SERVICE MANUAL
SNACKMART II

SNACKS

PUSH
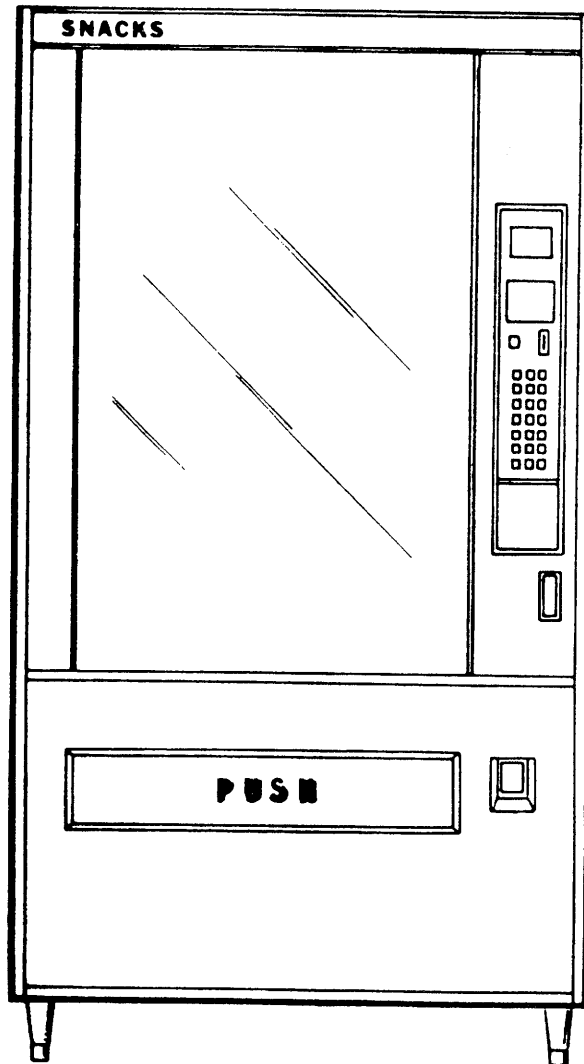
Model No.

2097,	2098,	2099
5 Wide	4 Wide	3 Wide

INTRODUCTION:

The Snackmart II represents the "new era" in the vending industry of today. All of the machine functions are managed by a "Controller", located on the sliding panel behind the selector assembly. The controller board operates much like a computer. It controls the normal vend functions along with retaining valuable machine information for the Service Personnel.

The control board allows the selections to be priced seperately and at various amounts, ranging from 5¢ to $12.75 in 5¢ increments. The Controller program also allows for the option of adding a "Bill Validator".

The vending sequence of the Snackmart II is a "first-in", "first-out", eliminating the need for stock rotation. The product drawers features the "Vend The Item You See", therefore a display item is not necessary. Each drawer may be pulled forward and tipped for ease of loading and cleaning. The drawers are equipped with individual motors and augers for each selection, along with a complete wiring harness for all drawer arrangements and configurations.

The capacity and product size may be varied by adding or reducing motors or by changing auger spacing in each drawer.

This service manual applies to the basic vendors and various models as designated by the Model Code Number. You will find this code number on the Serial Number Plate attached to the rear of the vendor. All correspondence and inquires pertaining to specific machines should reference these numbers. Should you have questions pertaining to this manual or vendor, please contact your local Distributor or Selectivend Service, 165 North 10th Street, Waukee, Ia.

SPECIFICATIONS:

GENERAL		
SERIES 3000	SERIES 4000	SERIES 5000
HEIGHT 72" WIDTH 28" DEPTH 36" WEIGHT 625 LBS	72" 33 1/2" 36" 695 LBS	72" 38 1/2" 36" 845 LBS

POWER REQUIREMENTS: 115 Volts AC, 60 Cycles

TRANSFORMER: 117 Volts AC Primary, 24 Volts AC Secondary

OPERATING AMPS: 1.3 AMP

COIN MECHANISM: Mars MC5010 or Coinco C-300

NOTE: Minimum door entry size 30 inches

OPTIONAL FEATURES:

Gum & Mint Drawer -- Cash Meter -- Exhaust Fan -- Dollar Bill Validator

GENERAL:

At some locations it is not possible
to move a fully assembled machine
through a narrow door opening. The
Snackmart II is designed to be able
to fit through a 30 inch opening.
Follow the procedures below to move
the machine through the small opening.

