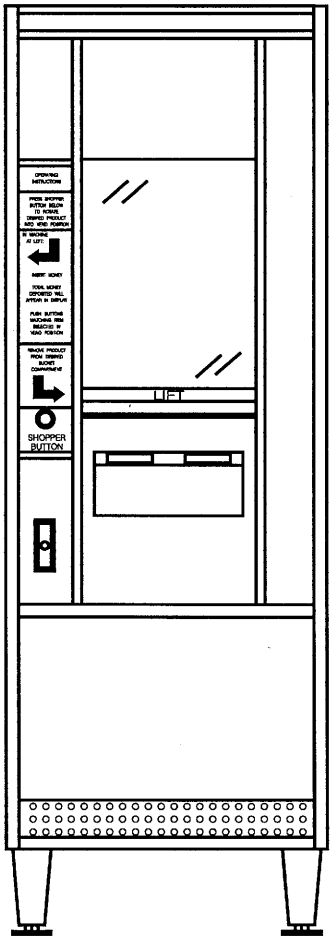
COLD FOOD MERCHANDISER MENU MART II

Number One In Quality

MODEL 3079-V



SERVICE MANUAL

March 1996

P/N 4206143

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INTRODUCTION:

This manual contains service and installation guidelines and instructions pertaining to the **Menu Mart II** Cold Food Merchandiser along with various options, features and accessories that are offered within the product line.

The Menu Mart II is a "satellite" refrigerated vending unit that must be connected to a Glass Front Merchandiser or similar type "host" vending machine. The Menu Mart II utilizes the electronics of the "host" vendor's controller for the operation of the coin mechanism and/or validator or money handling components. All vend functions, pricing, accumulation of credits and other vend-related requirements are controlled by the "host" vendor.

Products are stored in a conveyor type unit with 20 "buckets" or compartments that can be configured as a "whole" or "split", for a maximum of forty items.

The Menu Mart II vendor adapted to the Snack Mart IV Merchandiser machines will have twenty (20) vend prices ranging from $.05 to $99.95.

All Menu Mart II vendors will be capable of vending a "whole" bucket and either the "50/50" or the "60/40" split. The standard Menu Mart II will be configured to handle the "50/50" split from the factory.

The Menu Mart II will be offered with the following basic features:

"SHOPPER": This allows the buying customers to select a particular item they desire by operating a "shopper switch" to move a selected item to the vend position.

"DISPLAY BOARD": A separate LED readout display board is used to display price and selection information for each compartment along with diagnostics information when in the service mode.

"HEALTH CONTROL": Electronic controlled (thermistor) to determine cabinet conditions favorable to vend.

SPECIFICATIONS:

GENERAL SPECIFICATIONS:

Height:	72 Inches
Width:	25 5/8 Inches
Depth:	34 Inches
Weight:	535 Pounds

ELECTRICAL:

Power Requirement:	120 VAC, 60 Hz
Transformer:	24 VAC, 75 VA
Starting Amps:	10 Amps
Running Amps:	6 Amps

CAPACITY:

A combination of two (2) compartment configurations, (the "whole" bucket and either the 50/50 split or the 60/40 split), can be used in a single machine.

Minimum compartments:
20 "Whole" Compartments
(1) 13 1/2" wide, 9" deep, 3 1/2" high

Maximum compartments: 40 Configured as follows:

1. 50/50 "Split" Compartments
   (2) 6 3/4" wide, 9" deep, 3 1/2 high
2. 60/40 "Split" Compartments
   (1) 8 1/8" wide, 9" deep, 3 1/2" high
   (1) 5 3/8" wide, 9" deep, 3 1/2" high

PRICING:

20 Prices:	$.05 to $99.95 (Controlled at "Host" Vendor)

COINAGE:

Shared with "Host" Vendor

REFRIGERATION:

TYPE:	1/4 HP Hermetically Sealed
REFRIGERANT:	R-134a
CHARGE:	8.0 Ounces

UNPACKING:

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.

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

To minimize installation time and to avoid service problems due to improper installation, follow the instructions outlined in this manual. To remove the machine from the shipping pallet, follow the steps outlined below: **See Illustration #1**

1. Remove two (2) 5/16-18 x 1 1/4" Bolts using a 1/2" drive socket or wrench. These bolts are located on the underside of the skid-board.
2. Tilt the machine until the legs clear the skid-board.
3. Remove the skid-board from bottom of machine.
4. Replace the bolts removed previously, to plug exposed holes in bottom of vendor.
5. Repeat the above steps for the other skid-board.

Position the vendor in its place of operation , to the left of the "host" machine, no further than 6 feet from the power outlet or receptacle and check that the door will open fully without interference. Leave at least six (6) inches of space between the back of the machine and any wall or obstruction for proper air circulation. Level the vendor, making sure all levelers are touching the floor. The vendor **must** be level for proper operation.

Open the outer door and remove all internal packing material. On machines that are furnished with lock and keys, the lock & keys to the vendor will be located in the service packet inside the vendor.

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

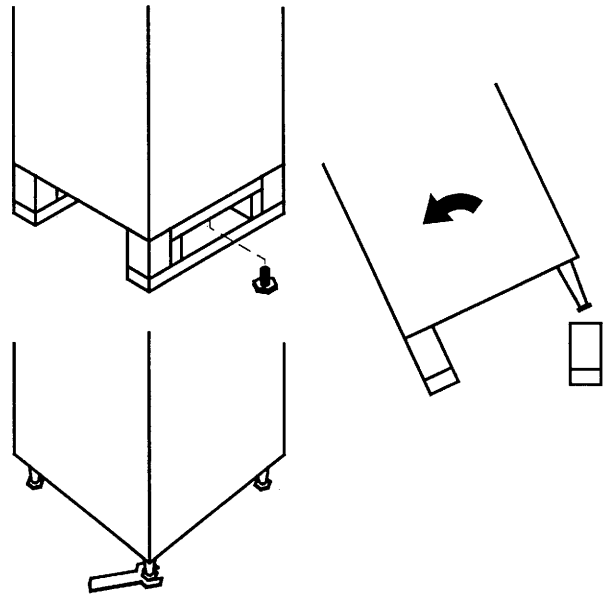


ILLUSTRATION #1

NOTE:

If the Menu Mart II **must** be positioned on the left of the "host" machine the instruction panel indicating the position of the host vendor must be modified. Furnished in the service packet is an arrow that is to be used indicating that the "host" is located on the right. Affix this arrow over the existing arrow on the instruction panel.

INSTALLATION:

THE MENU MART II MUST BE CONNECTED TO A GLASSFRONT MERCHANDISER. THE STEPS OUTLINED ON THE FOLLOWING PAGES ARE THE BASIC INSTRUCTIONS FOR INSTALLING THE MENU MART II. REFER TO THESE INSTRUCTIONS ALONG WITH THE WIRING DIAGRAMS DURING INSTALLATION.

