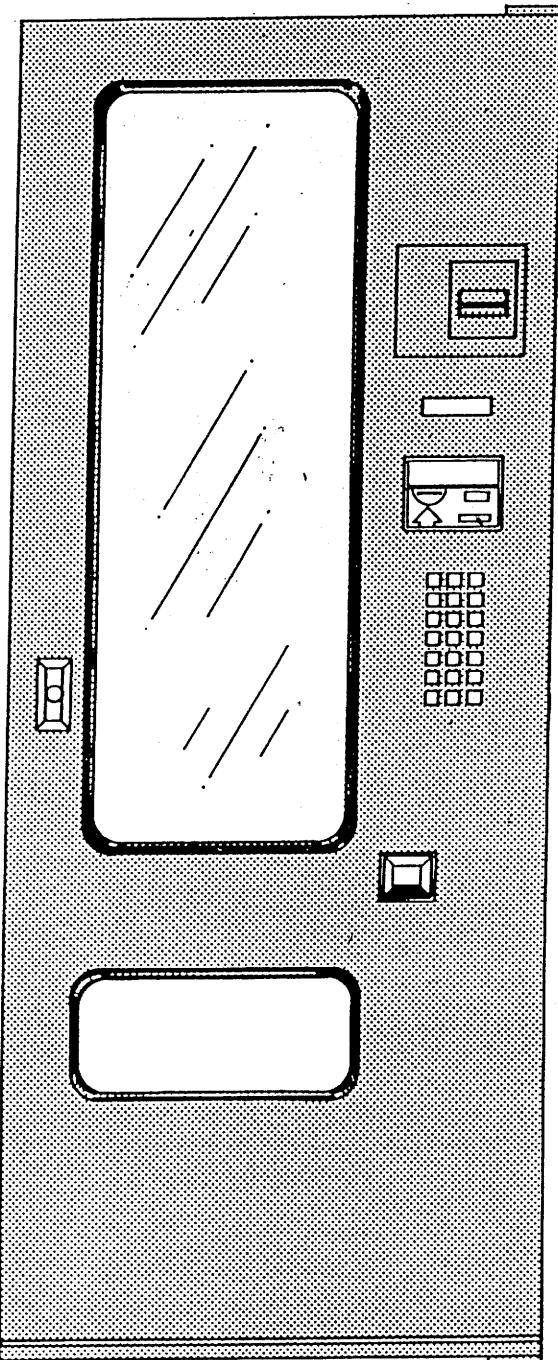


# **GF 35**

## **GLASSFRONT VENDOR**



# **SERVICE MANUAL**

**P/N 4205387**

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# INTRODUCTION

The contents of this manual contains instructions, service and installation guidelines pertaining to the GF 35.

The GF35 is equipped with an electronic control system that can be programmed into the logic of the controller and used by the customer as needs arise for specific locations.

The electronics within the controller allow all selections to be priced separately at various vend prices ranging from \$.05 to \$99.95 in five cent increments. All programming of the vend functions, pricing and features is done at the controller and changes and/or information can be retrieved without the need of any additional accessories or remote parts.

Electrical malfunctions are recorded by the controller and will be displayed to service personnel when the machine is placed in the "Service Mode".

The vending sequence of the GF35 is a "first-in"/"first-out" procedure in each selection, eliminating the need for stock rotation to maintain fresh products in the vend area.

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

Should you have any questions pertaining to information in this manual, replacement parts, or the operation of the vendor you should contact your local distributor or Selectivend Service, 165 N. 10th, Waukee, Ia. 50263-0488, (515) 274-3641.

## SPECIFICATIONS

### GENERAL SPECIFICATIONS:

HEIGHT	68 INCHES
WIDTH	38 INCHES
DEPTH	30 1/8 INCHES
WEIGHT	479 POUNDS

### ELECTRICAL:

MODEL	3076
VOLTS	115
HZ	60
AMPS	1.2
MODEL	3077
VOLTS	220/240
HZ	50
AMPS	.6

### PRICING:

\$,.05 TO \$99.95

### COINAGE:

MARS	MC5010
	TRC6010
COINCO	9302L

# INSTALLATION

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.

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. 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.

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

Remove Knock-A-Way Support by placing a 2 X 4 under vendor, inserting a screwdriver and splitting the Knock-A-Way in two. Turn the leveling screws in as far as possible. ( See ILLUSTRATION #1)

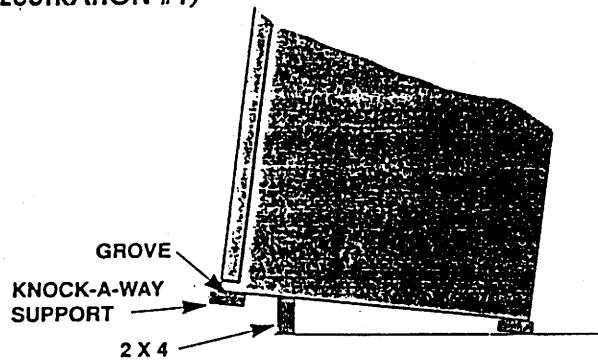


ILLUSTRATION #1

Position the vendor in its place of operation. 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 and acceptance of coins through the coin mechanism.

## GROUNDING & ELECTRICAL

For proper operation of any equipment utilizing electronic-controlled components, it is recommended that the equipment be placed on an isolated or individual circuit. The circuit should be a minimum 15 Amp, 115 Volt AC, 60 Hz, properly polarized and grounded. Shown in Illustrations #2 and #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 adaptor in place. To verify that the receptacle is properly grounded and polarized, insert one probe of a volt-ohm meter (set to check AC line voltage) or a neon test light in the ground terminal (hole) and the other probe into the "hot" terminal of the outlet. You should read 115 VAC on the voltmeter or the test light should light.

**NOTE:** The "hot" side of the outlet should always be counter-clockwise from the grounded terminal, with the ground terminal at the bottom.