Item 'A'

Item "A"

FIGURE 1

1. Remove two (2) control panel
    stops located on the control
    panel weld assembly. (See
    Figure 1, Item A)
2. Slide control panel weld
    assembly back into machine
    cabinet.
3. Carefully rotate machine
    through the narrow opening.
4. Re-assemble the control panel
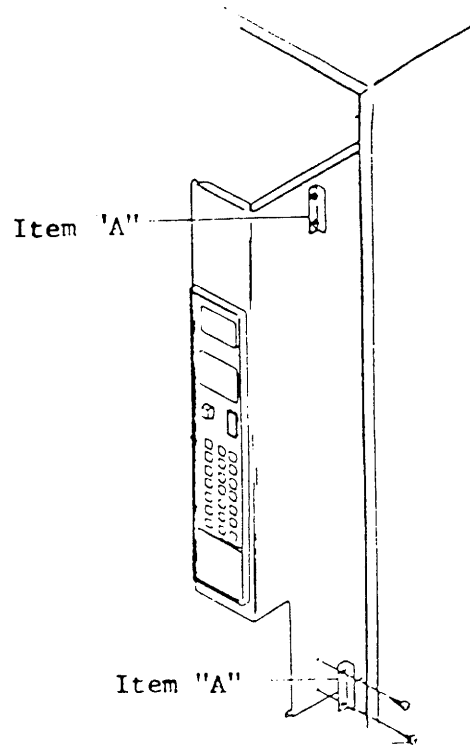   stops before operating the
    machine.

UNPACKING:

Remove all packing material in a manner not to damage the finish or exterior
of the vendor. Remove the "knock-away" supports by inserting a screw driver
and splitting the "knock-away" in two. Turn the leveling screws in as far as
possible.

This machine was thoroughly inspected before leaving the factory and the
carrier has accepted this vendor as their responsibility. Any damage or ir-
regularities should be noted at the time of delivery and immediately reported
to the delivering carrier. Request a written inspection report form from the
Claims Inspector to file any freight claim for damage (FILE CLAIM WITH THE
CARRIER, NOT THE MANUFACTURER) within fifteen (15) days after receipt of the
machine.

INSTALLATION:

LEVELING:

The vendor must be level for proper operation and acceptance of coins
through the coin mechanism.

Position the vendor in it's place of operation. Leave at least four (4)
inches behind the vendor for proper air circulation. Level the vendor
from front to back and side to side, make sure all levelers are touching
the floor.

MAIN POWER CORD:

All electrical equipment must be properly polarized and grounded. This
vendor is wired so that it is properly polarized in accordance with the
electrical code. If the wall outlet is wired and grounded properly, then
the vendor will connect properly.

Shown in Figures 1 & 2 are two properly grounded and polarized wall out-
lets. One is a three wire grounding type wall outlet (See Figure 1) and
one is a two wire wall outlet (See Figure 2) with an adaptor in place. To
make a polarity check, use a volt-ohm meter or a 115 volt neon test light
as shown. The hot side of the circuit should always be counter clockwise
from the grounded terminal with the grounded terminal at the bottom. If
the polarity at the wall outlet shows any other way, than shown in the
figures indicated below, the outlet needs to be rewired.

The power cord is shipped inside of the vendor. Route the cord through
the hole located in the back right side of the vendor by the power box.
Install the locking plate with two screws, through the power cord hole and
tighten screws to hold cord in place

FIGURE 1   FIGURE 2
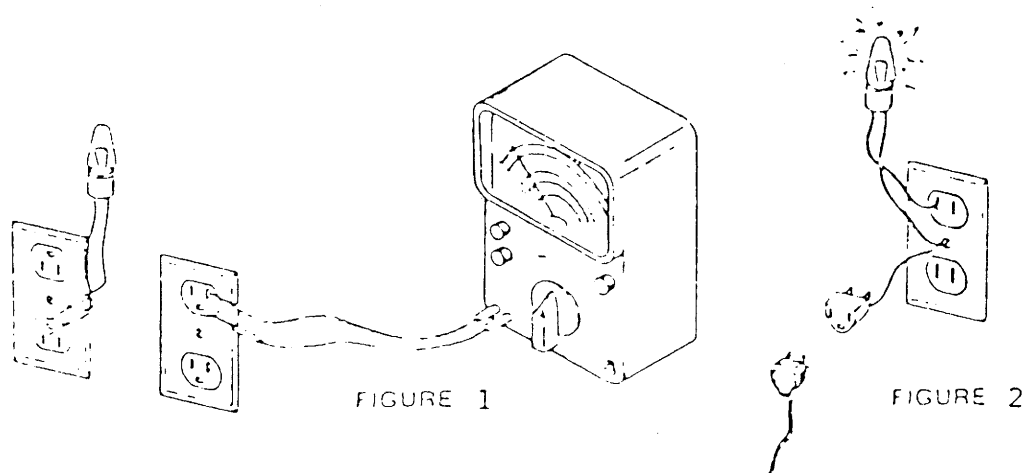
CHANGER:

The changer is to be mounted on the changer mounting studs located on the
sliding panel behind the selector panel. Hang the changer on the studs and
secure studs to hold changer in place. Plug changer into one of the two
receptacles located on the coin entrance chute assembly. The changer plug
with determine which receptacle should be used. Be sure the changer cord is
clear of the coin return lever operation. Load change in the payout tubes an
turn power switch "ON".

LOADING:

All the drawers may be adjusted up and down in one (1) inch increments to
allow for clearance of product between the drawers. Open the main door to
the full open position, lift up on the front of the drawer and pull forward
to the "Stop". The drawer tilts down to make for easier loading. Only one
product drawer should be in the loading position at a time. When returning
a drawer, make sure the drawer returns to the full home or vend position.

SNACK DRAWER:

A snack selection drawer may have a 7, 10, 12, or 15 item auger. The number of items per auger is determined by the spaces (loops) in the auger. In a snack drawer, the bottom of the product should be placed on the top of the spiral wire that rests on the drawer surface.

CANDY DRAWER:

A candy selection drawer may have a 12, 15, 18, 24 or 30 item auger. The number of items per auger is determined by the spaces (loops) in the auger.

> IMPORTANT: Product must not be forced into the spiral spaces. All product should fit freely. If the product is too tight, a larger spaced or pitched spiral should be used. The width of the product must be greater than the diameter of the snack spiral. If the product is smaller, it may fall through the spiral when the product is in the front vend position.
>
> Soft products such as pastry, pies, etc., should be loaded in the lowest snack drawer, making the drop distance as short as possible.

GUM & MINT DRAWER:

The gum and mint drawer is an optional feature in the Snackmart II. The gum and mint drawer will be located below the sixth drawer in the main cabinet. With a seven (7) drawer machine, the gum and mint drawer cannot be added as an option.

To load the gum and mint drawer, push up on the unlatching rod, pull out on the drawer to the stop. Pull forward and up on the top cover plate to the gum and mint drawer. The cover plate is held in place by pins in key slots through the cover sides.

COMPONENTS:

VEND MOTORS:

The Snackmart II incorporates the use of DC motors. Due to the new design, the vend motors may no longer be turned by hand. DO NOT TRY TO RUN MOTORS BY HAND, DAMAGE TO MOTORS WILL RESULT. Any necessary homing of the motors must be done electrically by the controller board.

SELECTION PANEL & CONTROL BOARD:

The selection panel on the Snackmart II incorporates the use of a self enclosed membrane switch panel. This eliminates the need for individual switches and wiring. The membrane switch panel is housed in a casted panel with individual buttons protecting the switch face. The selector panel also houses the (optional) bill validator, digital LED credit display and the instruction panel.

COIN RETURN:

The coin return button located on the sliding panel in the selector casting and coin return linkage located above the changer, scavenges or clears the slug rejector. Actuation or operation of the coin return button will clear the rejector of any damaged coins. Coins will be channeled through the coin changer to the coin return chute to the coin return cup located in the lower section of the sliding panel.

DOLLAR BILL VALIDATOR:

The option of a dollar bill validator adds another dimension to the capabilities of the Snackmart II. The Snackmart II is capable of using a upstack type dollar bill validator. The dollar bill validator will mount in the sliding panel above the selection buttons.