GROUNDING & ELECTRICAL:

For proper operation of any equipment utilizing electronically controlled components, it is recommended that the equipment be placed on an isolated or dedicated "noise" free circuit, properly polarized and grounded. The circuit should be a minimum **15 Amp**, **120 Volt AC, 60 cycle** power source

Shown in **Illustration #2** and **Illustration #3** are two (2) properly grounded and polarized wall outlets. Illustration #2 is a three (3) wire grounding type wall outlet. Illustration #3 is a two (2) wire outlet with a three (3) plug adapter in place.

NOTE:

The "HOT" side of the outlet should always be counter-clockwise from the "GROUND" terminal, with the ground terminal at the bottom. The "NEUTRAL" terminal will be clockwise from the "ground" terminal.

VOLTAGE CHECK:

1. **Voltage Check:** With a Volt-Meter set to check AC line voltage, insert one connector to the HOT terminal and the other connector to the NEUTRAL terminal. The volt-meter should indicate 108 to 132 Volts AC.
2. **Polarity and Ground Check;** With a Volt-Meter set to check AC line voltage, insert one connector to the **HOT** terminal and the other connector to the **GROUND** terminal. The volt-meter 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 amperage reading of the fuse or breaker protecting the circuit, is a minimum of that specified in the vendor Service Manual or greater.

NOTE:

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

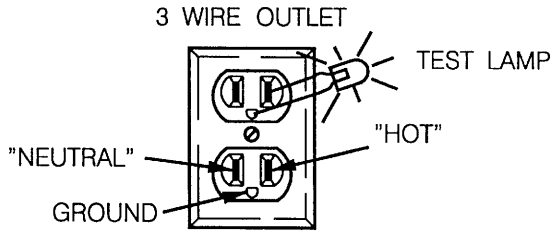


ILLUSTRATION #2

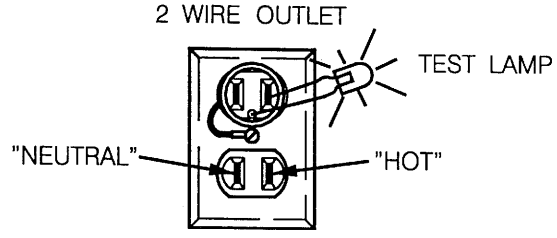


ILLUSTRATION #3

INSTALLATION INSTRUCTIONS:

1. Set and level the Menu Mart II to the right of the Glassfront Merchandiser ("host" machine) and connect both machines together using the two (2) Tie Plates (P/N 1211234) furnished in the service packet. **See Illustration #4.**

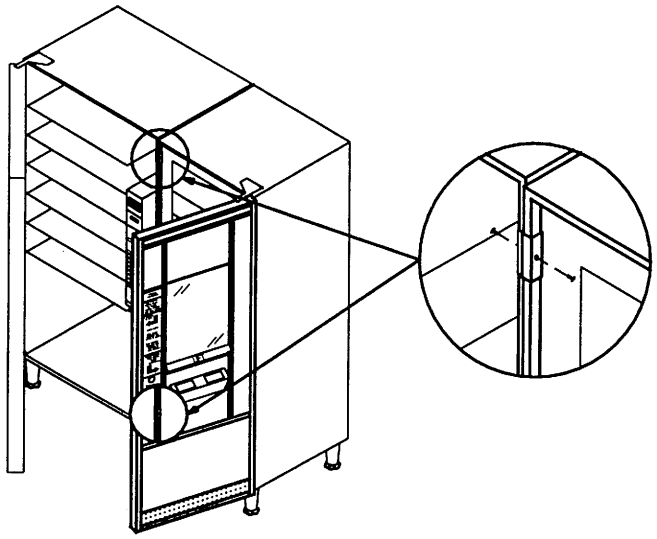


ILLUSTRATION #4

NOTE

If both a Menu Mart II and a Can Drink Merchandiser are to be connected to the "host" machine, the Menu Mart II should be positioned to the right of the "host" machine.

2. Unplug the Glassfront Merchandiser, "host" machine, from the power source.
3. Remove the hole plug from the back of the "host" machine's cabinet.
4. Insert the "umbilical" cord from the Menu Mart II through the hole in the back of the "host" machine and secure the plate attached to the umbilical cord. **See Illustration #5.**
5. Connect the "umbilical" cord from the Menu Mart II to the J6 connector on the "host" machine control board. **See Illustration #6.**
6. Plug both the "host" machine and the Menu Mart II into the building power source.
7. Set vend prices for the Menu Mart II at the "host" machine (Refer to **Price Setting Instructions**) and test vend both machines for proper operation.

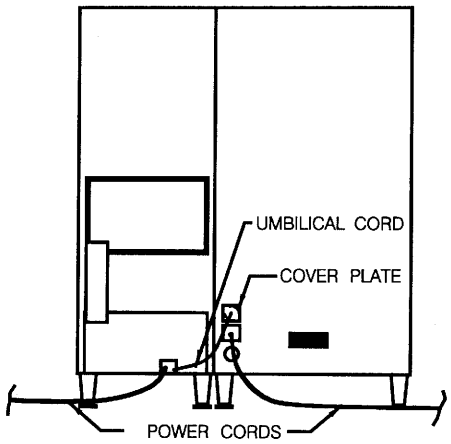


ILLUSTRATION #5

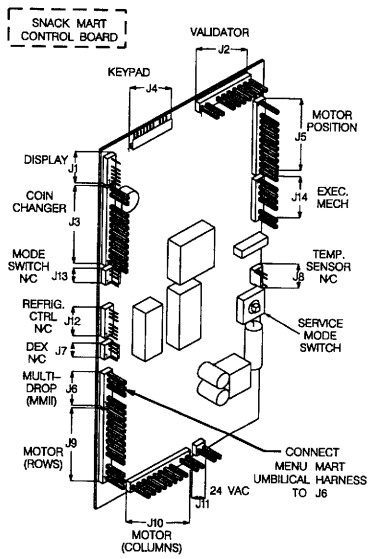


ILLUSTRATION #6

Refer to **Wiring Diagrams** on both the Menu Mart II and the "Host" Glassfront Merchandiser for proper identification of the connections and components.

INSTALLATION CHECK LIST:

1. Adequate space has been allowed for proper air flow.
2. Menu Mart II has been properly connected to "Host" machine and is functional. (Verify by test vending).
3. Compartments have been properly loaded. (Refer to Loading Instructions)
4. Vend prices have been properly set. (Refer to Price Setting.)

LOADING INSTRUCTIONS:

When loading the Menu Mart II, be sure the correct bucket or compartment is identified and the vend price programmed for that particular bucket corresponds to the product being loaded.

