
●	Red Plastic Plug
◇	Red Strip
▶	NO Solenoid Blocking Plug

48 Compartments



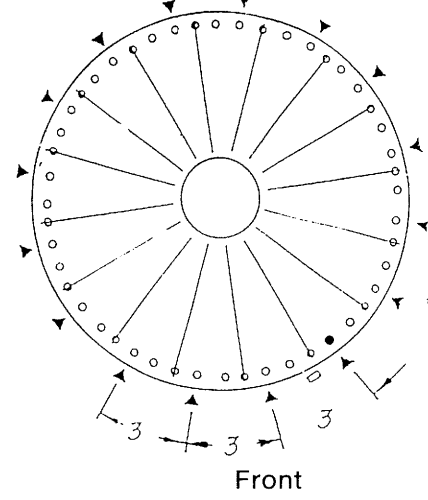
Front

24 Compartments

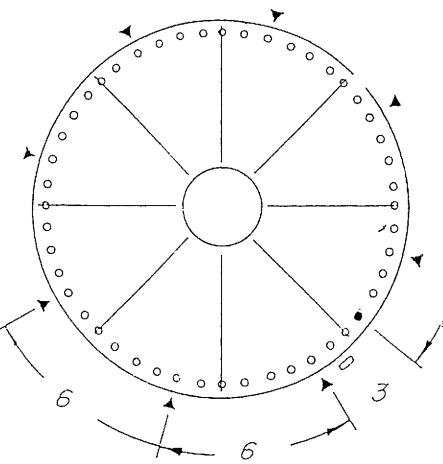


Front

16 Compartments

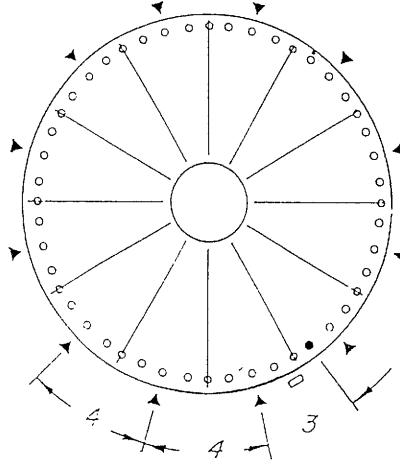


Front



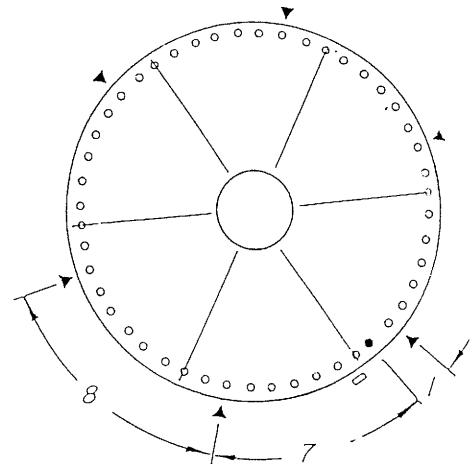
Front

8 Compartments



Front

12 Compartments



Front

6 Compartments

ADJUSTMENTS (Continued)

Precedure For Changing Compartment Size:

1. Swing-out the stainless steel front grille. This grille is held in place by two locating pins next to the red selection strip.
 2. Adding spacers. Insert the spacers into the center hub of the selection drum.
 3. Rotate the Selection Drum, below the drum that is receiving the spacer, until the large hole on the upper place is below the spacer being added to the upper drum. (See Figure 11)
 4. Then insert the spacer bolt through the large hole and secure the bolt with the special tool provided on the inside of the main door.
 5. Secure all spacers in the above manner.
 6. Plug all the required holes in the drum edge, as shown in the compartment spacing diagram with the plastic plug provided. (See page 16) Position Plastic Plug with "Δ" up. Plug must seat flat against drum flange.
- NOTE:** On the drum edge where the plugs fit into the slots, do not remove the larger RED colored plug.
7. Replace the stainless steel front grille.
 8. Swing open the stainless cover to Unlatch Solenoids. Behind the hinge is a plastic knob used to loosen the sliding plate. Loosen the plastic knob and move the plate to match the new space in the compartments. Secure the plastic knob.