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

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

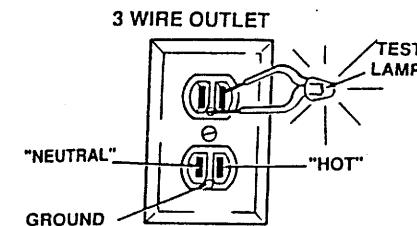


ILLUSTRATION #2

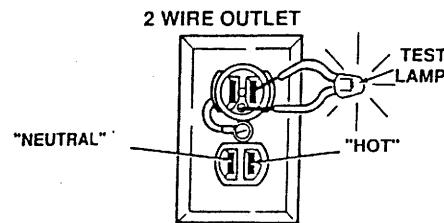


ILLUSTRATION #3

# CONTROLLER FUNCTIONS

## SALES MODE

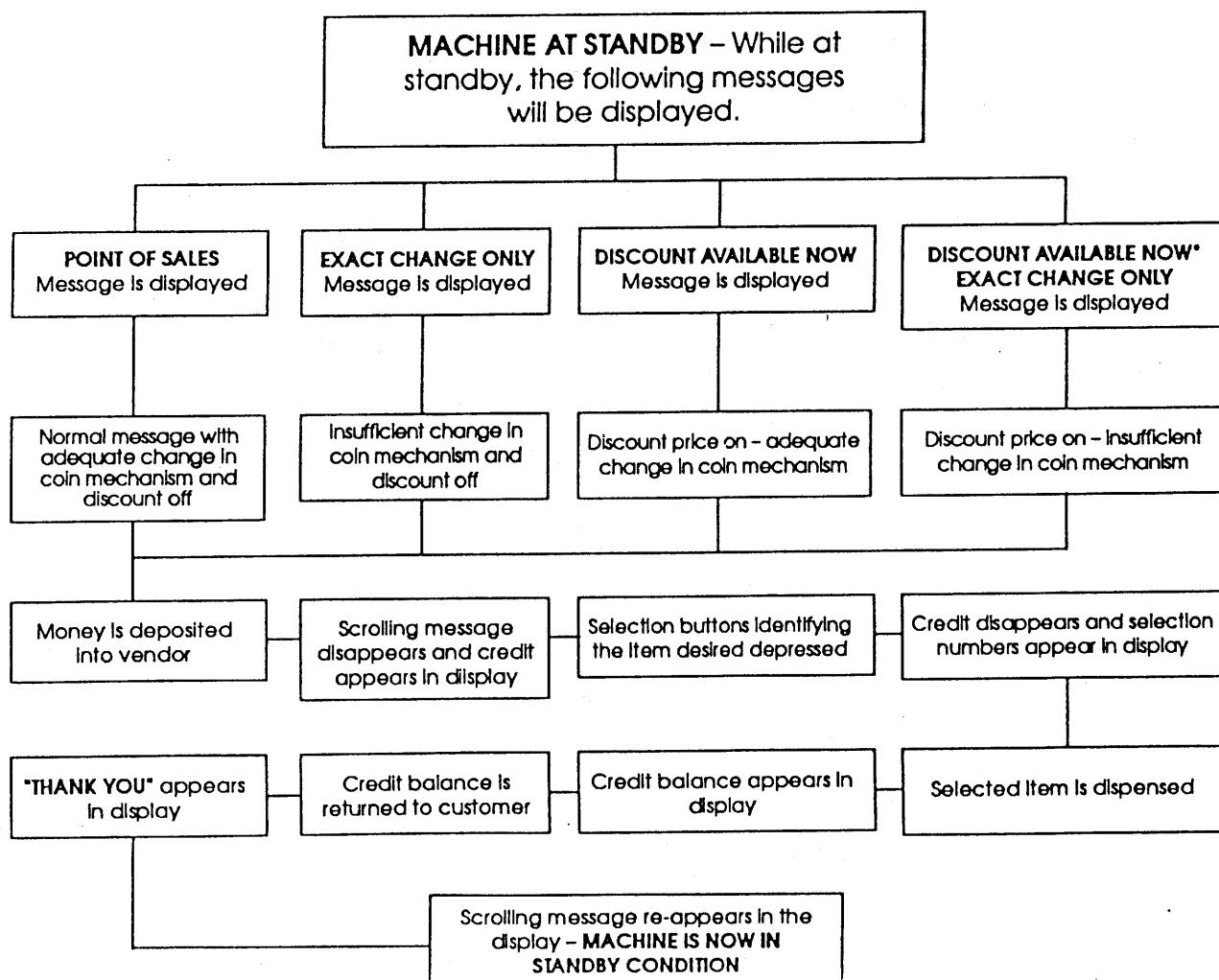
The "Sales Mode" is the normal operating mode of the vendor. When in the "Sales Mode" the controller will communicate with the buying customer with instructions pertaining to the vend requirements.

The following messages will be displayed while the vendor is in the "Sales Mode".

## DISCOUNT AVAILABLE NOW MESSAGE

This message will be displayed when the discount feature has been programmed into the controller and the feature becomes active. Refer to **Discount Feature Section** for instructions on setting the discount and activating this feature.

The following will define the standby condition of the Glassfront Merchandiser along with the step-by-step operation during a normal vend cycle with credit inserted to equal or exceed the vend price of the item selected.



## POINT OF SALES MESSAGE

This is a programmable 130 character sales message and is usually an encouragement to the buying customer to purchase the products. The message is displayed in a scrolling format and will appear continuously while the machine is in 'stand-by' condition and the coin mechanism has an adequate supply of coins in the change tubes. If the change supply in the coin mechanism is below the "low level" sensors in the pay out tubes, the "EXACT CHANGE ONLY" message will appear.

## EXACT CHANGE ONLY MESSAGE

This message will be displayed when the change supply in the coin mechanism is below the "low level" sensors in the change tubes. When the pay-out tubes are low, the "EXACT CHANGE ONLY" message takes priority over the "Point of Sales" message and the Discount Available Now Message.

# CONTROLLER FUNCTIONS CONTINUED

## SERVICE MODE

The "Service Mode" will allow the service personnel access to the programming functions of the controller. The controller must be placed in the "Service Mode" to alter any programming, establish new programs, retrieve diagnostic information and other features.

When the controller is placed in the "Service Mode", faulty selections that have been recorded will appear in the display. Any information displayed in the digital display should be recorded immediately. Any input or key depression on the key pad will remove this information from the controller's memory and the failures will not be displayed again until that specific failure has been repeated during normal vend cycles. See the **Diagnostics and Trouble Shooting Sections** for further details pertaining to motor failure.

When in the "Service Mode" the keys on the key pad will perform different functions depending on the specific mode, or requirements of the program to be accomplished. The "key" functions will be defined in detail under each mode description throughout this manual. Furnished in the service packet is a key pad over lay that can be placed over the key pad to illustrate the programming functions.

To place the controller in the "Service Mode", depress the service mode button located on the control board. (See Illustration #20)

SERVICE MODE  
BUTTON

## ILLUSTRATION #20

Record any diagnostics that appear in the display. If no diagnostics are displayed, no electrical problems with the motors were detected by the controller since the last depression of the "Service Mode" switch.

**NOTE:** The controller will automatically exit the "Service Mode" and enter the "Sales Mode" in 25 seconds if no input or depression of the key pad is made during that time. Each depression or input will allow for another 25 seconds before the controller times out.

The following chart can be used as a "quick reference" for entering or changing programs in the Glassfront Merchandiser. Complete details and steps for individual modes are outlined throughout the service manual.

Place the controller in the "Service Mode" by depressing the "Service Mode" button located on the control board.

Follow the steps outlined below:

MODE KEY	FUNCTION / MODE	TO PROGRAM - ENTER THE FOLLOWING
1	COIN DISPENSE	1 + A = 5¢ 1 + B = 10¢ 1 + C = 25¢
2	MOTOR COUNT	2 = NUMBER OF MOTORS SELECTION
3	FORCE VEND	3 + A = FORCE VEND "ON" 3 + A = FORCE VEND "OFF"
	MULTI VEND	3 + B = MULTI VEND "ON" 3 + B = MULTI VEND "OFF"
	PROMO VEND	3 + C = PROMO VEND "ON" 3 + C = PROMO VEND "OFF"
4	LANGUAGE	4 + E = ENGLISH
5	SET PRICE	5 + (SEL.) + (PRICE) + #
	COPY PRICE	5 + (SEL.) + (PRICE) + * + (SEL.) + (SEL.) ... + #
6	VEND COUNT	6 + A = TOTAL VENDS 6 + B = TOTAL CASH
7	MESSAGE	7 + (MESSAGE) + NEXT MENU + ENTER
8	TEST VEND SEL.	8 + (SEL.)
9	TEST VEND ROW	9 + (ROW)
0	TEST VEND MACHINE	0 = TEST VEND
*	SET TIME (CLOCK)	* + A + (TIME OF DAY) + #
	SET TIME (DISC.)	* + B + (TIME) + # = START 1 * + C + (TIME) + # = STOP 1 * + D + (TIME) + # = START 2 * + E + (TIME) + # = STOP 2 * + F + (TIME) + # = START 3 * + G + (TIME) + # = STOP 3
#	DISCOUNT CONTROL	# + A = DISCOUNT "ON" # + A = DISCOUNT "OFF"
	SET AMOUNT	# + B + (AMOUNT) + #
	SET ROW/ROWS	# + C + (FIRST ROW) + #

# — CONTROLLER FUNCTIONS CONTINUED

## DIAGNOSTICS

Each time the controller is placed in the "Service Mode", failures pertaining to the electrical circuit to the vend motors will be displayed if a particular selection failed to vend when selected by the buying customer. If an item is selected and the vendor is unable to complete the vend, the controller will display to the buying customer "**MAKE OTHER SELECTION**", and that particular selection will be removed from the program. The faulty selection will remain inoperative until cleared or repaired.

Each time the controller is switched in or out of the "Sales Mode" or "Service Mode", the motor circuits are scanned to determine the number of active or operational motors at that time. The diagnostics being displayed indicate the selections that were functional when the "Sales Mode" was last activated, however, due to failures or removal, are not in the circuit now. For instance, if a tray is not properly connected with the main cabinet harness, these selections would appear as faulty when the "Service Mode" is entered.

Faulty motor selection numbers will be displayed in a rotational sequence. If no selection numbers are displayed in the display when the controller is first placed into the "Service Mode", no electrical problems with motors were detected since the last depression of the "Service Mode" switch.

It is **IMPORTANT** that the information displayed be recorded immediately. Any input or key depression of the key pad will remove this information from the controller's memory and the failures will not be displayed again until that specific failure has been repeated during a normal vend cycle.

The selection number indicates the area where the problem was detected and will assist service personnel in isolating the source or cause of the problem.

**NOTE:** Exiting the "Service Mode" or advancing to another step by depressing the key pad will remove the diagnostics from the controller's memory.

# CONTROLLER FUNCTIONS CONTINUED

## POINT OF SALES MESSAGE MODE

Provisions have been incorporated into the controller for a point of sales message that will be displayed to the buying customer. This message can be used by the owner/operator as advertising or an encouragement to the buying customer to purchase the products. The point of sales message will appear continuously while the machine is in a standby condition as long as the coin mechanism has an adequate supply of coins in the payout tubes. If the change supply in the coin mechanism is below the "low-level" sensor in the payout tubes, the "EXACT CHANGE ONLY" message will appear.

