PROGRAMMING (CONTINUED)

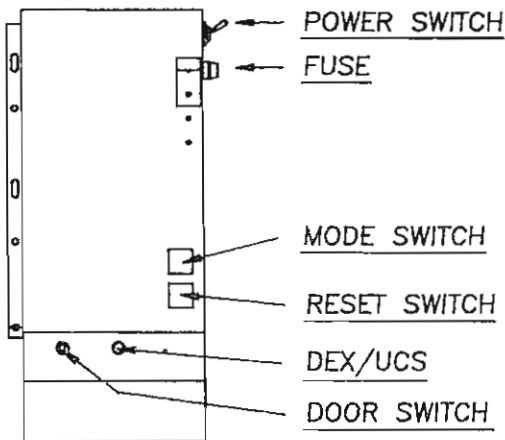**Important - - READ CAREFULLY BEFORE PROCEEDING**
To program, it is necessary to press the selection buttons, mode switch and door switch in the indicated sequence.
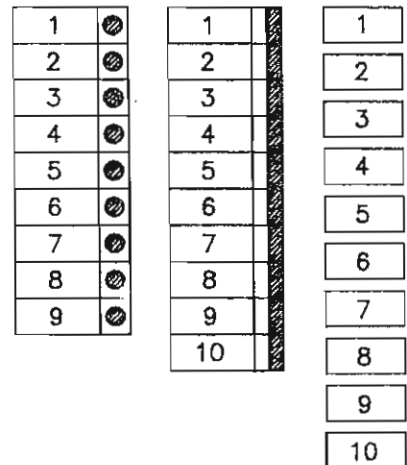
The MODE SWITCH will be indicated by **M**

The DOOR SWITCH will be indicated by **D**

The SELECTION BUTTONS will be indicated by **#1,#2, etc.**

CONTROL BOARD

- POWER SWITCH
- FUSE
- MODE SWITCH
- RESET SWITCH
- DEX/UCS
- DOOR SWITCH

SELECTION BUTTON EXAMPLES
UP TO 10 SELECTIONS

1	⊘
2	⊘
3	⊘
4	⊘
5	⊘
6	⊘
7	⊘
8	⊘
9	⊘

1
2
3
4
5
6
7
8
9
10

1
2
3
4
5
6
7
8
9
10

CONTROL BOARD OPERATION INSTRUCTIONS
SEE USER'S MANUAL FOR MORE DETAILED INFORMATION

CONTROL INPUT SUMMARY		
DISPLAY	**CONTROL SEQUENCE**	**MODE / RESPONSE**
.00		Ready to vend
XX, XXXX	OPEN DOOR	Historical total vends
XX, XX, ...	#1, #2, ...	Number of vends per selection #1, #2, ...
XX, XX_XX	[#1, #2]	Historical cash
CPO	M	Operate pay-out tubes
	#1	$.05
	#2	$.10
	#3	$.25

dEL
CO1, CO2, ...
C14,   C13, ...
	M, M
	#1
	#2
	#3, #4, ...
		Test vend mode
		    Increase column number to be tested
		    Decrease column number to be tested
		    Vend selected column

SPr
XXXX
⌄XX5,   XX10, ...
  ⟨95,   XX90, ...
	M, M, M
	#1, #2, ...
		Set price mode
		    Press #xx once & hold = current price
		    Press 2nd time & hold = price increase
		    Press 3rd time & hold = price decrease

SOP
1
2
3
	M, M, M, M
	#1
	#1
	#1
		Set option mode - cash handling
		    Force vend
		    Change machine
		    Neutral (do not use w/ high-level DBV)

SOP
1
2
	M, M, M, M
	#2
	#2
		Set option mode - multi/regular vend
		    – Regular vend –
		    Multi-vend_

SOP
 	
1
2
	M, M, M, M
	
	#3
	#3
		Set option mode - display lower-case "o" to indicate jammed columns
		    On
		    Off

SOP
1
2
	M, M, M, M
	#4
	#4
		Set option mode
		    Dumb mech
		    Single-price mech

SSS CO1, CO2, ...	M, M, M, M, M, D #XX, #XX, ...	Set space-to-sales mode
dSS 1, #XX, CO2, #XX, ...	M, M, M, M, M, M, D	Display space-to-sales mode
J XX, J XX, ...	OPEN DOOR	Jammed column
	R	Resets number of vends per selection to 0

A. CUSTOMER INTERFACE

To enter this mode, the machine should be in stand-by mode.