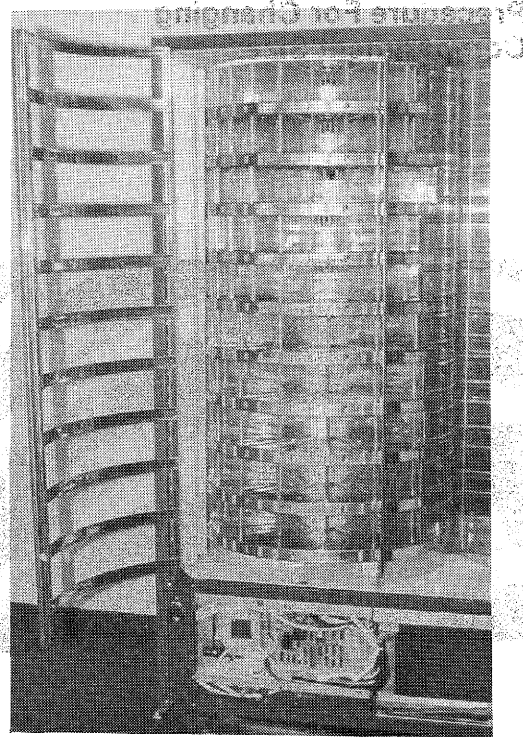


Figure 10

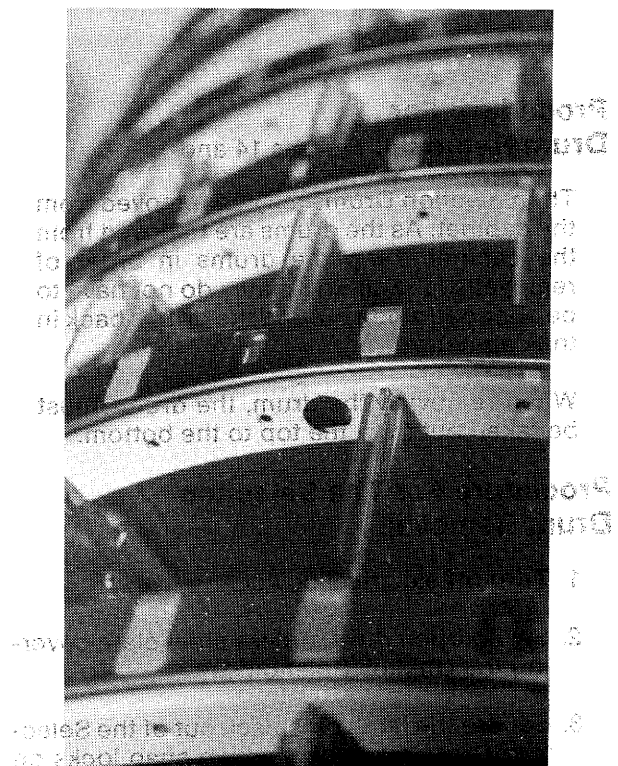


Figure 11

Precedure For Changing Compartment Size:

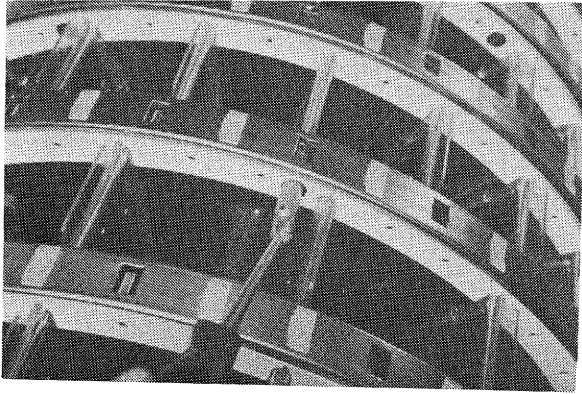


Figure 12

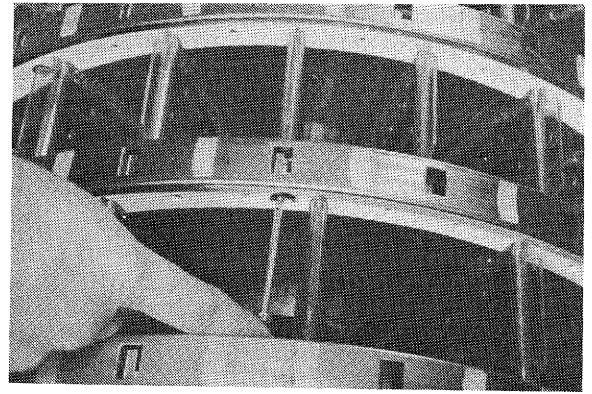


Figure 13

Procedure For Drum Removal: Figures 14 and 15

The Selection Drums may be removed from the cabinet. As the drums are removed from the cabinet, keep the drums in order of removal so the sliding plates do not have to be changed when putting the drums back in the cabinet.

When removing the drum, the drums must be taken out from the top to the bottom.

Procedure For The Selection Drum Removal:

1. Turn off electrical power.
2. Swing open the stainless steel plate covering the Unlatch Solenoids.
3. Secure the latch pins back out of the Selection Drum by using the two snap locks on the Unlatch Solenoid cover.
4. Swing-out the front grille for the Selection Drums.

Precedure For Selection Drum Removal (Continued):

5. Remove two allen screws holding top and two allen screws from the bottom of the grille with the sliding plates. Swing the cover to the right side in front of solenoids. Remove the grille from the cabinet.
6. Remove the 2 drip trays placed under the bottom Selection Drum.
7. Locate the crank on the inside of the main door.
8. Locate the crank shaft, in the lower cabinet below the bottom of the Control Box. Using the crank, turn the shaft counter-clockwise to the stop, to lower the Selection Drums.
9. Take out the drums one by one starting at the top and working to the bottom.

NOTE: Keep the drums in order of removal so as not to mix up the sliding plates when putting the drums back in the cabinet.

10. When putting drums into the cabinet check alignment between drums.

NOTE: After a drum is put in place on the drive shaft, turn the drum clockwise until the locating pins mate with the drive shaft or other drums.