The sales message can be changed on location by accessing the point of sales message mode. Messages can include up to 130 characters including spaces. While in the programming mode the key pad will function similar to a typewriter keyboard. A key pad overlay is furnished in the service packet. By placing the overlay over the selection panel, the owner/operator can "type" the new message into the controller's memory.

To enter the programming mode, the controller must first be placed in the "Service Mode", then enter the "Point of Sales Mode". The following outlines the steps to be taken:

1. Set the controller in the "Service Mode" by depressing the "Service Mode" button on the control board. (See Service Mode Section)
2. Enter "Point of Sales Message Mode" by depressing key "7" on the front panel key pad.
3. Type in the new message (maximum of 130 characters, including spaces).
  - Use the key pad overlay for location of characters on the key pad.
4. Enter the message into the controller's memory by depressing the "Next Menu" key twice.

**NOTE:** If the key's defined in STEP 4 are not entered properly when the programming of the new message is complete, portions of the previous message may appear.

When exiting the "Point of Sales Mode" message, the scrolling message will appear in the display if adequate change is in coin mechanism payout tubes.

**NOTE:** When in the "Point of Sales Mode" the buttons have different functions.

A	1	2	P.O.S.M
B	3	4	
C	5	6	
D	7	8	
E	9	0	
F	*	#	
G	H	J	

**NOTE:** When in the "Point of Sales Message" Mode the buttons have different functions, see sketch below for key functions.

**NOTE:** The upper characters in each block are accessed directly by depressing the desired key while the bottom characters in each block can only be accessed by depressing the "Next Menu" key each time those characters are needed.

A	G	N
K	Y	4
B	H	O
Q	Z	5
C	I	P
U	Ø	6
D	J	R
V	1	7
E	L	S
W	2	8
F	M	T
X	3	9
SPACE	NEXT MENU	BACK SPACE
*	ENTER	\$

# CONTROLLER FUNCTIONS CONTINUED

## PRICE SETTING INSTRUCTIONS

All pricing is controlled by the controller and must be programmed into the controller's memory. The vend prices can only be programmed while in "Service Mode". Vend prices are programmed into the memory of the controller by using the key pad to input the commands or requirements.

A vend price must be established for each selection. On items that will be vended at the same vend price, the "Copy Price Mode" can be used to duplicate the prices.

To establish vend prices, follow the steps outlined below:

1. Place the controller in the "Service Mode".
  - This is done by depressing the "Service Mode" button located on the control board. (See Service Mode Section)

**NOTE:** The display will indicate any faulty selections that have been recorded by the controller. These faults should be noted immediately. Refer to the Trouble Shooting section of this manual for additional information.

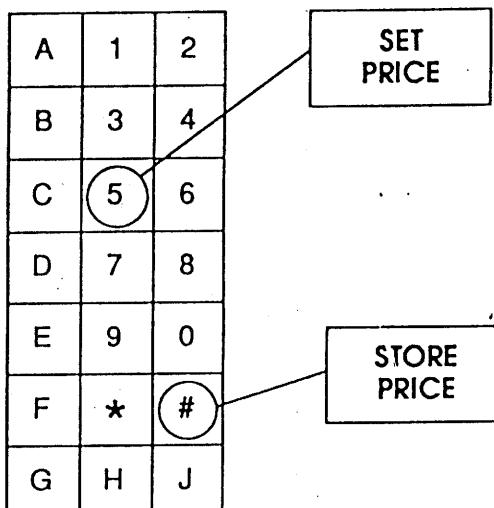
2. Enter the "Price Mode" by depressing key "5" on the front panel key pad.
  - The display will indicate "MAKE SELECTION".
3. Enter the selection letter and number of the item to be priced.
  - The selection number and current vend price will be displayed.
4. Enter the desired vend price using the number keys on the front panel key pad.

**EXAMPLE:** If the numbers 1, 2 and 5 were entered, that item would have a vend price of \$1.25.

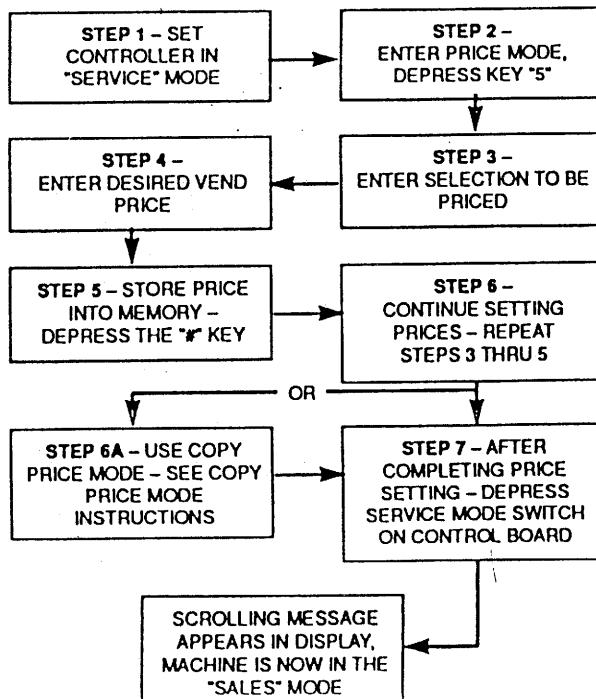
5. Store the price in memory by depressing the "#" key on the front panel key pad, or use "Copy Price Mode".
6. Continue setting prices for other selections by repeating Steps 3 through 5 or by using the "Copy Price Mode" instructions.
7. After completing price setting, depress the "Service Mode" button located on the control board.
  - The scrolling message will appear in the display. The machine is now in the "Sales Mode".
8. Check prices of items programmed by depressing selection buttons in "Sales Mode".

**NOTE:** Any time the controller is placed in the service mode it will automatically return to the sales mode in 25 seconds if no input or depression of the key pad is made during that time.

**IMPORTANT:** When establishing vend prices, make sure the price label located on the product tray agrees with the vend prices programmed into the controller and that they are properly located below the item they are identifying.



The following "flow chart" indicates the basic steps that are required when establishing vend prices on individual selections. If more than one selection is being vended at the same vend price, the "Copy Price Mode" can be used:



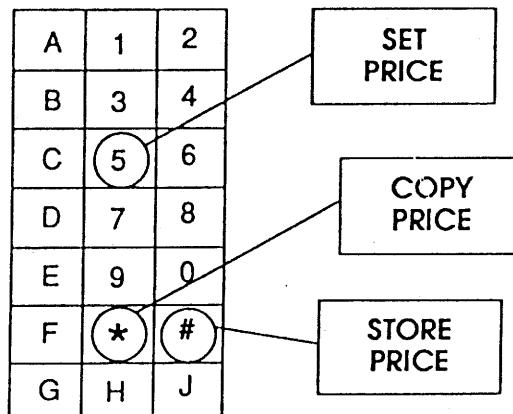
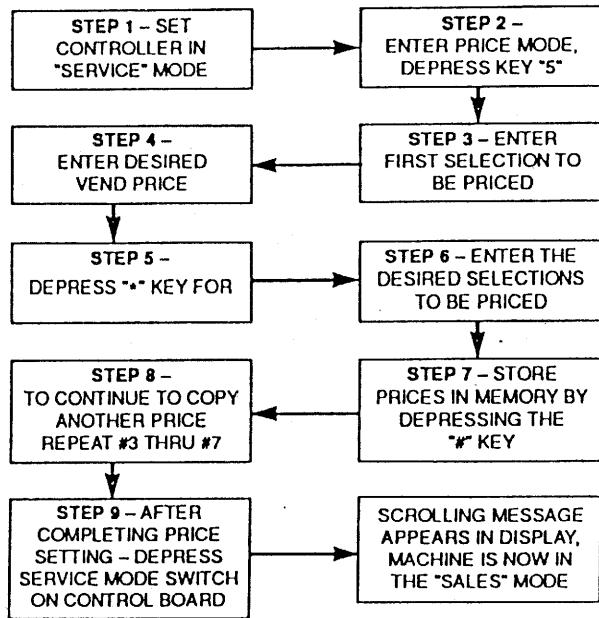
# CONTROLLER FUNCTIONS CONTINUED

## COPY PRICE MODE

When there is more than one selection to be vended at the same vend price, the "Copy Price Mode" can be used to duplicate prices for these selections. The "Copy Price Mode" can be accessed by following the instructions outlined below.