BEFORE CREDIT IS ESTABLISHED:

ACTION		CONDITION
Press any Selection	Price will be displayed	There is vendable product in column
	LED will light: "Try another Selection"	Sold-out or jammed displayed

AFTER CREDIT IS ESTABLISHED:

After credit is established	Credit amount is displayed
Press any selection button	
If "try another selection" LED is flashing	Column is sold out or defective
If "use correct change" LED is flashing	Cannot make change--use correct change
If "Try another selection" LED remains illuminated	All columns are sold out

HISTORICAL TOTAL VENDS DISPLAYED:

To enter this mode, open the outer and inner doors to gain access to the control board. This action automatically actuates the door switch.

ACTION	CONDITION
When the door is opened, if no columns are jammed	Display will show the historical total vends
If a column is jammed, pressing selection buttons [#1 & #2] together	Bypasses the jammed column displayed and displays historical vends
Press selection button #1 one time	Display will show total vends for #1 selection
Press selection button #2 one time	Display will show total vends for #2 selection
Continue to press desired selection buttons; display will show total vends for each selection	

JAMMED COLUMN:

ACTION	CONDITION
Open the outer and inner door if column is jammed	Display will show J N N. "N N" indicates the column number that is jammed. J01, J02 for columns #1 and #2, etc.
Note: If a motor controls two columns, both columns will have to be test vended	

A. CUSTOMER INTERFACE (CONTINUED)

The resettable register will store at least four digits, and will accumulate up to 9999 before rolling over to 0000. The last four digits will be displayed. The resettable feature is engaged by the selection of a reset button, located on the control board. The total-vend register is not resettable. DEX download will also cause registers to reset to "0000."

CAUTION: To control inventory, a reading should be taken either during or before loading each column, and prior to pressing the reset switch or DEX download. If a reading is not taken, depressing the reset switch will zero out all of the registers attached to it, including the product vended by selection.

NOTE: If no selection buttons are pressed for fifteen seconds, the control will return to the stand-by mode.

HISTORICAL CASH MODE:

To enter historical-cash mode, open the outer and inner doors to gain access to the control board. This action automatically actuates the door switch.

SELECTION BUTTONS	ACTION
Press selection buttons [#1 & #2] at the same time	Display will scroll the historical cash numbers, which are displayed in two increments
Increment #1	Shows four digits for value, with no decimal point
Increment #2	Shows the last two digits of the dollars, a decimal point, and the cent value
Example: $125.35 = Value of vends	
Increment #1	Displays as _ _ _ 1
Increment #2	Displays as 2 5 . 3 5
Display will alternate between high and low	

NOTE: If no selections are pressed within 15 seconds, the control will return to stand-by.

To leave the customer interface mode, press the mode switch one time, or close the inner and outer doors and wait 15 seconds.

B. CASH PAYOUT MODE

To enter payout mode, open the outer and inner door to gain access to the control board. This action automatically actuates the door switch.

TO OPERATE PAY-OUT TUBES:

ACTION	CONDITION
MULTI-PRICE	
Press mode switch M one time	Display will show C P O
Press selection button #1	Dispenses $.05
Press selection button #2	Dispenses $.10
Press selection button #3	Dispenses $.25
Press selection button #4	Dispenses $1.00 (if the changer has this option)
NOTE: Single-price changers cannot be used in this mode.	

To leave the cash payout mode, press the mode switch one time, or close the inner and outer doors and wait 15 seconds.

C. TEST-VEND MODE

To enter this mode and allow test vends, open the outer and inner doors to gain access to the control board. This action will automatically actuate the door switch. Use selection buttons #1 and #2 to increase or decrease the column number.

ACTION	CONDITION
Press the mode switch in the following sequence: M, M	All columns set to test vend display will show del
Press selection button #1	Increases the column number selected by one
Press selection button #2	Decreases the column number selected by one
Press selection button #3 or higher	The selected column will test vend one time
NOTE: During the test-vend mode, the sold-out switch is not observed. Thus, a column that is sold out will operate when selected.	

NOTE--FREE VEND: A zero price for a selection enables that selection to be free vended. If columns are sold out, machine will not vend.

To leave the test-vend mode, press the mode switch one time, or close the inner and outer doors, and wait 15 seconds.

D. SET-PRICE MODE

To enter the set-price mode, open the outer and inner doors to gain access to the control board. This action automatically actuates the door switch.