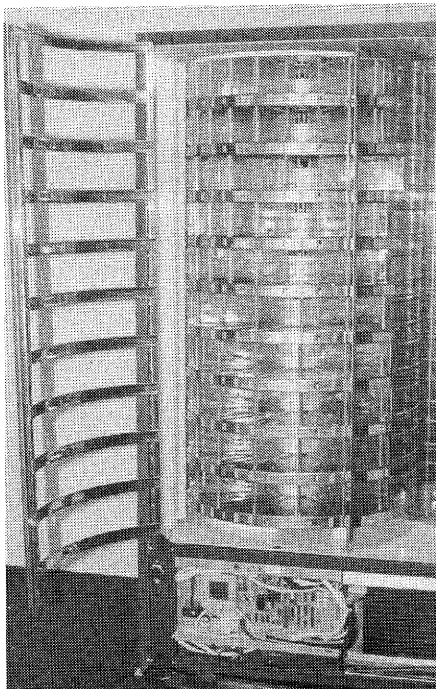


Figure 14

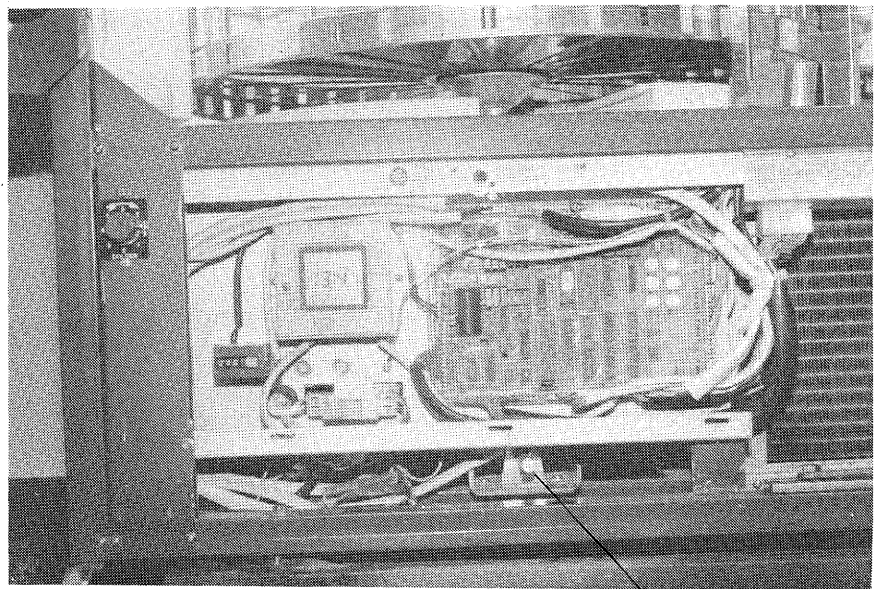


Figure 15

Crank Shaft

ADJUSTMENTS

Procedure For The Selection Drum Installation:

To put the Selection Drums back into the Vendor, reverse the procedure for taking the drums out of the Vendor. As the drums are placed back into the Vendor on the drive shaft, make sure the drum aligns with the drive pin in the shaft coupling or connector. To do this turn the drum in either direction until the pins fall into the mating coupling and turn the coupling on the other drum. If the pins do not mate properly, the top drum will not fit into the Vendor. After all of the Selection Drums are in place in the Vendor use the crank handle, turning clock-wise and raise all the drums into place. When the crank handle can not be turned or comes to a stop, the drums are in place. Check the alignment of the Solenoid Latch pins to the edge of the drums. Latch pin should be in the center of the drum edge. (See Figure 9)

Product Loading:

When loading products into the compartments of the Food Mart, uncover the Unlatch Solenoids and use the two snap locks to release the latch pins from the drums. This allows for free rotation of drums while loading products. Before loading products make sure that all drums are in their Home Position. The Home Position is when the red dot in the compartment is to the right of the red selection strip and load the product into the empty compartments except for the compartment with the red dot. Leave this compartment empty. When loading a FI-FO (First-In-First-Out) selection make sure not to skip a compartment for this selection only rotates one compartment at a time.

When loading is completed, make sure to rotate the drums, to position the compartment with the red dot to the right of the red selection strip. **Release the snap locks to allow latch pins to engage the Selection Drums.**

NOTE: DO NOT load any products that stick out of the sides of the Selection Drum. These products could jam the rotation of the drums.

Loading Procedure:

1. Uncover Unlatch Solenoid and secure latch pin back using the snap locks.
2. Locate drum to Home Position.
3. Load product in each compartment. Except the Home Position compartment.
4. Position drums to Home Position.
5. Release the snap locks.

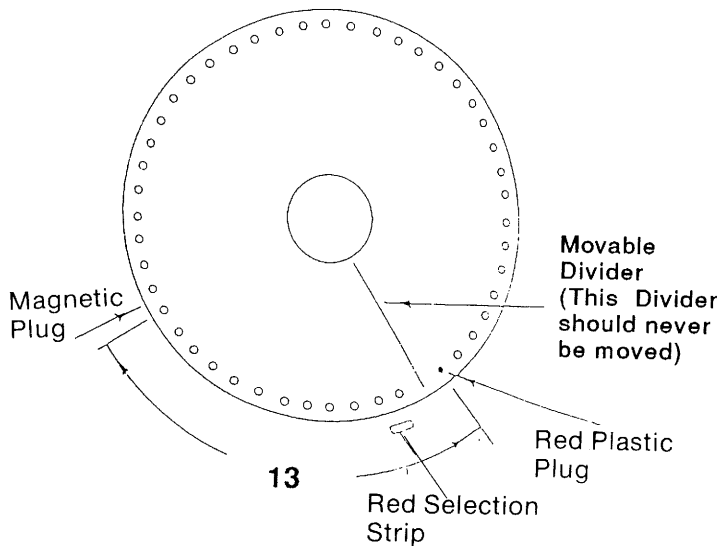


Figure 16

ADJUSTMENTS

Partial Load: Figure 17

Place the product into consecutive compartments, rotating the drum to the right when loading the product. After loading the compartments, rotate the drum so the original product is in the first position to the left of the red selection strip.