LED CREDIT DISPLAY:

The LED credit display is located in the selector casting above the selection buttons. The feature in the LED credit display are:

USE EXACT CHANGE   PRICE
CREDIT   130 DIGIT MESSAGE CENTER
MAKE ANOTHER SELECTION

The LED credit display is operated according to the following sequence:

1. If a selection is made and adequate credit has been established, then the display is cleared and the vend operation is completed.
2. If a selection is made and there is insufficient credit, then "PRICE" is flashed, along with the vend price for that selection.
3. The "MAKE OTHER SELECTION" will appear in the LED credit display if a faulty vend condition exists.
4. If credit is established and no selection is made, then the LED display will indicate "CREDIT" and the amount deposited will be displayed.
5. At the end of a vend cycle or after pressing coin return, the display will indicate "CREDIT" and 0.00.
6. "USE EXACT CHANGE" will appear if the changer payout tubes are empty.

LIGHTING SYSTEM:

There is only one fluorescent lamp in the Snackmart II. The lamp is located in the top of the door, and lights the main product area. The ballast is located on the lamp mounting bracket on the left side when facing the lamp. The starter is located on the hinge side door mounted to the light bracket.

GUM & MINT DRAWER:

The optional gum and mint drawer will be located below the sixth drawer in the main cabinet, which contains 3 or 5 individual columns, depending on the model of the vendor. The motor mounting, located below the gum & mint drawer, contains the individual vend motors, one for each column. Each motor has a switch mounted to it, a vend cam and pusher.

MAIN PRODUCT SHELVES:

There are six (6) or seven (7) main product shelves per machine. Each containing various selections, depending on model configuration. Each selection has it's own vend motor and motor switch mounted to the back of the shelf. Every shelf has it's own wiring harness and plug for connecting to the remainder of the circuit through the cabinet, located in the rear right of the cabinet. The motors and switches are the same on all shelves. It is now possible to change selection configuration in each shelf by adding or removing motors and augers.

> NOTE: When changing configuration of shelves, you will have to re-program the machine for price and selection.

REMOVAL OF PRODUCT DRAWER:

1. Lift up and pull drawer out to loading position.
2. Grasp drawer on sides at center, lift up and pull drawer forward and out of cabinet.

INSTALLATION OF PRODUCT DRAWER:

1. Place drawer rollers into drawer guides.
2. Lift up to clear stop, push drawer into cabinet.
3. When front rollers contact stops, lift drawer and continue to push drawer toward back of cabinet to vend position.

DELIVERY BOX:

This is located below the display window on the door and is mechanically operated. The linkage on the outside ends of the delivery bins may require occasional lubrication, should the door become difficult to open.

REMOVAL OF DELIVERY BOX:

To remove delivery box from the door assembly there are four (4) bolts and nuts, (two on each side of the box) that must be removed to allow the delivery box to be taken off the door.

CONTROL BOARD AND FUNCTIONS:

The control board is located behind the Selector Buttons on the sliding control panel. Located on the control board are the nickel, dime and quarter inventory (pay-out) switches (for MARS coinage only). Also located on the control board is the "SERVICE MODE SWITCH." (See Figure 4)

SALES MODE:

The Sales Mode is the primary operational mode for the Snackmart II. Entering or invoking any other routine or feature, always results in an "Escape to the Sales Mode" with no additional input from the machine operator. IF NO SERVICE RELEATED OPERATION HAS BEEN INPUTED INTO THE VENDOR, THE VENDOR WILL ESCAPE TO THE SALES MODE IN 25 SECONDS.

25¢ PAYOUT   SERVICE MODE
10¢ PAYOUT   SWITCH
5¢ PAYOUT

FIGURE 4

CONTROLLER BOARD

SERVICE MODE:

The "Service Mode" is to be entered by depressing the "SERVICE MODE SWITCH" located on the control board. The service mode automatically reverts to the "Sales Mode" if no service operation has occurred for approximately 25 seconds. When operated in the "Service Mode", several buttons on the front panel selector will have more than one definition as outlined under the "SERVICE MODE KEY FUNCTIONS". To enter the Service Mode, actuate or depress the "Service Mode Switch" on the controller board. Upon actuating or depressing the service switch, the "LED" display will provide a read-out of faulty or jammed motor locations. Motor locations will alternate in the "LED" for 25 seconds unless interrupted by another function.

SERVICE MODE KEY FUNCTIONS:

BUTTON NUMBER 1 = "ESCAPE TO SERVICE MODE"
This mode must be entered into after depressing the "Service Mode Switch". This mode is a "clearing" or "waiting" mode for additional input from the operator.

BUTTON NUMBER 2 = "NUMBER OF MOTORS"
This mode will indicate how many motors are in the vend circuit.