PRODUCT LOADING:

The Products must be loaded in priced pairs. There are a maximum of forty compartments with twenty separate prices (J0 - J9 and L0 - L9). Each selection (example, L6) has a paired priced selection on the other side of the carousel (another L6). The price of the selections must match but the products can be different.

To load the product, open the door and press the load switch, located at the top of the carousel. Shop the carousel to find the desired compartment for filling. Pressing the load switch once will advance the buckets to the next selection. Holding the load switch down will continue to advance the carousel until the load switch is released. The selections will be identified by a label attached to the side of each compartment. A matrix sheet is provided inside the outer door to record which products are to be loaded in each selection.

BUCKET POSITIONS:

Selection Position:

There are 20 buckets mounted on a conveyor assembly in the Menu Mart II. These buckets rotate on the conveyer assembly in one direction.

The buckets can be configured as either a whole or split compartment. The compartments are identified as Selections "J0" through "J9" and "L0" through "L9" on the Glassfront Merchandiser, ("host" machine). When the buckets are all configured as split, a maximum of 40 selections are available. When the carousel is in the "Home Position", the bucket located in the vend position will hold selections J0 and J1, the next bucket will hold selections J2 and J3, . . . on through bucket L8/L9. The entire sequence will then repeat so that there is a second J0/J1 bucket on the other side of the carousel. **See Illustration # 7.**

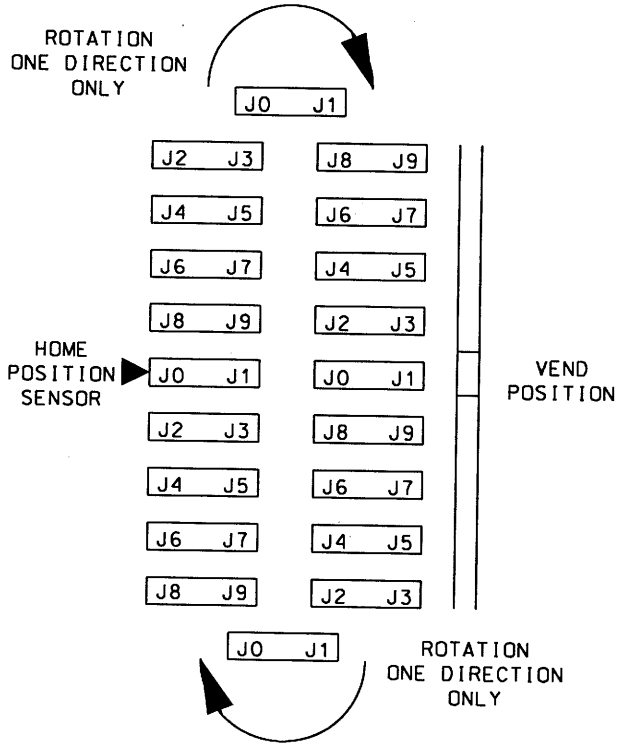


ILLUSTRATION #7

Anytime a bucket (example, J4/J5) is identified as a "whole" compartment, the odd number's (ie., J5) vend price must be set at $99.90. At that time, the odd selection number (ie., J5) is not recognized for vending and the readout at the Menu Mart will be blank. The even selection number (ie., J4) is then used to price and vend the "whole" compartment. The paired bucket (ie., J4/J5) on the back side of the conveyer, will have the same configuration.

Home Position:

The Menu Mart II locates the "home position" whenever power is applied. **Home Position** is when the J0/J1 bucket is in the Vend Position. **See Illustration #7.** The controller identifies the selection in the Vend Position by tracking its relationship to the home position. The Home Position is located by the "**Home Position Switch**", located in the back of the conveyer assembly when it detect the **"Home Position Plug**". The **"Home Position Plug"** is on the back of the bucket located at the Home Position Switch, (bucket J4/J5). **See Illustration #8**.

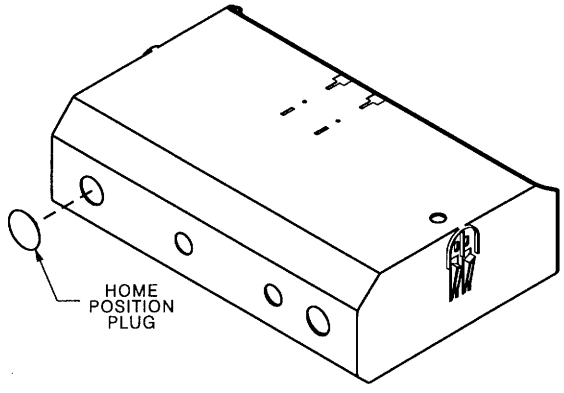


ILLUSTRATION #8

WARNING:

The conveyer will rotate to the home position when power is applied. Special caution should be used during any servicing or maintenance that requires powering the vendor on and off to prevent injury.

BUCKET CONFIGURATION:

Each bucket can be configured as a whole or split compartment. There are two split versions available: the 50/50 split or the 60/40 split. **See Illustration #9.**

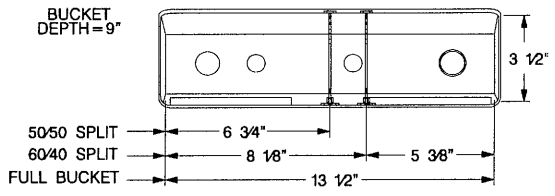


ILLUSTRATION #9

To instruct the controller to identify a bucket as "whole" (no divider) the right or odd numbered selection must be priced at $99.90. This price instructs the controller to open both split doors to allow access to the entire bucket. Any price set for the odd numbered selection other than the $99.90 identifies that bucket as a split bucket.

Product Dividers:

A product divider is used for the split bucket configuration. To add or remove a bucket divider, use the load switch to rotate the bucket to the top of the carousel. Remove the panel located at the top of the stack assembly by loosening the three screws and lifting the panel off of the keyhole slots. Press the bucket upwards from within the bucket interior to release the locking tab located on the top of the divider and pull out the divider. Reverse the steps to insert a divider. **See Illustrations #10 & #11.**