1. Place the controller in the "Service Mode". (See Service Mode Section)
  - This is done by depressing the "Service Mode" button located on the control board.
2. Enter the "Price Mode" by depressing key "5" on the front panel key pad.
  - The display will indicate "MAKE SELECTION".
3. Enter the selection to be priced.
  - The selection number and current vend price will be displayed.
4. Enter the desired vend price using the number keys on the front panel key pad.
5. Depress the "\*" key on the front panel key pad.
  - "COPY PRICE" will appear in the display.
6. Enter the desired selections to receive the Copy Price. All selections entered will receive the same vend price.
7. Store the prices in memory by depressing the "#" key on the front panel key pad.
8. To continue to copy another price, repeat Steps 3 through 7.
9. After completing price setting, depress the "Service Mode" button on the control board. Scrolling message will appear in the display. The machine is now in the "Sales Mode".

The following flow chart indicates the basic steps that are required when establishing vend prices using the "Copy Price" option. When establishing prices for individual selections, follow the instructions outlined under "Price Setting Instructions".



## VERIFYING VEND PRICES

The vend price for each selection can be verified at any time while the machine is in the "Sales Mode". To verify the price programmed into the controller, depress the specific selection numbers and the current vend price will be displayed for approximately three seconds. The price for each selection must also be identified by a "price label" on the tray under each product. Make sure the price programmed into the controller agrees with the label affixed to the tray for each selection.

**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.

# CONTROLLER FUNCTIONS CONTINUED

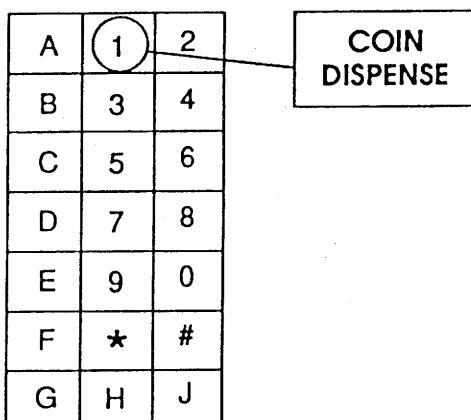
## COIN DISPENSE MODE

In the "Coin Dispense Mode", coins that are stored in coin mechanism pay out tubes can be removed. To access the "Coin Dispense Mode" the controller must first be placed in the "Service Mode" by depressing the Service Mode button located on the control board. (See **Service Mode Section**)

The "Coin Dispense Mode" is accomplished as follows:

1. Depress key "1" - "DISPENSE \$" will be displayed.
2. Depress key "A" - The Nickel pay-out tube will be activated.
3. Depress key "B" - The Dime pay-out tube will be activated.
4. Depress key "C" - The Quarter pay-out tube will be activated.

Coins will continue to be dispensed from the pay-out tubes as long as its activating key is depressed.



**NOTE:** Exit the "Coin Dispense Mode" by entering any other "function" key or by exiting the service mode by depressing the "Service Mode" button on the control board. (See **Service Mode Section**)

## MOTOR COUNT MODE

The "Motor Count Mode", when operated causes the controller to indicate the total number of functional motors that are in the system. This number should agree with the total number of selections that are in the machine. Only the total number of motors will be flashed. Individual selection numbers will not be displayed. The motor count command is accomplished as follows:

1. Enter "Service Mode".
2. Depress key "2" - The number of functional motors will be briefly flashed in the digital display.

**NOTE:** The motor count can be displayed again by pressing and holding key "2", the count will be displayed constantly.

A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

If the motor count displayed does not agree with the total number of selections in the machine, this indicates that the electrical circuit of all motors is not complete. The service person should determine what motor/motors are not functioning. Listed below are suggested steps to be taken.

1. Were faulty motors displayed when placed in the service mode?
  - Problem would be in these areas.
2. Test vend all selections.
  - Problem: faulty selection will not vend.
3. Refer to the **Trouble Shooting** section of this manual for further assistance.

**NOTE:** Exit the "Motor Count Mode" by entering any other function key or exit the "Service Mode" by depressing the Service Mode button on the control board. (See **Service Mode Section**)

# CONTROLLER FUNCTIONS CONTINUED

## TEST VEND MODES

The operational functions of the vendor can be verified by running various test vends. The machine can be tested by individual selections, a complete row, or all selections in the entire machine. When the test commands are entered, the controller will check the motor circuit and run the selection through a complete vend cycle if the circuit is complete and the motor is functional. If the motor is not functional, or the motor circuit is not complete on a particular selection, the test function will not be made.

The controller will acknowledge all commands that can be performed by a single "beep" sound. Three "beeps" will be heard when a command cannot be performed. It will be necessary for the service person to observe the testing operation. Verifying that the functions are being performed, as the controller will also sound three "beeps" for selections that are not configured in the machine.

**NOTE:** The testing functions and vending of the products while in the "Test Vend Mode" will not affect the records maintained by the controller pertaining to Total Vends/Total Cash".

## TEST VEND SINGLE SELECTION

Single selections can be test vended to verify that they are functioning properly. The controller will check the motor circuit and run the selection through a complete vend cycle if the circuit is complete and the motor is functional. The controller will acknowledge the commands that are being performed by a single "beep" sound. Three "beeps" will sound if a command cannot be performed.

To test vend single selections, the controller must be in the "Service Mode". Each time the service person places the controller in the service mode, any diagnostics displayed in the display should be noted. Follow the instructions below to test vend single selections:

1. Place the controller in the "Service Mode" by depressing the Service Mode button on the control board. (See Service Mode Section)
2. Depress key "8" on the front panel key pad. A single "beep" will sound and "MAKE SELECTION" will be displayed.

A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

TEST VEND  
SINGLE SELECTION

3. Enter selection to be tested. A single "beep" will acknowledge the input, the vend price of the selection will be displayed and a single product will be dispensed.

**NOTE:** If the product dispense cycle is successful, the display will remain blank and the system will remain in the "Service Mode" waiting for the next service command.

**NOTE:** If the product dispense cycle is unsuccessful, the display will remain blank, three "beeps" will sound and the system will remain in the "Service Mode" waiting for the next service command.

To test vend another selection, repeat Steps 2 and 3 outlined above.

**NOTE:** To exit the "Service Mode", depress the Service Mode switch located on the control board. To enter another function mode, depress that particular function mode button.

# CONTROLLER FUNCTIONS CONTINUED

## TEST VEND COMPLETE ROW

All selections in a complete row can be tested to verify that they are functioning properly. The controller will check the motor circuits and run each selection in a single row, starting with the number "1" selection if the circuit is complete and the motor is functional.

Each motor will be run through a complete vend cycle and the controller will acknowledge a functional selection with a single "beep". If a selection is not functional, three "beeps" will sound indicating that the command cannot be performed and the controller will continue to the next selection.

While using the "row" test function it will be necessary to observe the testing of the selections to verify the operation as the controller will also sound three "beeps" for selections that are not configured in the machine.

Vending items while in the "Test Vend Modes" will not affect the records being accumulated pertaining to "Total Vends" or "Total Cash".

To test vend the machine by complete row, the controller must be in the "Service Mode". Each time the service person places the controller in the "Service Mode", any diagnostics displayed in the read-out should be noted.

Follow instructions for test vending complete row:

1. Place the controller in the "Service Mode" by depressing the Service Mode button on the control board. (See **Service Mode Section**)
2. Depress key "9" on the front panel key pad. A single "beep" will sound and "MAKE SELECTION" will appear on the display.

A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

TEST VEND  
COMPLETE ROW

3. Enter row (Alpha) to be tested. A single "beep" will acknowledge the input, the vend prices of the selections will be displayed and a single product of each selection will be dispensed.

**NOTE:** If the product dispense cycle is successful, the display will remain blank and the system will remain in the "Service Mode" waiting for the next service command.

**NOTE:** If the product dispense cycle of an item is unsuccessful, three "beeps" will sound and the controller will continue to the next selection. At the end of the test function the display will blank and the system will remain in the "Service Mode" waiting for the next service command.

To test vend another row, repeat **Steps 2 and 3** outlined above.

# CONTROLLER FUNCTIONS CONTINUED

## TEST VEND COMPLETE MACHINE

All selections in the entire machine can be tested to verify that they are functioning properly. The controller will check the motor circuits and run each selection if the circuit is complete and the motors are functional.

Each motor will be run through a complete vend cycle and a product will be dispensed. The controller will acknowledge each functional selection with a single "beep". If a selection is not functional, three "beeps" will sound indicating that the command cannot be performed and the controller will continue to the next selection.

While using the "machine" test function it will be necessary to observe the operation of the individual selections as the controller will also sound three "beeps" for selections that are not configured in the machine.

During the machine test cycle the records pertaining to "Total Vends" and "Total Cash" will not be affected.