BUTTON NUMBER 3 = "FORCE VEND ON"
The "Force Vend On" mode, when used, will eliminate the escrow circuit. When money is deposited, a purchase must be made in the vendor before any money will be returned.

BUTTON NUMBER 4 = "FORCE VEND OFF"
This mode will remove the "Force Vend On" mode from the controller and allow "coin return" or escrow at anytime before vend.
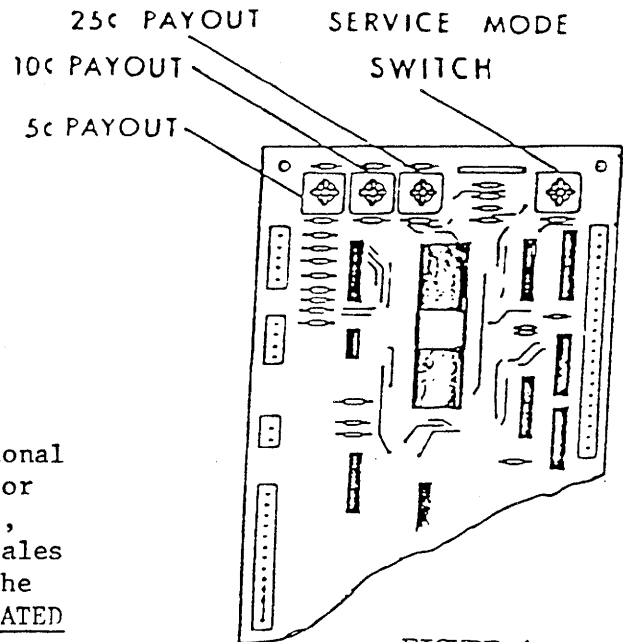
BUTTON NUMBER 5 = "COPY PRICE MODE"
    This mode may be used whene there is more than one
    selection to be vended at the same price. See "COPY
    PRICE MODE - PRICE SETTING".

BUTTON NUMBER 7 = "DECREMENT PRICE" (Decrease)
    This button is used in price setting to decrease the vend
    price, and it will decrease in 5¢ increments. (See
    Price Setting).

BUTTON NUMBER 8 = "FREE VEND - SINGLE SELECTION"
    This feature in "Service Mode" is for the service man or
    route person. This feature allows the service man or
    route person to test single selections without depositing
    money into the vendor. By depressing a selection (A1,
    C2, etc.) the service man or route person can vend a
    selection to test or check for proper vending. When
    finished with checking or test vending, the service man
    must depress a button for "Escape To Service Mode" to
    remove this feature before attempting to enter another
    mode.

BUTTON NUMBER 9 = "FREE VEND BY ROW"
    This feature allows for the checking or testing of an
    entire row by the service man or route person. After
    depressing button number 9 in "Service Mode" and depressing
    the first selection number of a row. The column will
    vend in sequence, starting with the highest selection
    number and ending with the lowest selection in that row.
    After completing the test and before going to another
    mode you must first depress a button for "Escape to
    Service Mode" to exit this feature.

BUTTON NUMBER 10 = "FREE VEND - ENTIRE MACHINE"
    This feature is for the service man or route person to
    check or test vend every selection in the entire vendor.
    In the "Service Mode" and by depressing button number 10,
    the vendor will start to free vend beginning with the last
    selection and running in sequence backwards through the
    entire machine. To interrupt or stop this feature,
    depress and hold button #1. (Three (3) beeps will sound
    and the sequence will stop.

BUTTON NUMBER 12 = "ESCAPE TO SERVICE MODE"
    This button feature is the same clearing or waiting mode
    as button number 1, 6 and 11 and may be used instead of
    these buttons.

BUTTON NUMBER 13 = "ESCAPE TO SALES MODE"
    This feature is used to place the vendor into the sales
    mode after performing any functions in the Service Mode.

BUTTON NUMBER 14 = "INCREMENT PRICE (Increase)
    This button is used in price setting to increase the
    vend price, and it will increase in 5¢ increments. (See
    Price Setting).

PRICE SETTING INSTRUCTIONS:

Pricing is done through the selection panel in conjunction with the "Service Mode Switch" located on the Controller Board.