Procedure for Partial Loading:

1. Uncover the Unlatch Solenoid and secure the latch pins back by using the snap locks.
2. Load the product in each consecutive compartment except the Home Position compartment.

NOTES: To keep the product, being vended, as fresh as possible, always move the oldest product to the left compartment of the red dot before loading the new product.

3. Position the drums to the Home Position.
4. Release the snap locks and secure Vendor.

IMPORTANT:

After loading the product make sure to release the snaps holding the latch pin back from drums.

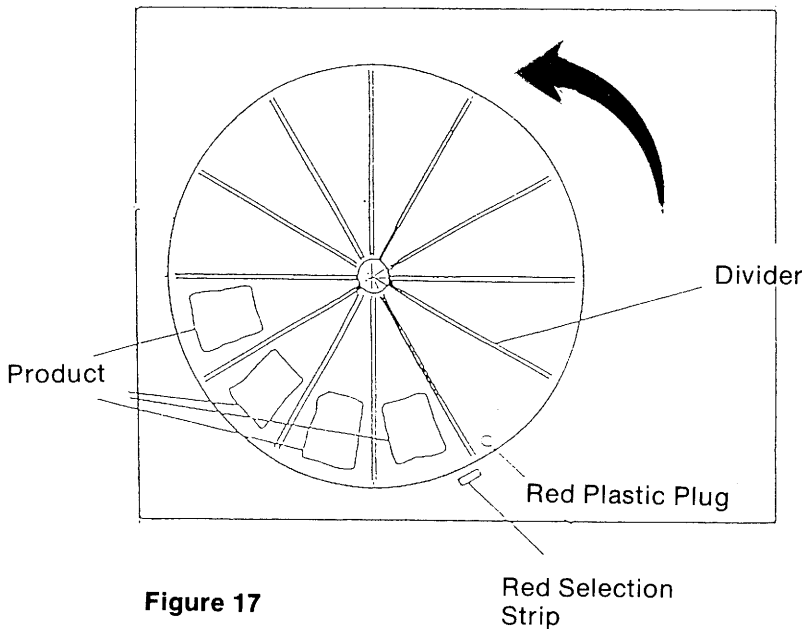


Figure 17

Cleaning Instruction:

The Food Mart should be cleaned daily to assure sanitary conditions for vending food products. Check with the local health officials for an approved sanitizing solution and specific regulations for sanitizing vending machines.

Cabinet:

Clean interior and exterior of cabinet with warm water and a mild detergent. Wax the exterior periodically with a good automobile wax.

Important Cleaning Points:

- A. With a specified sanitizing solution:
 1. Inside cabinet liner
 2. Turret compartments
 3. Condensate and drip pans
- B. Glass cleaner
 1. Display glass
- C. Stainless cleaner
 1. Delivery Door

Refrigeration System:

Clean dirt from condenser and evaporator with a brush, vacuum cleaner, or filter compressed air. Always clean cabinet after cleaning refrigeration system and clean bottom screen as well.

Coin Mechanism:

Since all coins in a Mars TRC 6000 Coin Mechanism roll down a common coin ramp, heavy use can result in dirt build-up. To clean the acceptor and coin ramp, swing the acceptor lid diagonally upward and to the right. Wipe the exposed coin ramp and inner surface of the acceptor lid with a damp cloth. For problem cleaning, use a cloth dampened with water and a mild non-abrasive soap.

CAUTION:

Never immerse the Coin Mechanism in water. **DO NOT** use solvents, steel wool, scouring pads, or a metal bristle brush. **DO NOT** spray with any lubricant.

Trouble Shooting Charts:

The following chart contains a listing of possible trouble symptoms that could occur during Vendor operation, the probable cause, and corrective action. If a problem is encountered that is not listed in the chart, refer to the sequence of operation explanation.