ACTION	CONDITION
Press the mode switch in the following sequence: M, M, M	Display will show Spr
Press any selection button once	Price will be displayed
Depress the same selection button a second time and hold it until the desired price is shown	Display will show an increase in price in $.05 increments
Depress the same selection button a third time and hold it until the desired price is shown	Display will show a decrease in price in $.05 increments
By continuing to depress and release the selection button, the price will increase or decrease in $.05 increments, until the desired price is shown	

To exit the set price mode, press the mode switch one time or close the inner and outer doors or wait 15 seconds.

E. SERVICE MODE

To enter service mode, open the outer and inner door to gain access to the control board. This action automatically actuates the door switch.

SET-OPTION MODE--CASH HANDLING:

Definition of cash-handling numbers 01, 02, & 03:

If 01 is displayed	Force Vend	If a dollar is accepted, customer must make a vend
If 02 is displayed	Change Machine	If a dollar is accepted and stacked, pushing the scavenger lever will return four quarters
If 03 is displayed	Neutral	Do not use this option with a high-level DBV.* With a low-level DBV interface, the bill is held in escrow.
NOTE: When single-price coinage is being used, cash handling must be set at force vend		

*WARNING: The vendor will not operate with a high-level DBV in the neutral (03) setting. This configuration will cause all functions to shut down.

To set cash handling for force vend, change machine or neutral settings:

ACTION	CONDITION
Press the mode switch in the following sequence: M, M, M, M	Display will show S O P
Press #1 selection button one time	Display will show one of three numbers: 01, 02, or 03
Press #1 selection button again	Display will show the next number
Continue to press selection button #1. The numbers 01, 02, & 03 will repeat in sequence until the desired setting is reached.	

To leave the cash-handling mode, depress the mode switch once, close the outer and inner doors, and wait 15 seconds.

E. SERVICE MODE (CONTINUED)

To enter service mode, open the outer and inner door to gain access to the control board. This action automatically actuates the door switch.

SET-OPTION MODE--DUMB MECH / SINGLE-PRICE MECH:

Definition of dumb mech / single-price mech--coin-option numbers 01 & 02:

If display is 01	Dumb changer
If display is 02	Single-price changer
NOTE: Single-price changer will set all prices equal to selection #1	

To set dumb mech / single-price mech settings:

ACTION	CONDITION
Press the mode switch in the following sequence: M, M, M, M	Display will show S O P
Press #4 selection button one time	Display will show one of two numbers: 01 or 02
Press #4 selection button again	Display will show the next number
Continue to press selection button #4. The numbers 01 & 02 will repeat in sequence until the desired setting is reached.	

To leave the option mode--dumb mech / single-price mech, depress the mode switch once, close the outer and inner doors, and wait 15 seconds.

E. SERVICE MODE (CONTINUED)

To enter service mode, open the outer and inner door to gain access to the control board. This action automatically actuates the door switch.

SET-OPTION MODE--MULTI-VEND / REGULAR VEND:
Definition of multi-vend / regular vend-option numbers 01 & 02:

If 02 is displayed	Multi-vend	Change due is held and displayed to allow additional purchases. Can be returned by pressing the scavenger lever, or by waiting 5 to 10 seconds
If 01 is displayed	Regular vend	Change is paid out immediately after selection has started

To set multi-vend / regular-vend settings:

ACTION	CONDITION
Press the mode switch in the following sequence: M, M, M, M	Display will show S O P
Press #2 selection button one time	Display will show one of two numbers: 01 or 02
Press #2 selection button again	Display will show the next number
Continue to press selection button #2. The numbers 01 & 02 will repeat in sequence until the desired setting is reached.	

To leave the option mode--multi-vend / regular vend, depress the mode switch once, close the outer and inner doors, and wait 15 seconds.

SET OPTION MODE--DISPLAY SHOWS A LOWER-CASE (L.C.) o
Definition of display shows lower case o-option numbers 01 & 02:

If 01 is displayed	Setting is enabled--will show L.C. o when at least one selection is sold-out or column is jammed
If 02 is displayed	Setting is disabled--will not show L.C. o when sold-out or jammed

To set display lower-case o settings:

ACTION	CONDITION
Press the mode switch in the following sequence: M, M, M, M	Display will show S O P
Press #3 selection button one time	Display will show one of two numbers: 01 or 02
Press #3 selection button again	Display will show the next number
Continue to press selection button #3. The numbers 01 & 02 will repeat in sequence until the desired setting is reached.	