1. Depress "Service Mode Switch" on the Controller Board. LED display will light indicating any faulty selections.
2. Depress No. "1" on the Key Pad (Selector Panel).
3. Depress the selection on the key pad to be priced. LED will display the selection number and also the vend price for that selection.
4. "To Increase" selection price depress the No. "14" button on the key pad. Price will increase in 5¢ increments. A single beep will sound for each 5¢ increase. LED will display the selection price. When desired price appears in the display, release the button, the price is set for that selection.
5. "To Decrease" selection price depress the No. "7" button on the key pad. Price will decrease in 5¢ increments. A single beep will sound for each 5¢ decrease. LED will display the selection price. When desired price appears in the display, release the button, the price is set for that selection.
6. Continue setting prices for each selection by repeating steps 2 thru 5 or by using "COPY PRICE MODE" (See Copy Price Mode instructions).
7. After completing "Price Setting" depress button No. "13" to set controller in the "Sales Mode".
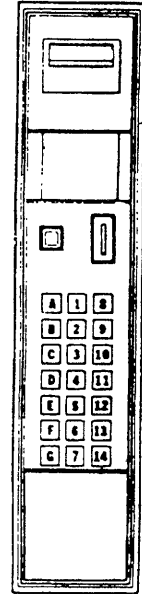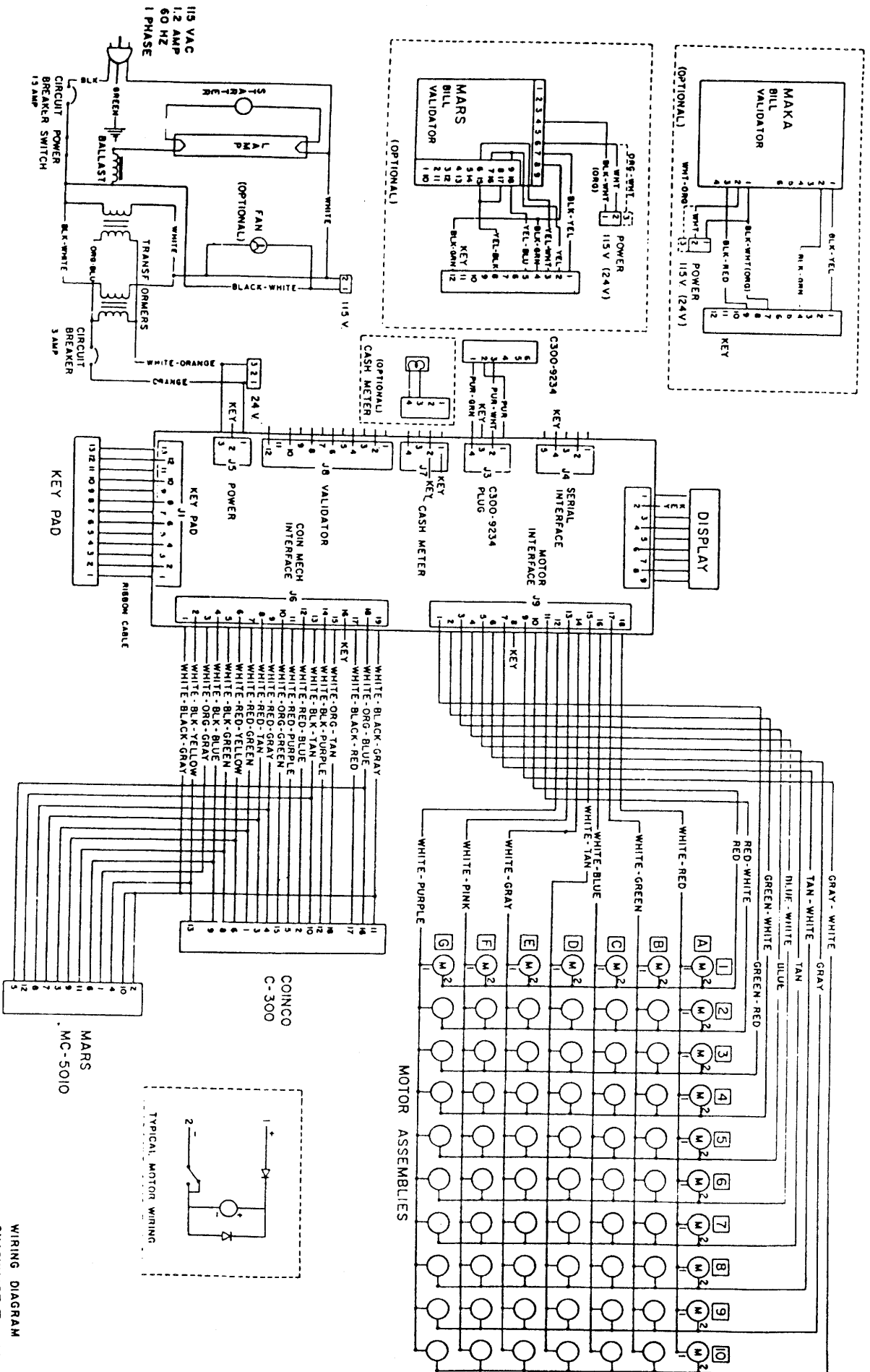
COPY PRICE MODE:

When there is more than one selection to be vended at the same vend price, the "Copy Price Mode" can be used when establishing vend prices.
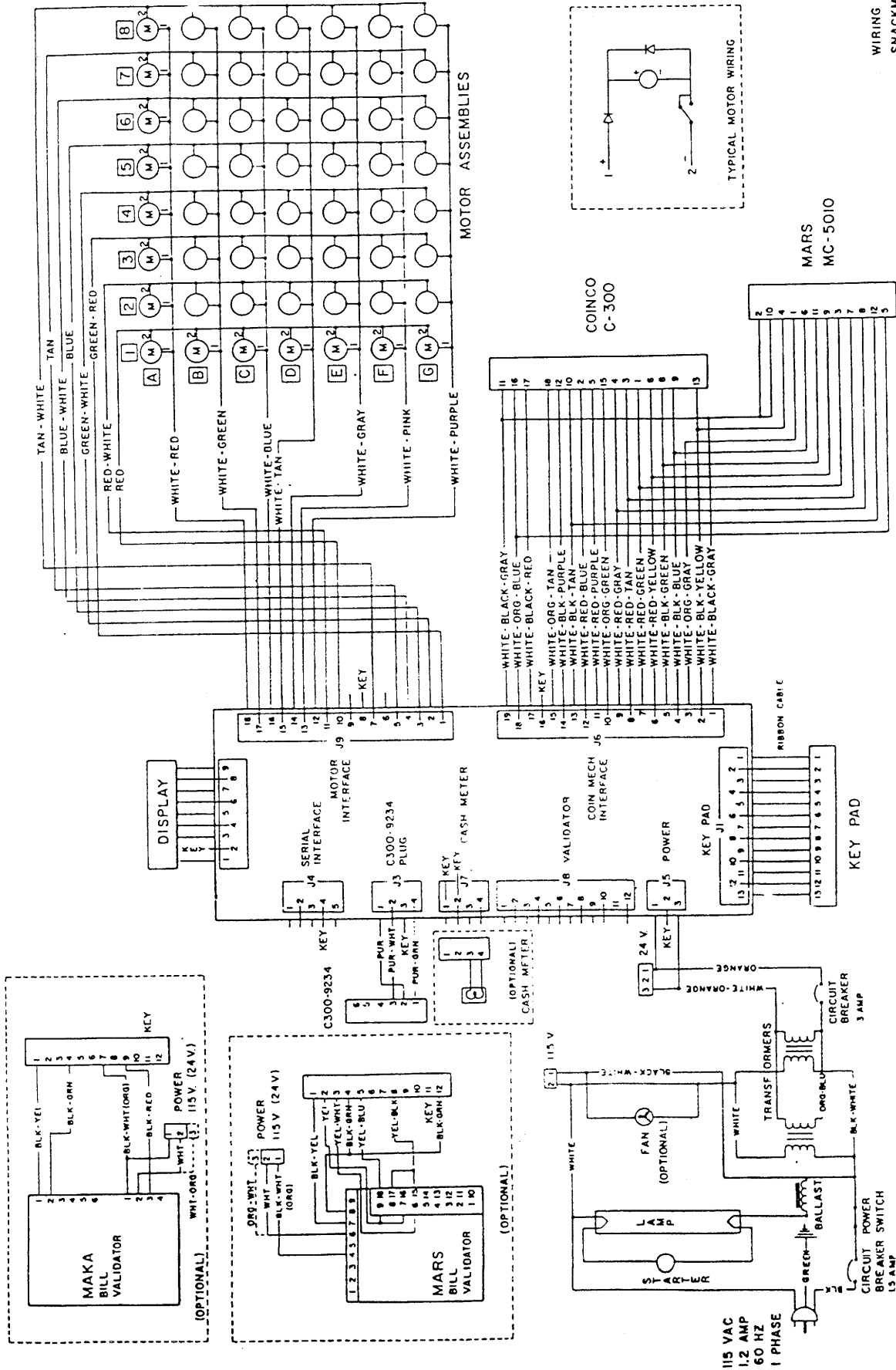
SEQUENCE FOR USING "COPY PRICE MODE":