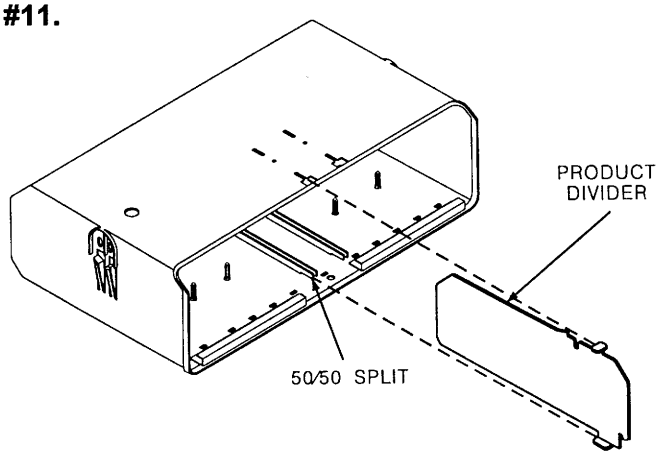


ILLUSTRATION #10

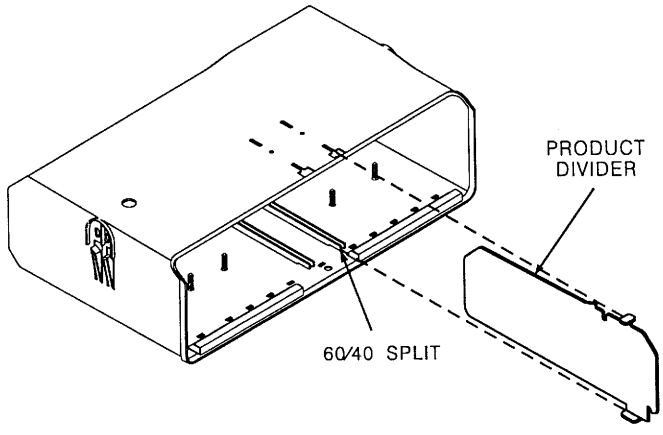


ILLUSTRATION #11

Product Retainers:

The loaded product is held in the bucket by the "**Product Retainer**". It is important to use a product retainer to keep the product from being tossed out of the compartment. The Product retainer is mounted on the front edge of the bucket with "**Push In**" fasteners. Products can be further restrained and displayed forward within the bucket by inserting "**Pine Tree Clips**" through the holes in the bottom of the bucket. The pine tree clips keep the product from rolling or sliding back into the bucket. **See Illustration #12.**

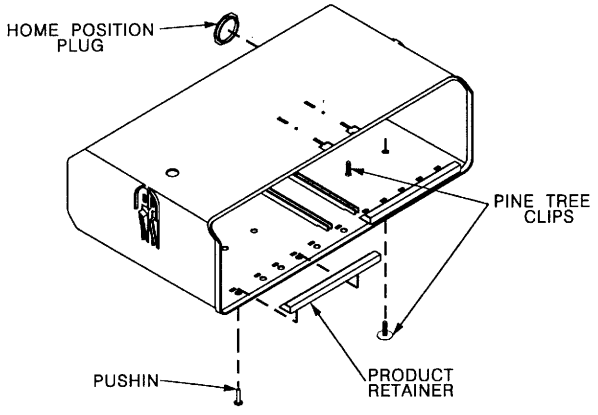


ILLUSTRATION #12

CONTROLLER FUNCTIONS:

The Menu Mart II has a control board located in the bottom of the cabinet. However, it is only a "slave" control board and requires the use of a "host" control board from the Glassfront Merchandiser. It communicates the vend information through the umbilical harness to the "host". The Menu Mart II selections are interpreted as a J and L trays by the "host" Controller. Refer to your "host" Service Manual for additional programming and controller functions.

SET PRICE:

The price setting is handled through the Glassfront Merchandiser or "host" Vendor. The following steps will allow you to program the prices for the Menu Mart II selections from the "host" machine:

1. On the "host" vendor access the service mode by pressing the service mode switch on the control board.
2. To enter the "**Set Price**" function press **"5"** on the "host" keypad. The "host" display will show "**Enter Selection**".
3. Enter the Menu Mart Selection number you wish to price on the "host" keypad (example, J4).
4. Then enter the desired price for that selection. (example, 0095 is 95 cents.)
5. To accept the price, press **"J"** on the "host" keypad.
6. To continue pricing the Menu Mart II selections repeat steps 3-5. Making sure you press "J" after each item.
7. Exit the service mode by pressing the service mode switch on the "host" control board.

NOTE:

To copy a price to other selections follow the steps above through step 4. Now press **"C"** for copy and press all the other selection's alphanumeric numbers that you want to copy the price to. Press **"J"** to accept after all selections are entered.

VERIFYING VEND PRICES:

The vend price of each selection can be verified at anytime while the "host" machine is in the "Sales Mode". To verify the price programmed into the controller, depress the specific selection number, the selection number and the current vend price will be displayed for approximately three (3) seconds. The price will also be displayed on the Menu Mart II LED readouts for the selections are in the vend position. The price programmed into the controller should agree with the price displayed at the Menu Mart.

NOTE:

When the controller is in the "Discount Mode" and a time interval has been activated, the discounted price will be displayed. If that specific selection has been recorded as a faulty motor or has been removed by the controller, **"SELECT OTHER ITEM"** will be displayed. This indicates that the selection is not functional.

ERROR CODES:

There are two types of error codes available for the Menu Mart II: the Menu Mart Error Codes and the Snack Mart Error Codes. The Menu Mart Error codes will be displayed at the Menu Mart upon power up. The Snack Mart Error Codes will be displayed on the "host" readout during the High Level Service Mode only.

Menu Mart Error Codes:

The Menu Mart will run a self diagnostics on the split doors and the carousel during power up. The error codes will be displayed on the Menu Mart LED readout right after power is applied. The following list contains the error codes that could be displayed if an error is detected:

Err 0 - The carousel motor has not been detected or is drawing too little current to be detected.

Err 1 - The Service Door Switch, Vend Door Switch or Latch Solenoid on the vend door was opened at the start of a carousel activation.

Err 2 - The carousel motor has drawn too much current at start up and shut down after three tries.

Err 3 - The switches or the motors to the split doors did not function properly to place the door mechanism in the standby position and the carousel start routine was interrupted.

Err 4 - The Menu Mart control board did not detect the actuation of the Vend Position Switch to the N.O. (Normally Open) position and has timed out.

Err 5 - The Menu Mart control board did not detect the actuation of the Vend Position Switch to the N.C. (Normally Closed) position and has timed out.

Err 6 - The carousel can not locate home position after two complete revolutions.

Snack Mart Error Codes:

If an "out of service" situation occurs during the sales mode the Menu Mart II will display dashes on the LED readouts located on the front of the Menu Mart. No price information will be displayed at the Menu Mart and the Menu Mart will not vend. These errors are recorded in the Snack Mart or "host" machine and must be viewed during the high level service mode on the "host" machine.

To display the error codes, complete the following:

1. Access the service mode by pressing the **"Service Mode Switch"** on the control board in the Snack Mart or "host" machine.
2. Press the **"7"** on the "host" keypad to enter the high level service mode.
3. Enter the high level service mode access code: **"1,2,3,4"** at the "host" keypad.
4. Enter **"H"** on the "host" keypad. The "host" readout will display "**Menu Mart**" and then the error message.
5. To exit back to the "Sales Mode", press the **"Service Mode Switch"** on the control board. To back out to the previous level, enter **"L"** on the keypad.

Error Messages are as follows:

OK - No errors have been detected.

Health Safety - The temperature of the Menu Mart has gone above the designated health limits for a sustained period of time.