To test vend the machine, the controller must be in the "Service Mode". Each time the controller is placed in the "Service Mode", any diagnostics displayed in the read-out should be recorded prior to inputting any service commands.

Follow instructions below to test vend the complete machine:

1. Place the controller in the "Service Mode" by depressing the Service Mode button located on the control board. (See Service Mode Section)
2. Depress key "0" on the front panel key pad. The machine test will begin immediately starting with selection "A1".

A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

TEST VEND  
COMPLETE MACHINE

**NOTE:** All functional selections will be run through one complete vend cycle and a product will be dispensed. The machine test may be stopped at any time by depressing any "Alpha" key, other wise all selections will be cycled.

**NOTE:** If the product dispense cycle for individual selections is successful, the controller will sound a single "beep", the vend price will be displayed and a product will be dispensed. When the entire machine has been tested, the display will blank and the system will remain in the "Service Mode" waiting for the next service command.

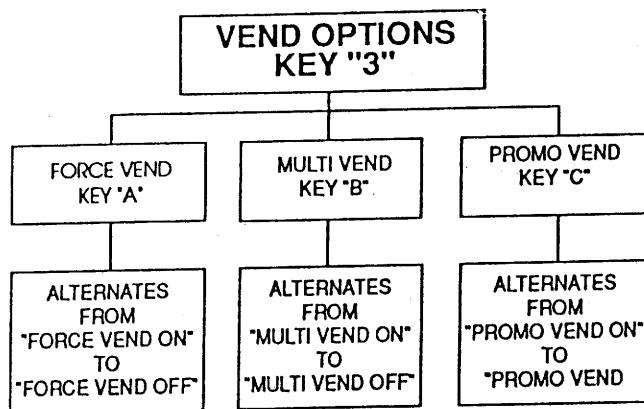
**NOTE:** If the product dispense cycle of an item is unsuccessful, the controller will sound three "beeps" will sound and continue to the next selection. At the end of the entire machine test the display will blank and the system will remain in the "Service Mode" waiting for the next service command.

# CONTROLLER FUNCTIONS CONTINUED

## VEND OPTIONS MODE

Vend options are available that can be programmed into the controller. When using any of the vend options, a battery backup is required to maintain the setting. **"SEE BATTERY BACKUP OPTION"** The options allow the machine to be programmed to function as a changer without making a purchase, make multiple selections with single deposits, or vend a free item when selecting another product. The three (3) options that are available are identified as:

- "FORCE VEND"
- "MULTI VEND"
- "PROMO VEND"



Each time the individual modes are entered, the controller will alternate from the "On" or "Off" position.

**EXAMPLE:** If a specific mode had been precisely programmed to the "ON" position, the next time the controller is placed in this mode it will automatically toggle the mode to the "OFF" position.

## FORCE VEND OPTION

To set the "Force Vend" options, the controller must be placed in the "Service Mode" by depressing the Service Mode button located on the control board. (See Service Mode Selection) Depress key "3" to enter the "Option Mode".

FORCE VEND	A	1	2
	B	3	4
	C	5	6
	D	7	8
	E	9	0
	F	*	#
	G	H	J

Two (2) selections are available:

1. "Force Vend On"
2. "Force Vend Off"

These options will alternately be displayed each time key "3" plus key "A" is depressed while in the Service Mode.

**FORCE VEND ON:** When the "Force Vend On Mode" is selected, the controller will force the customer to make a purchase when a dollar bill is inserted, overriding the "coin return" command. When in the "Force Vend On Mode", coin return of 5¢, 10¢, and 25¢ coins is not affected.

**FORCE VEND OFF (Non-Escrowing Validator):** When in the Force Vend Off Mode the controller will allow the customer to receive change from a dollar bill insertion when the coin return button is pressed. A purchase is not necessary.

**FORCE VEND OFF (Escrowing Validator):** When in the Force Vend Off Mode the controller reacts differently depending on the maximum vend price within the machine.

**Example 1:** Maximum Vend Price set at 95¢ or less. Dollar bill will be returned when the coin return button is pressed. A purchase is not necessary.

**Example 2:** Maximum Vend Price set at \$1.00 or more. The controller will allow the customer to receive change from a dollar bill insertion when the coin return button is pressed. A purchase is not necessary.

## MULTI VEND OPTION

To set the "Multi Vend" options the controller must be placed in the "Service Mode" by depressing the Service Mode button located on the control board. (See Service Mode Selection) Depress key "3" to enter the option mode.

# CONTROLLER FUNCTIONS CONTINUED

Two (2) selections are available:

MULTI VEND	A	1	2
VEND OPTION	B	3	4
	C	5	6
	D	7	8
	E	9	0
	F	*	#
	G	H	J

1. "Multi Vend On"
2. "Multi Vend Off"

These options will alternately be displayed each time key "3" plus key "B" is depressed while in the Service Mode.

**MULTI VEND ON:** When in the "Multi Vend On Mode" the "CREDIT" is flashed in the display at all times. In this mode, if the vend price of a selection is smaller than the established credit and that selection is vended, no change will be paid out. The customer can use the remaining credit to purchase other items, or push "Coin Return" to receive the balance. Multiple vend can be selected as long as adequate credit is available. When in this mode, to receive change on over-deposit the "Coin Return" button must be pushed.

**MULTI VEND OFF:** When in the "Multi Vend Off Mode" the controller is set in a single selection vend mode, or normal operation. Change will be returned if the established credit exceeds the vend price each time a vend is completed.

## PROMO VEND OPTION

"Promo Vend" option allows the customer to receive an additional item "free" when purchasing another. Provisions have been made that item "A3" will be vended "free" each time item "A1" is selected, item "B3" will be vended "free" each time item "B1" is selected. Other selections in the machine will operate normally. Individual vends from items "A3" and "B3" can be obtained while in "Promo Vend" if these selections are depressed with adequate credit inserted.

To set the "Promo Vend" option, the controller must first be placed in the "Service Mode" by depressing the "Service Mode" button located on the control board. (See **Service Mode Section**)

VEND OPTION	A	1	2
PROMO VEND	B	3	4
	C	5	6
	D	7	8
	E	9	0
	F	*	#
	G	H	J

Two (2) selections are available:

1. "Promo Vend On"
2. "Promo Vend Off"

These options will alternately be displayed each time key "3" plus key "C" is depressed while in the Service Mode.

**PROMO VEND ON:** When in the "Promo Vend On Mode", item "A3" will be vended "free" when item "A1" is selected and item "B3" will be vended "free" when item "B1" is selected.

**PROMO VEND OFF:** When in the "Promo Vend Off Mode" all selections will operate normally.

**NOTE:** Exit the "Vend Option Mode" by entering any other "function" key, or by exiting the "Service Mode".

## LANGUAGE OPTION

This mode has been incorporated for machines located outside the United States or in areas where the English language is not used. All machines shipped from the factory will be programmed in the English language unless otherwise specified on the initial order. To verify that the controller is in the proper mode for the English language, place the controller in "Service Mode" by depressing the Service Mode button on the control board. (See **Service Mode Section**) Depress key "4" plus key "E". Return the controller to the "Sales Mode" by depressing the "Service Mode" button on the control board (See **Service Mode Section**). A scrolling message will appear in the display.

# CONTROLLER FUNCTIONS CONTINUED

If it becomes necessary to program the controller for a different language, place the controller in "Service Mode" by depressing the Service Mode button on the control board. (See **Service Mode Section**)

Follow the steps outlined below:

A	1	2
B	3	(4)
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

LANGUAGE	ENTER
ENGLISH	"4" plus "E"
FRENCH	"4" plus "F"
GERMAN	"4" plus "G"
DUTCH	"4" plus "D"

LANGUAGE	ENTER
ENGLISH	"4" plus "E"
FRENCH	"4" plus "F"
ITALIAN	"4" plus "G"
SPANISH	"4" plus "D"

## VEND COUNT OPTION

Provisions have been incorporated into the controller. This will allow the owner/operator to retrieve information such as "Total Cash" transactions and "Total Vend" cycles that have been performed by the vendor.

All money required for each vend is accumulated and will be displayed to the owner/operator when the "Total Cash Mode" is accessed. Total vends can also be retrieved when in the "Vend Count Mode".

These amounts are accumulated and recorded in a running total and the amounts are not resettable. Two records are maintained by the controller.

- TOTAL CASH
- TOTAL VENDS

This information can only be retrieved while the controller is in the "Service Mode". Instructions for retrieving this information are as follows:

1. Set the controller in the "Service Mode" by depressing the Service Mode button on the control board. (See **Service Mode Section**)
2. Enter the "Vend Count Mode" by depressing key "6" on the front panel key pad.
- The display will indicate "ENTER (A) FOR TOTAL VENDS OR (B) FOR TOTAL CASH".