To exit the service mode, press the mode switch one time, or close the inner and outer doors and wait 15 seconds.

F. SET SPACE-TO-SALES MODE (STS)

WARNING: Exiting the space-to-sales programming mode, before programming has been completed, will cause the controller to shut down. Once the programming has been started, you must continue through the last column/selection. If the controller shuts down, it will not operate until the space-to-sales settings have been reprogrammed.

To enter space-to-sales mode, open the outer and inner doors to access the control board. This action automatically actuates the door switch.

ACTION	CONDITION
Press the mode switch five times (M, M, M, M, M)	Display will show S S S
Press the door switch one time (D)	Display will show CO1 and start to scroll
To assign column #1 to a selection button, depress that selection. More than one button can be assigned to the same column.	Display will show C01.
10 SECONDS LATER: To assign column #2 to a selection button, depress that selection.	Display will show C02, which means column #2 is ready to program.
Display will sequence through columns (C01, C02, etc.) at 10-second intervals. Continue to assign columns to selection buttons until all columns have been programmed.	
A column may be skipped by waiting for 10 seconds, or by pressing the mode switch (M) when the corresponding column number is displayed.	
A column may or may not be assigned to a selection button. Any column not assigned to a button should be removed from all future logic checks and functioning.	
NOTE: The control will operate with any number of columns removed, however, column #1 must always be assigned in the STS configuration.	

To leave space-to-sales mode, press the mode switch one time, or close the inner and outer doors and wait 15 seconds.

G. DISPLAY SPACE-TO-SALES MODE

ACTION	CONDITION
Depress the mode and door switches in the following sequence: M, M, M, M, M, M	Display will be dSS
Depress the door switch (D)	Display will start to scroll through the space-to-sales settings. Display will show C01, followed by the selection button(s) assigned to that column.
NOTE: There will be a one second pause, and C02 will be displayed. The display will scroll through the columns until all columns have been displayed.	

To leave the display space-to-sales mode, press the mode switch one time or close the inner and outer doors and wait 15 seconds.

Vendo

ELECTRONIC-CONTROL BOARD -- CONNECTOR PIN-OUTS

J1 - POWER IN

1 Chassis Ground
2 24 VAC Neutral
3 24 VAC Hot
4 Key
5 115 VAC Hot
6 Key
7 115 VAC Neutral

J2 -- MOTOR DRIVE

1   Motor Common
2   Key
3   Motor 1-2
4   Motor 3-4
5   Motor 5-6
6   Motor 7-8
7   Motor 9-10
8   Motor 12-13
9   Motor 11
10 Motor 14
11 Motor Right
12 Motor Left
13 Sold-out 2
14 Sold-out 1
15 Door
16 Ground

J4 -- SELECTION SWITCHES

1   Selection One
2   Selection Two
3   Selection Three
4   Selection Four
5   Selection Five
6   Selection Six
7   Key
8   Selection Seven
9   Selection Eight
10 Selection Nine
11 Selection Ten
12 N/C
13 N/C
14 Ground

J8 -- COIN MECHANISM

1   24 VDC Return
2   Key
3   24 VDC hot NF
4   Key
5   Data
6   INT
7   Accept Enable
8   Reset
9   Send
10 VCC (+5 VDC)
11 Ground
12 Dispense $.05
13 Dispense $.10
14 Dispense $.25
15 N/C (Dispense $1.00)
16 Key
17 115 VDC NF
18 115 VDC NF Return

S 28

J7 -- BILL VALIDATOR

1. Escrow High
2. $1 High
3. $2 High
4. $5 High
5. Escrow Enable
6. $1 Enable
7. $2 Enable
8. $5 Enable
9. Credit
10. Key
11. Ground
12. 115 VAC Hot
13. 115 VAC Neutral
14. N/C
15. N/C
16. Enable
17. Enable Return

J9 -- DISPLAY

1. VCC
2. Clock
3. Data
4. Ground

J10 -- DEX/UCS CONNECTOR

1. Ground
2. Key
3. TXD
4. RXD

J12 -- SINGLE-PRICE COIN MECH

1. 24 VDC Return
2. 115 VAC Neutral
3. Exact Change
4. N/C
5. Enable
6. ACD In
7. Ground
8. Key
9. 115 VAC Neutral
10. 115 VAC Hot