TROUBLE SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Refrigeration unit inoperative.	Circuit breaker open.	Reset or replace circuit breaker.
	Line cord not connected.	Plug into receptable.
	Low line voltage.	Correct voltage source.
	Control thermostat Inoperative.	Replace control thermostat.
	Electical circuits open.	Locate and repair break.
Compressor overheats.	Defective motor start capacitor, motor start relay or thermal overload protector.	Locate and replace.
	Compressor relay not operating properly.	Check and replace relay.
	Condenser fan or compressor cooling fan not operating properly.	Check and replace defective part.
	Condenser clogged or dirty.	Clean condenser.
Unit operates on short cycles (runs on or off for less than one minute), or runs continuously.	Screens clogged or dirty.	Clean screens.
	Dirty or clogged condenser screen.	Clean condenser and screen.
	Insufficient air circulation.	Provide at least 4 inches free air space at rear of cabinet.
	Low line voltage.	Check line voltage. Should be 105 V minimum. AC 60Hz. 20 amp circuit.
Unit operates but does not cool.	Cold control thermostat incorrectly adjusted or inoperative.	Reset control or replace.
	Insufficient refrigerant.	Repair leak, purge and recharge system.

TROUBLE SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Ice forms on evaporator fans.	Evaporator fan motor not running.	Check wiring. Replace motor, if defective. Check door interlock switch. Replace if defective.
	Cold control thermostat set too cold.	Adjust thermostat. Normal setting is 2.5.
	Air leaks into cabinet front door not sealed.	Check door gaskets, refrigerant line seal, and other openings.
	Cold control thermostat inoperative.	Replace cold control Thermostat.
Cabinet temperature too high.	Door interlock switch fails to close circuit with door open.	Check and replace door interlock switch, if inoperative.
	Cold control thermostat not set properly or inoperative.	Adjust cold control to proper setting or replace if defective.
	Compressor relay inoperative.	Check and replace compressor relay.
	Compressor inoperative.	Replace compressor unit.
	Evaporator fan motor inoperative.	Check wiring and replace motor, if necessary.
Refrigeration system leaks.	Repair leak or replace system & recharge.	
Thermostat open continuously.	Cabinet too warm.	Set automatic control thermostat 2.5 or replace thermostate.
Fluorescent lamps not lighted.	Fluorescent lamp, ballast or starter inoperative.	Check and replace defective components.
	Open circuit breaker.	Check lamp circuit breaker. Replace if necessary.
All coins deposited are rejected.	Machine not level.	Level cabinet.
	Defective Coin Mech C.R.E.M.	Substitute another coin mech.
	Controller Board defective.	Check for loose connections. If not, replace board.

TROUBLE SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Open Door message is displayed continuously.	Delivery Door open.	Insure that Delivery Door closes properly.
	Delivery Door switch either jammed, faulty or adjusted incorrectly.	Check for jammed Delivery Door switch adjustment. Remover power and check switches with ohm meter. Replace if defective.
	Controller Board defective.	Replace Contoller Board.
Turret rotates continuously.	Faulty key pad switch.	Remove power; check switch with ohm meter. Replace if defective.
	Reed switch either out of adjustment or defective.	Check for proper switch adjustment. Remove power and test switch with ohm meter. Replace if defective.
	Controller Board defective.	Replace Controller Board.
Turret rotates continuously after transport button is pressed.	Faulty reed switch.	Remove power. Check switch with ohm meter and replace if defective.
	Controller Board is defective.	Check Controller Board for black burn spot, if so, replace board.
Turret fails to rotate.	Delivery Door open.	Insure Delivery Door is closed.
	Reed switch defective.	Replace Reed switch.
	Drive Motor inoperative or jammed.	Locate and clear jam; check motor and replace if defective.
	Contoller Board defective.	Check Controller Board for loose connection, if not replace board.
	Solenoid Defective.	Replace solenoid.
	Solenoid out of adjustment.	See Unlatch Solenoid Adjustment. Adjust solenoid.
Turret fails to stop at Home Position.	Reed switch defective.	Replace Reed switch.
	Red plastic magnet missing from drum edge.	Replace magnet.

TROUBLE SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Delivery Door fails to open.	Insufficient credit established.	Insure proper amount for vend is inserted.
	Defective door switch or switch improperly adjusted.	Check adjustment of door switch; remove power, check switches with ohm meter and replace if defective.
	Defective Controller Board	Replace Contoller Board
	Defective Unlatch Solenoid.	Replace solenoid.
	Defective latch switch.	Replace latch switch.

NOTES