A	1	2
B	3	4
C	5	(6)
D	7	8
E	9	0
F	*	#
G	H	J

A = Total Vends  
B = Total Cash

3. Depress key "A" – the total number of vends will be displayed.
4. Depress key "B" – the total amount of accumulated cash will be displayed.

**NOTE:** Exit the "Vend Count Mode" by entering any other "function" or by depressing the Service Mode button on the control board.

**NOTE:** The total vend/total cash records are not affected when using the "Test Vend" options.

# CONTROLLER FUNCTIONS CONTINUED

## BATTERY BACKUP OPTION

The Glassfront Merchandiser has provisions for a battery backup option that can be added to maintain time-related programs in case of power failure or any interruption of the main power source. The battery must be a rechargeable 9 volt nickel-cadmium (transistor-style) and is capable of maintaining programmed backup functions for approximately 12 hours. A charging circuit is supplied on the control board and will restore the battery when A.C. power is supplied to the vendor.

A battery backup system must be incorporated to maintain memory for the following features:

1. Real Time Clock
2. Discount Sales Programs
3. Force Vend Options
4. Multi Vend Options
5. Promo Vend Options

If the A.C. power source is interrupted or lost and a battery backup is not utilized the following will occur:

1. Clock settings will be lost.
2. Discount Sales Programs will be lost - features will default to "OFF".
3. Force-Vend Option will default to "OFF".
4. Multi-Vend Option will default to "OFF".
5. Promo-Vend Option will default to "OFF".

Other modes or settings do not require the battery backup in case of a power failure. The last program or input will be retained in the memory of the controller when the power is restored.

## BATTERY INSTALLATION

To install the battery proceed as follows:

1. Turn-off or unplug the electrical power to the vendor.
2. Place battery in the clip provided on the circuit board with the battery connections aligning to the mating circuit board connectors. (See Illustration #21)
3. While supporting the circuit board terminal bracket, press down on the battery until contacts lock together.

**CAUTION:** When pressing down on the battery, be careful not to damage the power component on the circuit board.



ILLUSTRATION #21

# CONTROLLER FUNCTIONS CONTINUED

## SET TIME MODE BATTERY BACK UP REQUIRED

The controller is equipped with a time clock. The time will not be displayed while the vendor is in the "Sales Mode". The purpose of the clock is to control the discount program. The clock controls the start and stop times of the discount time period. In the discount program, three (3) time intervals may be selected during a 24-hour day.

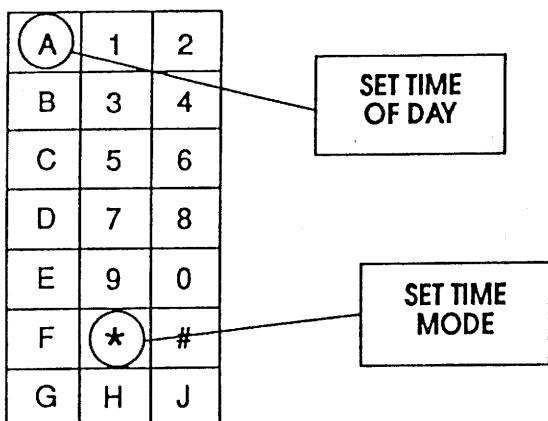
The clock operates in the military format. Midnight is represented as "0000", noon is "1200", 1:00 P.M. is 1300, etc.

## HOW TO SET THE TIME OF DAY

To set the time of day, place the controller in the "Service Mode" by depressing the Service Mode button located on the control board. (See Service Mode Section)

Press the "\*" key on the front panel key pad to enter the "Time Set Mode". The message center will display "SET TIME MODE" in a scrolling format.

Press key "A" on the front panel key pad. The message center will indicate the current time setting programmed into the controller's memory.



Enter the current time of day. For example, if the time is 2:15 P.M., press buttons 1,4,1 and 5 consecutively. The number will appear in the display as they are entered. When the last digit "5" is entered, the message center will display "SET TIME MODE" in a scrolling format. Enter the time by depressing the "#" key on the front panel key pad.

This concludes the time setting function and indicates that the current time is entered into the controller's memory.

The current time can be checked at any time while the controller is in the "Service Mode".

To check the time proceed as follows:

1. Press "\*" key - "SET TIME MODE" will be displayed.
2. Press "A" key - Current time is displayed.
3. Press "#" key - This exits the controller from "Set Time Mode".

**NOTE:** Press the "#" key to abort the time setting functions. The "#" key must be depressed after checking the time or your next entry may alter the time setting.

Any time the "Time Setting" functions or "Discount" functions are to be utilized, a battery backup is required to retain the programming in the controller's memory in case of a power failure to the vendor.

**NOTE:** When setting the time all four digits must be entered. To set the time at 8:00 A.M. you must enter "0800", not just 800.

## SET TIME MODE DISCOUNT PROGRAMMING

The controller provides the owner/operator with the ability to discount products to the buying customer. The discount programs can be made inoperative when not desired by placing the controller in the "Discount Off Mode". The vend prices of the desired items will be reduced during the time the owner chooses.

Three time intervals are provided and will operate during a 24-hour day. These programs will be repeated each day of the week when in the "Discount On Mode". The programs can be changed as often as required and can be switched "ON" or "OFF" when desired.

When the vendor is received from the factory the controller will be in the "Discount Off Mode". If the discount function is to be utilized, the following must be programmed:

1. Time intervals the discount will become active.
- Three time intervals are available. See instructions on "How To Set Start/Stop Time".
2. The amount the product will be discounted when the program is activated. See instructions on "How To Set Discount Amount".

# CONTROLLER FUNCTIONS CONTINUED

3. The items that will be discounted. See instructions on "How To Set Discount Row".

In order for the "Discount" feature to function properly, the correct time must be set. See instructions on "How To Set The Time Of Day". The battery back-up option must be utilized to retain the setting in case of a power failure.

When activating the "Discount" feature all three (3) time intervals must be programmed, as all intervals become active when the controller is in the "Discount On Mode". When the discount is in effect, the message center will display "DISCOUNT AVAILABLE NOW" in a scrolling format. If a time interval is not utilized, the following start/stop times must be programmed.

START = 0000 "Time"

STOP = 0000 "Time"

## DISCOUNT PROGRAMMING HOW TO SET START/STOP TIME

To program the discount functions, the controller must be put in the "Service Mode" by depressing the Service Mode button located on the control board. Three discount time intervals are available for programming. To establish the start and stop times of the discount periods, the controller must be in the "Set Time Mode". Enter the "Set Time Mode" by depressing the "\*" key on the front panel key pad. The message center will display "SET TIME MODE" in a scrolling format.

Listed below are the key pad button functions at this time:

Key "B" = Start Time, Interval #1

Key "C" = Stop Time, Interval #1

Key "D" = Start Time, Interval #2

Key "E" = Stop Time, Interval #2

Key "F" = Start Time, Interval #3

Key "G" = Stop Time, Interval #3

### SETTING INTERVAL #1 START TIME

Press selection button "B". The message center will display the current discount setting start time in military format (Example: 0700). Enter the time the first discount period is to start. Each digit will be displayed as it is entered. Enter all four digits of the time.

START TIME INTERVAL #1		
A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

Press key "#" on the front panel key pad to store the entry in the controller's memory.

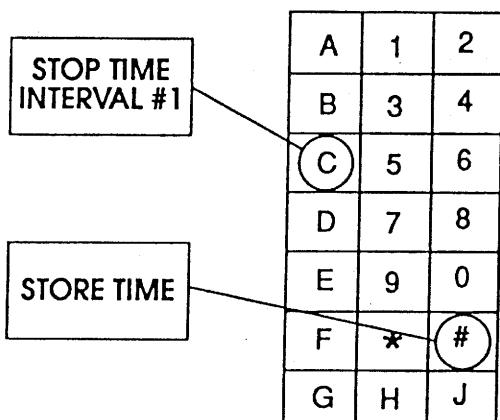
A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	*	#
G	H	J

SET TIME  
MODE

# CONTROLLER FUNCTIONS CONTINUED

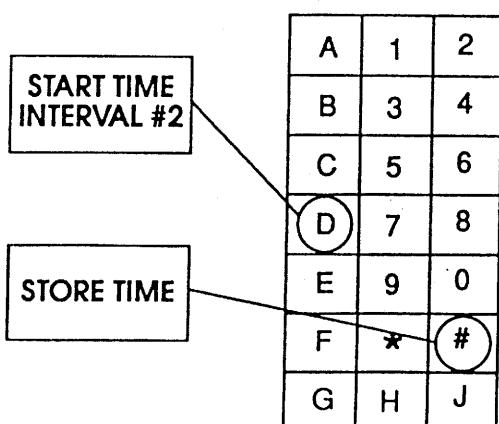
## SETTING INTERVAL #1 STOP TIME

Press selection button "C". The message center will display the current discount setting stop time in military format (Example: 0730). Enter the time you want the first discount period to stop. Each digit will be displayed as it is entered. Enter key "#" on the front panel key pad to store the entry in the controller's memory.