1. While in the "Service Mode", depress the No. "1" button on the Key Pad (Selector Panel).
2. Depress the selection for the price that is to be copied on the key pad. A single beep will sound to acknowledge the selection and the LED will light showing the selection price.
3. Depress the No. "5" button on the key pad. "A continuous beep will sound and the LED will light showing the selection price".
4. Enter the desired selections to receive the copied price. A single beep will sound acknowledging each selection.
    EXAMPLE: When entering selections you must enter as
          A-1, C-4, D-5, etc.
5. To continue to copy a different price setting, depress No. "1" button on key pad and repeat steps 2 thru 4.

    IMPORTANT: When completed with "PRICE SETTING", depress No. "13" button on the key pad to return to the "Sales Mode". The controller will automatically return to the "Sales Mode" 25 seconds after the last input or depression of the key pad.

115 VAC
1.2 AMP
60 HZ
1 PHASE

CIRCUIT BREAKER POWER SWITCH 13 AMP

BLK
GREEN
BALLAST

STARTER
LAMP

WHITE

FAN (OPTIONAL)

BLK-WHITE
ORG-BLU
TRANSFORMERS

CIRCUIT BREAKER 3 AMP

WHITE-ORANGE
ORANGE

WHITE
BLACK-WHITE
115 V.

POWER 115V (24V)
WHT
BLK-WHT (ORG)

MARS BILL VALIDATOR (OPTIONAL)

BLK-YEL
YEL-WHT
YEL-BLU
YEL-GRN
YEL-BLK
KEY
BLK-BLK
ORN-GRN

MAKA BILL VALIDATOR (OPTIONAL)

BLK-YEL
BLK-GRN
BLK-RED
WHT-ORG
BLK-WHT(ORG)
POWER 115V (24V)
KEY

C300-9234
KEY

(OPTIONAL) CASH METER

PUR-WHT
PUR-GRN
KEY
PUR

C300-9234 PLUG

KEY
SERIAL INTERFACE

MOTOR INTERFACE

KEY PAD
J2 24V
KEY

J5 POWER
KEY

J8 VALIDATOR

J7 CASH METER
KEY

J3

J4

J1
KEY PAD
RIBBON CABLE

COIN MECH INTERFACE

J6

J9
KEY

DISPLAY

WHITE-BLACK-GRAY
WHITE-BLK-YELLOW
WHITE-ORG-GRAY
WHITE-BLK-BLUE
WHITE-BLK-GREEN
WHITE-RED-YELLOW
WHITE-RED-GREEN
WHITE-RED-GRAY
WHITE-RED-BLUE
WHITE-RED-PURPLE
WHITE-RED-TAN
WHITE-RED-BLUE
WHITE-BLK-TAN
WHITE-BLK-PURPLE
WHITE-ORG-GREEN
KEY
WHITE-BLACK-GRAY
WHITE-ORG-TAN
WHITE-ORG-BLUE
WHITE-BLACK-RED

COINCO C-300
MARS MC-5010

WHITE-PURPLE
WHITE-PINK
WHITE-GRAY
WHITE-TAN
WHITE-BLUE
WHITE-GREEN
WHITE-RED
RED-WHITE
RED
GREEN-RED
GREEN-WHITE
BLUE
BLUE-WHITE
TAN
TAN-WHITE
GRAY
GRAY-WHITE

MOTOR ASSEMBLIES

G F E D C B A

1 2 3 4 5 6 7 8 9 10

TYPICAL MOTOR WIRING

WIRING DIAGRAM
SNACKMART II MOD. NO 2097
DWG. NO 20844-000 R.I

WIRING DIAGRAM
SNACKMART II MOD. NO 2098
DWG. NO 20844-001 R.I

WIRING DIAGRAM
SNACKMART II MOD. NO 2099
DWG. NO 20844-002 R-1