Motor Jam - An error was detected during the activation of the split door motors and/or the carousel motor. Motor may be jammed.

Home Switch - The "Home Position" could not be detected. Home Position Switch may be stuck open or closed.

Window Stuck - The vend window is open when not in the vend mode.

NOTE:

Only the Health Safety error can be cleared from the "host" machine. All other errors are cleared by opening and closing the service door on the Menu Mart.

To clear a Health Safety error, press **"0"** on the "host" keypad while the Snack Mart is in the Menu Mart service mode. The "host" readout will display **"CLEARED".** Press **"L"** to back out to the Sales Mode or press the **"Service Mode Switch"** on the "host" control board.

TEMPERATURE CONTROLS:

As a cold food vendor the Menu Mart has a refrigeration unit to maintain a certain temperature inside the cabinet. The temperature of the Menu Mart II will be displayed on the LED readouts, (on the door of the Menu Mart), approximately once every 60 seconds. The readout will be in both Fahrenheit and Celsius.

The cut-in and cut-out temperatures of the Menu Mart compressor can be set while in the "host's" High Level Service Mode. The cut-in temperature range is between 36° and 42° Fahrenheit, (2.2° to 5.5° Celsius). The factory default setting is 38° Fahrenheit, (3.3° Celsius), for the cut-in temperature. The cut-out temperature range is between 26° and 32° Fahrenheit (-3.3° to 0° Celsius). The factory default setting is 32° Fahrenheit, (0° Celsius), for the cut-out temperature.

CAUTION:

If it is necessary to adjust the temperature, a 6 degree difference between the cut-in and cut-out temperatures is recommended. Adjusting the cut-in and cut-out temperatures does not speed up the cooling process.

If the temperature goes above 45 degrees for a sustained amount of time, the Health Safety will shut down the Menu Mart until the error is cleared. The Menu Mart readout will display dashes and all vending operations will be shut down on the Menu Mart. The "host" will still operate normally. The only way to clear the Health Safety Error is through the "host" High Level Service Mode below.

Perform the following to access the temperature controls:

1. Access the service mode by pressing the **"Service Mode Switch"** on the control board in the Snack Mart or "host" machine.

2. Press the **"7"** on the "host" keypad to enter the high level service mode.

3. Enter the high level service mode access code: **"1,2,3,4"** at the "host" keypad.

4. Enter **"H"** on the "host" keypad. The "host" readout will display "**Menu Mart**" and then any error messages. **(See Snack Mart Error Codes)**

5. Enter the following options on the "host" keypad:

   "0" - Clears the Health Safety Error Code.

   "1" - Sets the display mode for the cut-in and cut-out temperatures. Press "D" for Fahrenheit, Press "C" for Celsius, Press "L" to abort.

   "2" - Set the cut-in temperature for the compressor. Press **"J"** to enter the temperature.

   "3" - Set the cut-out temperature for the compressor. Press **"J"** to enter the temperature.

6. To exit, Press **"L"** on the "host" keypad until you are back in the Sales Mode or Press the **Service Mode Switch** on the "host" control board.

NOTE:

When the outer door of the Menu Mart is opened, the compressor will run for 5 minutes and then shut off. The evaporaator fans will run continuously as long as the vendor is plugged in. There is a three minute time out before the compressor will come back on after the service door is closed.

COMPONENTS & FUNCTIONS:

This section will describe the operation or function of various components within the structure of the Menu Mart. See **Illustration #13** for the position or location of the components described. During normal operation of the Menu Mart the controller will monitor the position and sequence of operation of these components. Any electronic failures detected will be recorded by the controller and displayed in the readout on the front of the outer door. Refer to the "Error Codes" section for further information:

COMPONENT LOCATIONS

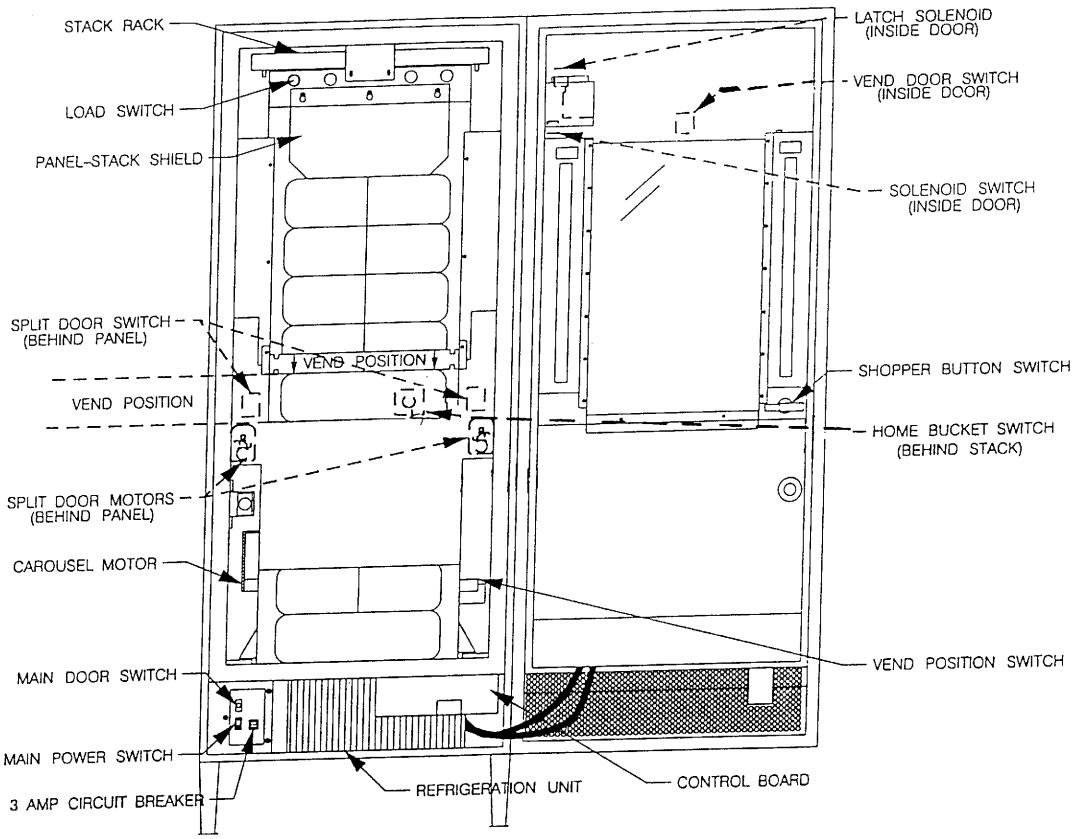


ILLUSTRATION #13

PRINTED CIRCUIT BOARD:

The control board is located inside of the Menu Mart's lower cabinet below and outside the refrigerated compartment. The control board contains all electronics necessary to control the system and peripherals of the Menu Mart II. The control board software is programmed into a single EPROM, external from the microprocessor and removable from the controller for updates or soft-ware revisions.