## SETTING INTERVAL #2 START TIME

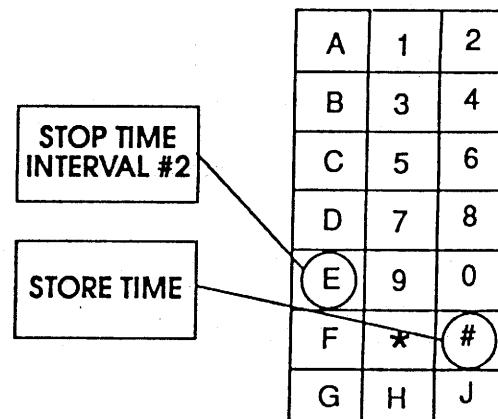
Press selection button "D". The message center will display the current discount setting start time in military format (Example: 1100). Enter the time you want the second discount period to start. Each digit will be displayed as it is entered. Enter all four digits of the time.



Press key "#" on the front panel key pad to store the entry in the controller's memory.

## SETTING INTERVAL #2 STOP TIME

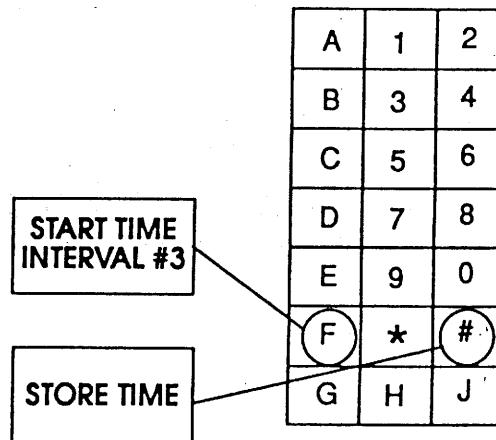
Press selection button "E". The message center will display the current discount setting stop time in military format (Example: 1130). Enter the time you want the second discount period to stop. Each digit will be displayed as it is entered. Enter all four digits of the time.



Press key "#" on the front panel key pad to store the entry in the controller's memory.

## SETTING INTERVAL #3 START TIME

Press selection button "F". The message center will display the current discount setting start time in military format (Example: 1400). Enter the time you want the third discount period to start. Each digit will be displayed as it is entered. Enter all four digits of the time.



Press key "#" on the front panel key pad to store the entry in the controller's memory.

# CONTROLLER FUNCTIONS CONTINUED

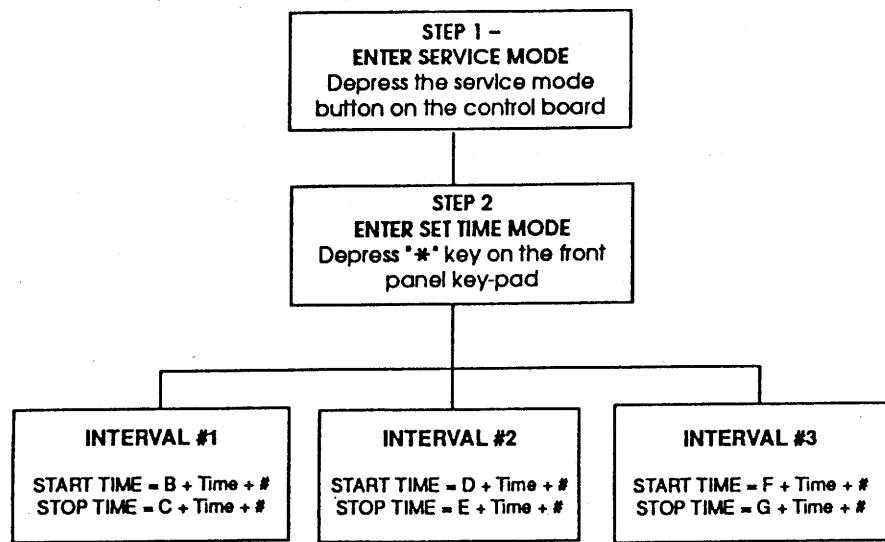
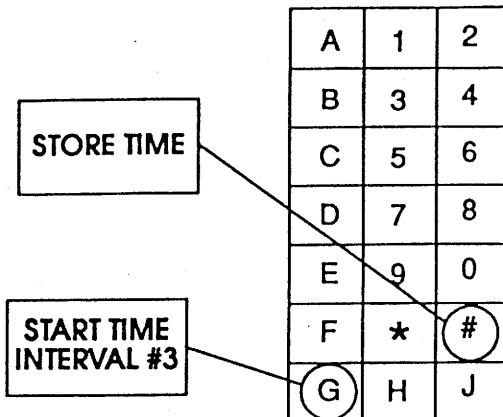
## SETTING INTERVAL #3 STOP TIME

Press selection button "G". The message center will display the current discount setting stop time in military format (Example: 1415). Enter the time you want the third discount period to stop. Each digit will be displayed as it is entered. Enter all four digits of the time.

Press key "#" on the front panel key pad to store the entry in the controller's memory.

The following flow chart will indicate the basic steps and key inputs required for establishing the "Start" and "Stop" times for the three time intervals necessary for the discount feature:

**NOTE:** The "#" key **MUST** be depressed after each time setting or the next entry may alter the previous entry.



# CONTROLLER FUNCTIONS CONTINUED

## HOW TO SET DISCOUNT "ON/OFF"

The controller provides the option for you to set the discount program "ON" or "OFF" as desired. When the discount program is activated, the vend prices of selected items will be reduced by the amount previously determined during the time intervals that have been programmed. When the "Discount" is in effect, the message center will display "DISCOUNT AVAILABLE NOW" in a scrolling format.

To program the "ON" and "OFF" options of the discount functions the controller **MUST** be put in "Service Mode" by depressing the button located on the control board. (See Service Mode Section)

Follow the steps below for programming:

1. Enter the "Service Mode". Depress Service Mode button. (See Service Mode Section)
2. Enter the "Discount Mode". Depress key "#". and the message center will display "DISCOUNT MODE".
3. Depress key "A". The "Discount Mode" will be toggled "ON" or "OFF" each time entered.

DISCOUNT TOGGLS "ON" & "OFF"	A	1	2
	B	3	4
	C	5	6
	D	7	8
	E	9	0
	F	*	#
	G	H	J

4. Depress "#" key to store the input in the controller's memory.

## HOW TO SET DISCOUNT AMOUNT

When utilizing the "Discount" feature the amount must be programmed into the controller. When the "Discount" is in effect, the message center will display "DISCOUNT AVAILABLE NOW" and the original vend price will be reduced by this amount each time a vend is made.

To program the amount the items will be discounted the controller must be put in "Service Mode" by depressing the Service Mode button

located on the control board. (See Service Mode Section)

Follow the steps below for programming:

1. Enter the "Service Mode". Depress Service Mode button. (See Service Mode Section)
2. Enter the "Discount Mode". Depress key "#".
3. Depress key "B". The message center will display the current discount amount.

DISCOUNT AMOUNT	A	1	2
	B	3	4
	C	5	6
	D	7	8
	E	9	0
	F	*	#
	G	H	J

4. Enter the discount amount. Each digit is displayed as it is entered.

**EXAMPLE:** If you want to discount the items 25¢, enter 2 and 5. The message center will display \$00.25.

5. Depress key "#" to store the input in the controller's memory.

**NOTE:** Exit the "Discount Mode" by depressing the "Service Mode" button on the control board (See Service Mode Section). If no other service related function is required, or introduce a new service command.

## HOW TO SET THE DISCOUNT ROW

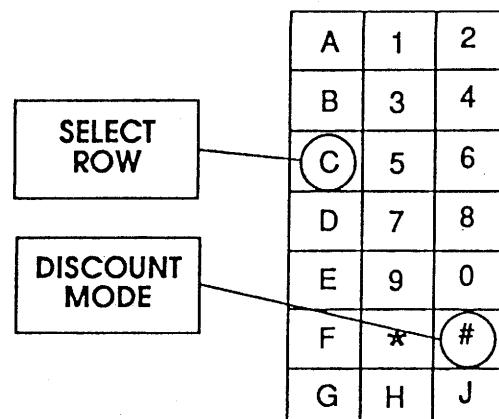
When utilizing the "Discount Options" the items that will be discounted must be programmed into the controller. During the discount "ON" periods all items in the row selected (and all rows following) will be discounted during the time intervals that have been selected. When the discount is in effect, "DISCOUNT AVAILABLE NOW" will be displayed. When an item included in the discount is selected, the vend price will be reduced by the amount programmed. During the discount periods, the discount vend price can be verified by depressing the specific selection number. The discounted vend price will appear in the display.

