

## DISPOSIZIONE DELLE SELEZIONI

## VDI Landscape

SEL.1	SEL.2
SEL.3	SEL.4
SEL.5	SEL.6
SEL.7	SEL.8
SEL.9	SEL.10

## VDI Marketing Landscape

SEL.1	SEL.2	SEL.3
SEL.4	SEL.5	SEL.6
SEL.7	SEL.8	SEL.9

## VDI Marketing door

SEL.1	SEL.2	SEL.3	SEL.4
SEL.5	SEL.6	SEL.7	SEL.8
SEL.9	SEL.10	SEL.11	SEL.12

## VDI D'Door

SEL.1
SEL.2
SEL.3
SEL.4
SEL.5
SEL.6
SEL.7
SEL.8
SEL.9

## NUMERAZIONE COLONNE

10	9	8	7	6	5	4	3	2	1
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**Vendo**PROGRAMMING MANUAL  
MDB / EXECUTIVE SN02 BOARD

## HARDWARE FEATURE

This board called SN02 has all functions inboard.

Power supply : 19 Volt AC 2 A rms / 26 Volt AC NO FILTERED 4 A rms

- 10 Volt AC 1,5 A rms
- 12 motor outputs 24 VDC 1 A
- 10 motor micro-switches
- 10 sold-out micro-switches
- 14 sold-out leds
- 14 selections switches
- 1 Door switch
- 2 Analogics inputs (for temperature control)
- 1 Real time clock

DEX/UCS audit output. Jack plug and TTL signal ( in option RS232 for serial printer or Plug & Go Kit to read-out data or program the machine using chip card).

External slave board (placed near the box transformer) used to control refrigerant system, fluorescent tube and heater kit (optional).

The board uses an 80C552 microcontroller with up to 1024K or program Setting and audit saved on EEPROM

Display 5 digits 7 led segments and decimal point  
In option display fluorescent 2 lines 20 characters (Cyrillic characters available)  
A correct change led indicator

Master and Slave optically isolated serial link for MDB  
EXECUTIVE

## SOFTWARE FEATURE

The SN02 software includes all above functions

- Service Programming routine
- Credit Accumulation
- Coin Mechanism Interface
- Consumer Manipulation and Vend process
- Multi pricing
- Programmable Space to Sales
- Escrow
- Sold-out Indication
- Correct change Indicator
- Manual Payout
- Manual Tubes filling
- Saved Error listing - Audit
- Cooling unit control by electronic

## FUNCTION OF THE SELECTION BUTTON

Selection Nr. 1		Abort or escape a programming point
Selection Nr. 2		Increase or next programming point by pushing selection button <sup>2</sup>
Selection Nr. 3		Decrease or previous programming point by pushing selection button <sup>3</sup>
Selection Nr. 4		Call or store a programming point by pushing selection button <sup>4</sup>
Selection Nr. 5		Price set to zero
Selection Nr. 6		Not used
Selection Nr. 7		Not used

Password 4-2-3-1-4

Entry by selection button

4 = key 4  
2 = key 2  
3 = key 3  
1 = key 1

## SERVICE ROUTINE

In the service mode, information such as sales by selection, total sales, total cash flow through the machine, and diagnostic error codes can be accessed by using the selection buttons and the electronic display. In addition, storage techniques. The service mode can only be entered when the vendor door is open and when the service mode switch is activated (place in the middle of the electronic board).

The first four vendor selection switches are used to step through the various programming functions. To do this each of these selection switches is given a specific function:

Selection Switch 1	HOME	( means Escape, Cancel, Abort )
Selection Switch 2	UP	( means Increase, Next )
Selection Switch 3	DOWN	( means Decrease, Previous )
Selection Switch 4	ENTER	( means OK, Accept, Enter, Save )

After entry into the service mode the operator can select one of several routines to read data registers or to program machine configuration information. This level is called the code level. Each of these paths is identified by a service code. The code for the various paths are as follows.

<b>Error</b>	Error routine
<b>CPO</b>	Coin Payout Routine
<b>tuFL</b>	Tube Fill Routine
<b>TEST</b>	Test Vend Routine
<b>PASS</b>	Required a password to access on the protected menu
<b>CASH</b>	Cash counter routine
<b>SALE</b>	Sales counter routine
<b>PRIC</b>	Prices setting routine
<b>SIS</b>	Spaces to sales setting routine
<b>Con</b>	Machine configuration setting routine
<b>CCOC</b>	Overpay routine
<b>PREU</b>	Preview vend password setting
<b>Lang</b>	Language selection
<b>Time</b>	Time and data routine
<b>Lit</b>	Light control routine
<b>rFRG</b>	Refrigeration control routine
<b>dISC</b>	Discount control routine
<b>SdEP</b>	Vending mechanism depth control
<b>dUDIP</b>	Daily Vend inhibited period
<b>rtn</b>	Return to unprotected menu
<b>rtn</b>	Return to normal mode door open state

Protected menu

The password is the sequence of selection 4-2-3-1. The purpose of this password is to prevent accidental reprogramming by the operator.



## ERROR ROUTINE

If the ENTER button is activated at the "Error" prompt the VMC will enter in the error routine. If no errors have occurred since the last error reset the display will show a "none" message. If an error has been detected since the last error reset the display will show the first summary level error code that has occurred, such as "COLJ", which would indicate a column jam error. Using the UP or DOWN buttons will cycle through the various summary level error. On the appendix A (Map of internal menu) you find all the error that the machine can generate.

Activation of the HOME button while summary level error code is displayed will return the VMC to the "Error" prompt.