DISPLAYS:

Located on the front of the outer door is a printed circuit board housing two (2) four digit LED readout packages to display to the buying customer the selection number and the price of the item. The interior cabinet temperature will also be displayed approximately every 60 seconds. If errors are detected during operation, the error codes will also be displayed. Refer to Page 10 for a listing of the error codes.

LATCH SOLENOID:

Located inside the door is a Latch Solenoid which controls the locking mechanism of the vend door. The Latch Solenoid is a 24 VDC continuous duty solenoid that will be energized when a vend has been initiated. This solenoid, when energized, unlocks the vend door latch mechanism, allowing the vend door to be opened. At the start of the vend cycle, power will be retained to the solenoid for 10 seconds. This will give the buying customer adequate time to open the main vend door of the Menu Mart.

VEND DOOR SWITCH:

Located inside the door is a Vend Door Switch which is operated by the Vend Door. The controller will monitor the position of this switch, both at standby and during a vend cycle. When the vend door is opened, this switch will be actuated to the normally closed (N.C.) position. When in this position all power is removed from the carousel motor. When the vend door is closed, the window switch is returned to the normally opened (N.O.) position.

VEND DOOR MOTORS:

Two Vend Door Motors (24 VDC, 8 RPM) located on the Mech Plate mounted on the front of the carousel will control the positioning of the "split door" assemblies. When a vend is made, from a split compartment, the opposite motor will run 180°, moving that Split Door Assembly into a position to cover the opening. With the door in this position access to the product opposite the one that was vended is blocked. At the end of the vend cycle, the vend door motor will run 180°, returning the Split Door to its standby position. On initial power up, or if power is lost, the controller will sense the position of the split doors, through the "Split Door Switches", and if either door is not in the standby position, the controller will run that motor to the proper position.

HOME BUCKET SWITCH:

The Home Bucket Switch is mounted on a bracket in the rear of the stack. The function of this switch is to communicate to the controller the position of the buckets around the carousel. On initial power up, or if power is lost, the controller will sense the position of the Home Bucket Switch. If the Home Bucket Switch is not at the "Home Bucket", in the de-actuated position (N.C.), the controller will run the Carousel Motor until the "Home Bucket" is positioned at the Home Bucket Switch. The controller will then track the position of "home position bucket" to determine the selection at the vend area.

NOTE:

If the "Vend Position Switch" is adjusted, the Home Bucket Switch may require adjustment also.

SPLIT DOOR SWITCH:

Two Split Door Switches, located on Mech Plate mounted on the front of the carousel communicate to the controller the position of the "split door" assemblies. At standby, the switches will be held in the actuated position (N.O. position) by the "split doors". On initial power up, or if power is lost, the controller will sense the position of the split doors, through the "Split Door Switches", and if either door is not at the standby position, the controller will run that motor to standby, properly positioning the door.

VEND POSITION SWITCH:

The Vend Position Switch is mounted on the lower right side of the stack and is operated by the cam protruding from the lower drive shaft. The function of this switch is to position the bucket or compartment to be vended within the vend area. At standby, this switch will be in the N.C. position, with the actuator in the valley of the cam. The bucket at the vend position can be repositioned, by loosing the screw and rotating the cam, changing the timing in relation to the carousel. (See **Illustration #14**)

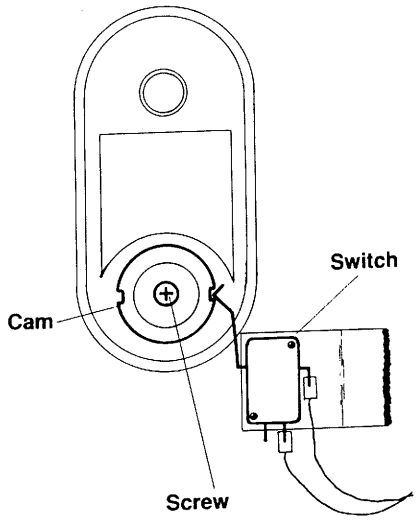


ILLUSTRATION #14

NOTE:
If the "Vend Position Switch" is adjusted, the Home Bucket Switch may require adjustment also.

CAROUSEL MOTOR:

The Carousel Motor (Main Drive Motor) located on the left side of the stack assembly is a 24 VDC, 2A maximum, 5-7 RPM motor. The motor controls the rotation of the buckets or compartments and will be driven by the controller. The buckets will automatically advance 6 buckets at a predetermined interval during the Sales Mode.

LOAD SWITCH:

The Load Switch is located inside the cabinet at the top of the carousel. The Load Switch has two functions. During normal operation when the outer door is opened it is used as a "Load Switch" to rotate the buckets to a position for easy access when loading products into the compartments.

SHOPPER BUTTON SWITCH:

The Shopper Switch is located on the front of the main door. With the outer door closed, this switch is used by the buying customer to rotate the bucket or compartments to the vend area for "select" items. When the outer door is open, pressing the "Shopper Switch" will place the controller in the "Service Mode".

MAIN DOOR SWITCH:

The Main Door Switch is located in the lower cabinet area outside the refrigerated compartment. This is an interlock type switch that is operated by the main door, being held in an actuated position (N.O.) when the outer door is closed. When the outer door is open the Main Door Switch will return to the normally closed position. The controller will sense the position of this switch to allow certain functions to run or not run under certain conditions.

MAIN POWER SWITCH:

The Main Power Switch is located in the lower cabinet area outside the refrigerated compartment. This is a rocker type switch and when in the "OFF" position will remove power from all components in the Menu Mart with the exception of Evaporator Fans in the Refrigeration Unit which will run as long as the machine is plugged in. The "main power switch" should be turned to the "Off" position when performing service or repair to the vendor.

THERMISTOR:

A Thermister, located inside the refrigerated area, will sense the temperature within the refrigerated compartment. The temperature signals will be interpreted by the control board to control both the "Health Safety Timer function and compressor/refrigeration control.

VEND CYCLE:

1. The "buying customer" shops the Menu Mart II with the shopper button switch to place the compartment of choice into the vend position as identified on the vend door of the machine.