# CONTROLLER FUNCTIONS CONTINUED

## HOW TO SET SELECT ROW OPTION

1. Place the controller in the "Service Mode" by depressing the Service Mode button located on the control board. (See Service Mode Section)
2. Depress key "#" on the front panel key pad. "DISCOUNT MODE" will appear in the display.
3. Depress key "C" on the front panel key pad. "SELECT ROW" will appear in the display.
4. Enter the "Alpha" character of the row the discount is to apply to. The row selected and all rows below the one selected will be included in the discount programs.

**EXAMPLE:** Press selection button "F". Rows "F", "G", "H" and "J" will be discounted.



5. Depress key "#" located on the front panel key pad to store the input into the controller's memory.

**NOTE:** Exit the "Discount Mode" by depressing the "Service Mode" button on the control board. (See Service Mode Section). If no other service related function is required a new service, or introduce a new service command.

## **LOADING "CANDY & SNACK" COMPARTMENTS**

When loading, lift and pull forward on the drawer until it contacts the drawer stop. The snack drawers tilt downward for ease of loading.

When loading the products, load front to back making sure all items fit freely between the spirals. Do not attempt to force oversize items into the spaces. All spaces forward MUST have a product in them; do not skip a space. The bottom of the item should be placed on the bottom of the compartment above the product auger, with the label facing the front of the machine easily identifiable by the customer.

## COIN MECHANISM REMOVAL

To remove the coin mechanism follow the steps outlined below: (See ILLUSTRATION #6)

1. Turn the power switch off, on the transformer cover.
2. Disconnect the coin mechanism plug.

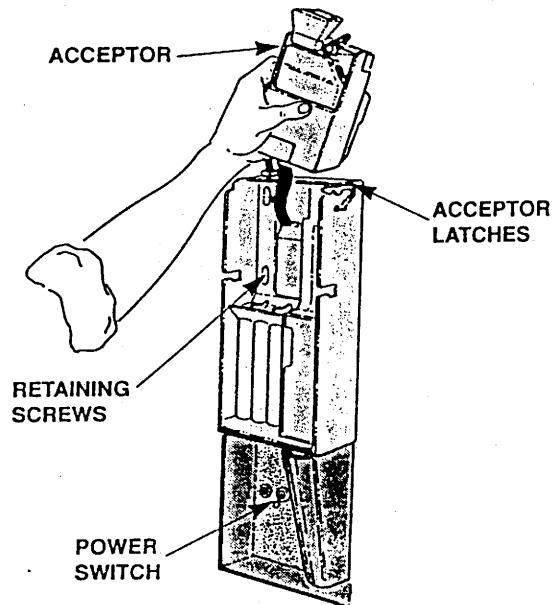


ILLUSTRATION #6

3. Release the acceptor latches.
4. Tilt the acceptor toward you, raise up, and lift out.
5. Loosen the retaining screw. Raise up on the coin mechanism to clear the key holes, tilt forward and lift out.
6. To reinstall reverse procedures.

## TRANSFORMER REMOVAL

To remove the transformer follow the steps outlined below: (See ILLUSTRATION #7)

1. Turn the power switch off.
2. Disconnect the power cord from the wall outlet.
3. Remove the screws mounting the coin chute (these screws also mount the transformer cover).

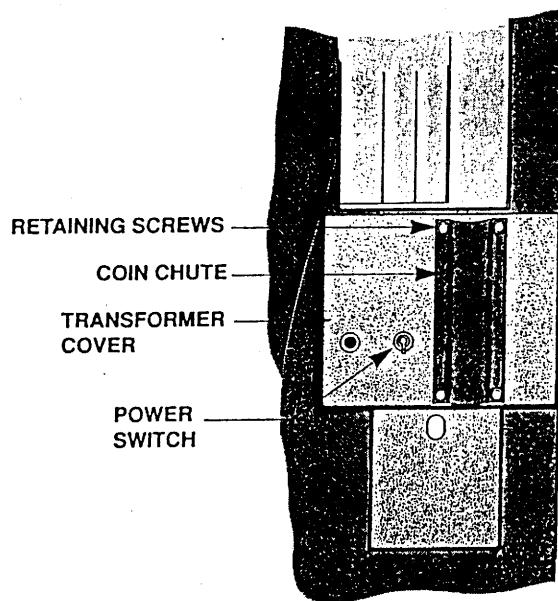


ILLUSTRATION #7

4. Remove the screws and nuts holding the transformer in place.
5. Unplug both primary and secondary plugs of the transformer.
6. To reinstall reverse procedures.

# OPTIONAL ITEMS

## VALIDATORS

The following validators are now available:

MAKA Model NB-14C P/N 4200892

MARS Model VFM3-L1-U2C P/N 8620725

To install the validator, follow the steps outlined below: (See ILLUSTRATIONS 8, 9, 10)

1. Loosen nuts on the validator bezel and remove the filler plate.
2. Reinstall the validator bezel.
3. Mount validator to validator bezel as shown.
4. Connect validator harness to appropriate plugs on the validator as shown.

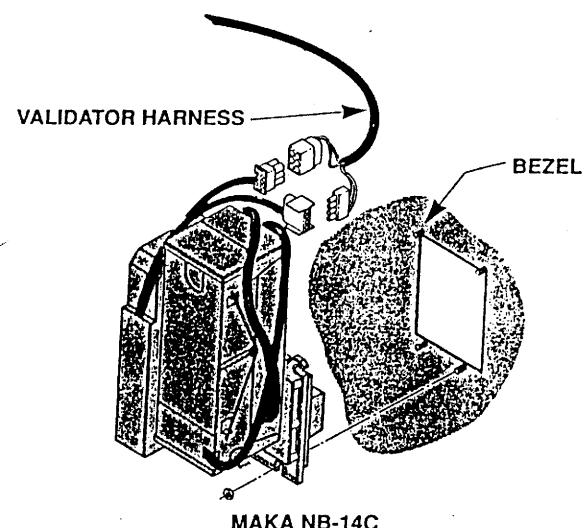


ILLUSTRATION #8

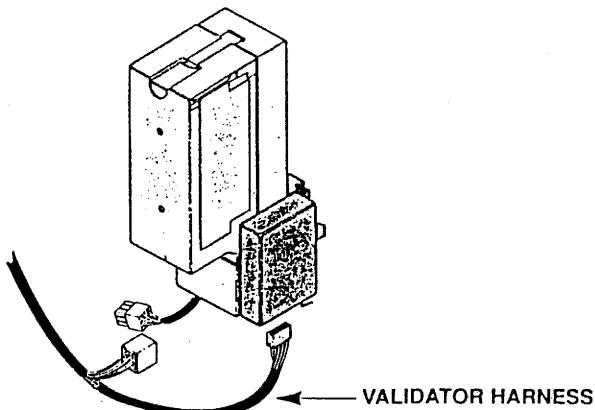


ILLUSTRATION #9

5. Connect the other end of the validator harness to the circuit board and the power harness located above the circuit board as shown.

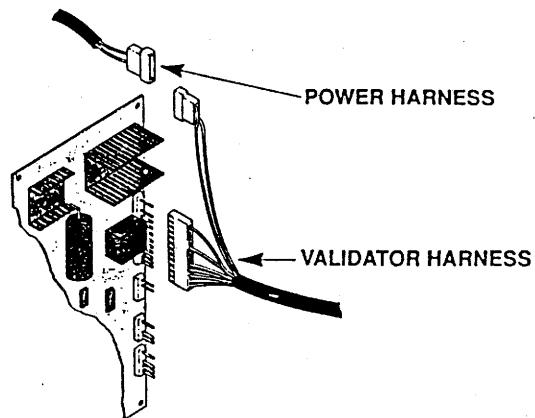
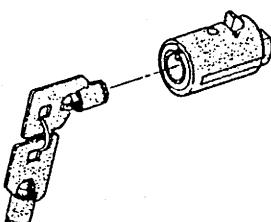


ILLUSTRATION #10

LOCK CYLINDER & 2 KEYS  
P/N 4060330



COIN BOX LOCK & 2 KEYS  
P/N 4060366