   NOTE: If the vend door switch is open, the control board does not allow the carousel to operate.
2. The Menu Mart II displays the price and selection identification (i.e. J3, .95) of the desired compartment in the LED displays on the machine front.
3 The host (Snack Mart) control must be powered up and active (sales mode).
4. The customer deposits appropriate credit (bills/coin) into the host machine to accrue credit equal to or greater than the price of the desired selection.
5. The customer then presses the appropriate alpha numeric (i.e. J3) combination on the host's keypad that identifies the selection desired in the vend position.
6. The host (Snack Mart) verifies that the selection is active in the controller matrix, that sufficient credit has been deposited, and sends the signal to the satellite (Menu Mart II) to start the vend sequence within the satellite machine.
7. The host at this time has started its 8-10 seconds vend time-out.
8. The satellite starts the vend sequence by determining whether the selection is active by checking the health parameters at that time.
   a. If the health parameters are violated, then the satellite reports to the host that the selection is not active and should be out of service, the host displays to the customer in the host display "make another selection", and the vend does not take place.
   b. If the health parameters are met then the satellite continues with the vend sequence.
9. The satellite determines whether a selection is a "full" compartment or a "split" compartment.
   a. If the compartment is a "full" compartment the satellite checks the status of the split doors through the split door switches and interprets whether either split door needs to be moved.
      a1. If either door is out of position (in the "up" position) the control board energizes the appropriate split door motor to properly position the door. After pausing 1 second, it energizes the vend door latch solenoid thus allowing the customer access to the full bucket compartment selected.
      a2. If both split doors are in the proper position (down) the control board immediately energizes the vend door latch solenoid thus allowing the customer access to the "full" bucket selected.

      NOTE: If the split doors cannot be properly positioned, the control board reports to the host that that selection is not active and should be out of service.
   b. If the compartment is a "split" compartment the satellite checks the status of the split doors through the split door switches and interprets whether either split door needs to be moved.
      b1. If either door is out of position, (either door is closed or up), the control board energizes the appropriate split door motor to properly position the door. After pausing 1 second, it energizes the vend door latch solenoid thus allowing the customer access to the split bucket compartment selected.
      b2. If the split doors are positioned appropriately, (both doors are in the open or down position) the control board energizes the appropriate split door motor to its closed position. After pausing 1 second, it energizes the vend door latch solenoid thus allowing the customer access to the split compartment selected.

      NOTE: If the split doors cannot be properly positioned, the control board reports to the host that that selection is not active and should be out of service.

NOTE:

1. The split door closed is opposite the selection desired thus blocking access to the adjoining compartment.
2. The control board, after analyzing the position status of the split doors, must at no time close both doors into the vend area at the same time. The split doors are purposely designed to overlap and will interfere with one another if they are both closed at the same time. The split doors are both in the "open" position at the same time. The control board will move doors one at a time in succession assuring they never become closed simultaneously.

10. The vend sequence continues with the control board analyzing the position of the vend door by observing the condition of the vend door switch.
    a. If the vend door switch remains closed (the vend door isn't lifted to remove product) within a time period of 10 seconds, the satellite unlatches the vend door latch solenoid to lock vend door access and returns a signal to the host to "make another selection" and returns the customer's money. At the same time, the satellite control board monitors the position of the vend door by sensing the condition of the vend door switch, as soon as the vend door switch has been "opened" (vend door down) for a period of 1 second (not accumulative) the satellite returns the appropriate split door to the "down" position by energizing the appropriate split door motor returning the machine to the Sales Mode and awaits the next vend.
    b. Approximately 1 second after the vend door switch closes (the vend door is lifted) the control board completes the vend sequence for the host by signaling a successful vend. The host will then return appropriate change and return to normal sales operation. At the same time, the satellite pauses 10 seconds to allow the customer to retrieve the product then unlatches the vend door solenoid. After the 10 seconds time, the satellite control board monitors the position of the vend door by sensing the condition of the vend door switch, as soon as the vend door switch has been opened (vend door down) for a period of 1 second (not accumulative) the satellite returns the appropriate split door to the down position by energizing the appropriate split door motor. The machine is returned to the Sales Mode awaiting the next vend.
11. The vend cycle is complete.

CAROUSEL REMOVAL:

A "Stack Rack" is provided to support the Carousel during maintenance and servicing. The stack rack is stored above the carousel. Remove the Stack Rack, unfold and secure angle braces . Locate the tabs on the front of the stack rack in the slots provided within the cabinet area of the Menu Mart.

The carousel can now be rolled out to the end of the rack. Care should be taken when removing the carousel that the wiring harness is not damaged or over-stretched.

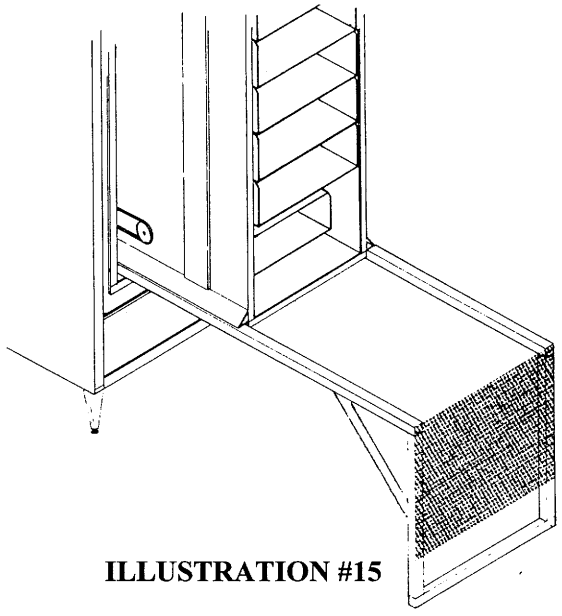


ILLUSTRATION #15

CARE & CLEANING:

When cleaning the interior of the machine power should be removed to avoid possible electrical shock or injury.

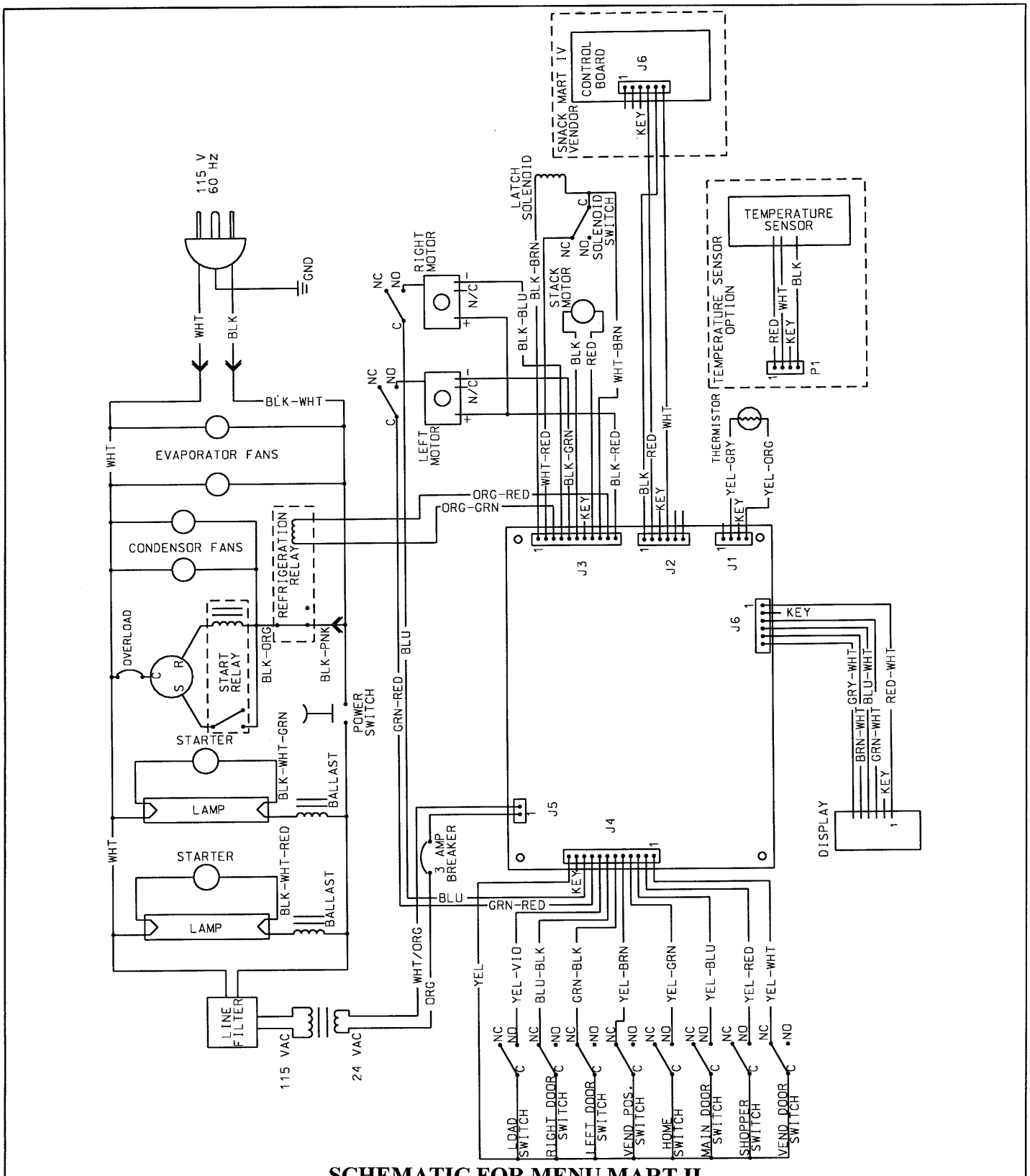
CABINET INTERIOR: Wash with a mild detergent and water, rinse and dry thoroughly. Odors may be eliminated by including baking soda or ammonia in the cleaning solution. Plastic parts may be cleaned with a

quality plastic cleaner. **Do not get the cleaning solution on electrical components.**

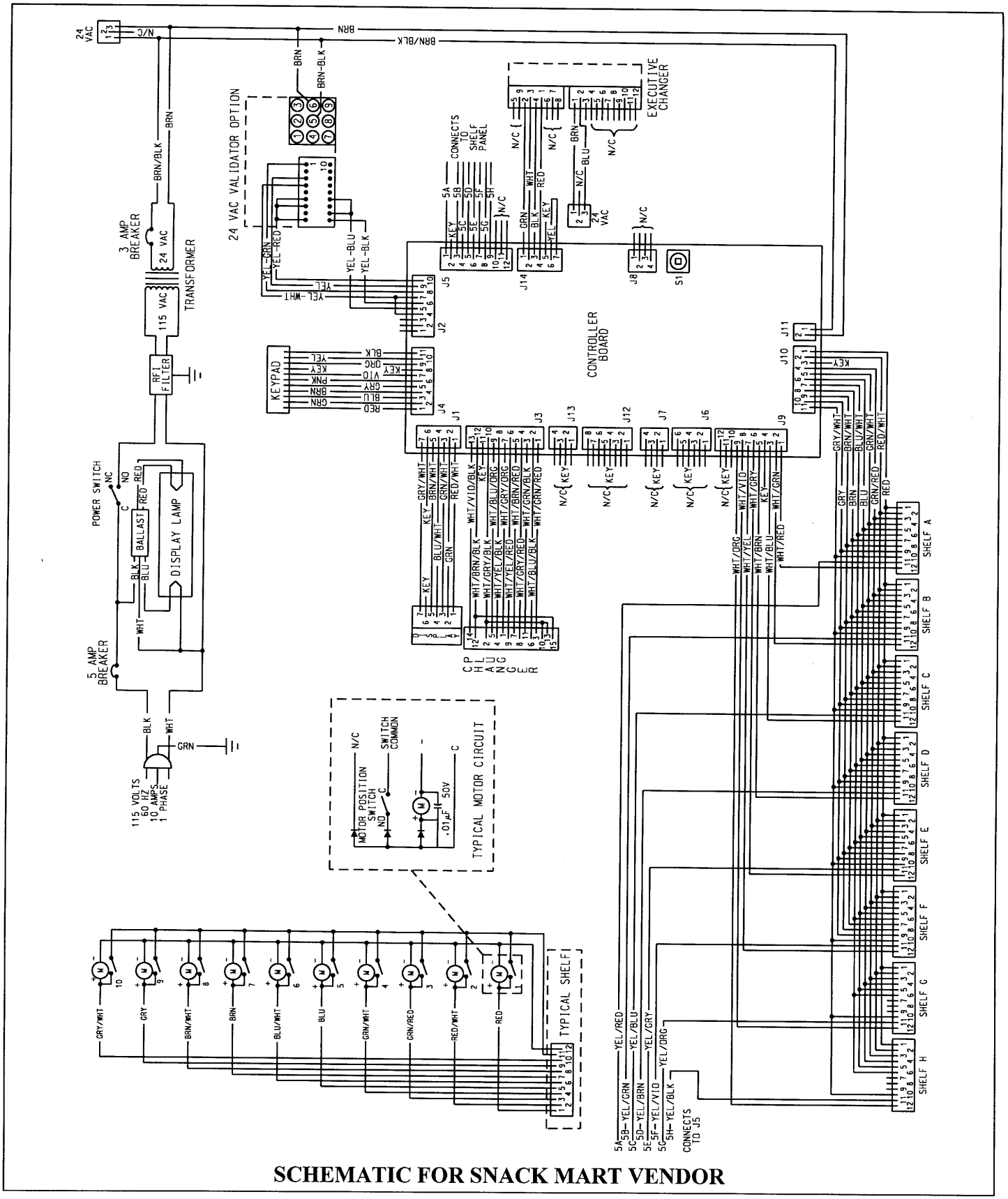
CABINET EXTERIOR: Wash with a mild detergent and water, rinse and dry thoroughly. Clean occasionally with a quality car wax. Remove and clean Condensate Drain Hose to eliminate any deposits that may restrict condensate water flow.

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

NOTES:



SCHEMATIC FOR MENU MART II



SCHEMATIC FOR SNACK MART VENDOR