Activation of the HOME button at "Error" prompt returns the VMC to the normal mode door open state.

The most common errors are :

Vend	Vend Mechanism
door	Door open
SELS	Selection Switch
CHAR	Changer
ACCE	Changer Acceptor
Chut	Chute/Carrier Switch
STS	Space to sales programming
BUAL	Bill Validator
Cdr	Card reader
FfRG	Cooling unit

### COLUMN JAM ERROR ROUTINE

If the ENTER button is activated at the "Vend" prompt the VMC will display a "CJXX" message where XX indicates the columns that have been detected as being jammed.

Using the UP and DOWN buttons will cycle through all jammed columns. If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing, VMC will display the next existing column jam error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

### DOOR SWITCH ERROR ROUTINE

If the ENTER button is activated at the "door" prompt the VMC will display a "dS" message indicating a door switch error was detected (door open for more than one hour). If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing VMC will display the next existing error or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

### SELECTION SWITCH ERROR ROUTINE

If the ENTER button is activated at the "SEL" prompt the VMC will display a "SLXX" message where "XX" indicates the first selection switch error (switch always close). Using the UP and DOWN buttons will cycle through all selection switch error. If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing VMC will display the next existing error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

### CHANGER ERROR ROUTINE

If the ENTER button is activated at the "CHA" prompt the VMC will display a "CC" message indicating a changer communication error a "tS" message indicating a tube sensor error, an "IC" message indicating an inlet chute blocked error (no coins sensed in the acceptor for a supplier pre-determined number of hours, a "tJ" message indicating a tube jam error, or a "CRCH" message indicating a changer ROM checksum error. Using the UP and DOWN buttons will cycle through all changer error. If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing VMC will display the next existing error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

### ACCEPTOR ERROR ROUTINE

If the ENTER button is activated at the "ACCE" prompt the VMC will display a "EE" message indicating excessive escrow attempts (escrow to vends greater than a pre-determined supplier standard), and "nJ" message indicating a coin jam (sensed and reported by coin mechanism), or a "LA" message indicating a low acceptance rate. Using the UP or DOWN buttons will cycle through all acceptor errors. If the ENTER button is pressed and held for two seconds during the display of any error code, that code will be cleared.

After clearing VMC will display the next existing error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

### CHUTE SENSOR ERROR ROUTINE

If the ENTER button is activated at the "Chut" prompt the VMC will display a "CS" message indicating a chute sensor error. If the ENTER button is pressed and held for two seconds during the "CS" error code, that code will be cleared.

After clearing VMC will display the next error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.



**BILL VALIDATOR ERROR ROUTINE**

If the ENTER button is activated at the "bUAL" prompt the VMC will display a "bC" message indicating a bill validator communication error, a "bFuI" message indicating that the bill stacker is full, a "bILL" message indicating a defective motor, a "bJ" message indicating that there is a bill jammed in the bill validator, a "briCH" message indicating a checksum error, a "bOPn" message indicating an open cash box, or a "bS" message indicating a bill sensor error. The first column that has been detected with a home sense error. Using the UP or DOWN buttons will cycle through all bill validators errors. If the ENTER button is pressed and held for two seconds during the display of any error code that code will be cleared.

After clearing VMC will display the next existing error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

**COOLING UNIT ERROR ROUTINE**

If the ENTER button is activated at the "rFIG" prompt the VMC will display a "SEns" message indicating probe failure. The message "COLd" indicating that the temperature is lower than 1.5 °C lower than the setpoint. The message "HOT" indicating that the temperature is 1.5 °C higher than the setpoint.

The message "CnPr" indicating that the temperature did not fall down of more than 0.5 °C during the last hour.

The message "Htr" indicating that the temperature did not increase of more than 0.5 °C during the last hour.

**IMPORTANT :** AFTER "POWER ON", THE COMPRESSOR HAS A START DELAY OF 3 MINUTES

Using the UP or DOWN buttons will cycle through all cooling unit errors. If the ENTER button is pressed and held for two seconds during the display of any error code that code will be cleared.

After clearing VMC will display the next existing error, or "none" if no other error.

Activation of HOME button will return the VMC to the code level at the "Error" message.

**COIN PAYOUT ROUTINE**

If the ENTER button is activated at the "CPO" prompt the VMC will enter the coin payout routine. Upon entry into this routine the display will show the lowest coin value dispensable. Pressing the UP button will increase the display to the next highest coin value, the DOWN will decrease to the next lowest coin values. When the changer has only 3 tubes, the fourth value will display to 0, means don't exist the fourth tube.

**Pushing the button number 5 to a corresponding coin value the display will show the number of coins in the tube reported by the changer.**

Pressing the ENTER button will pay out the displayed coin type. Activation of the HOME button while a coin value is displayed will return the VMC to the "CPO" prompt.

Activation of the HOME button at the "CPO" prompt returns the VMC to the "normal mode door open state."

**TUBE FILL ROUTINE**

If the ENTER button is activated at the "tUFL" prompt the VMC will enter the tube fill routine.

The purpose of this routine is to allow the operator to fill the tubes by entering them through the acceptor and thus have total coin accountability, if they so choose.

Upon entry into this routine the VMC will enable acceptance of any coin type that will be routed to an inventory tube and disable all others.

The VMC will count and display all inventoried coins and will not disable the acceptor from taking coins when the highest price setting is reached.

Activation of HOME button while a coin inventory is displayed will return the VMC to the "tUFL" prompt. Activation of the HOME button at the "tUFL" prompt returns the VMC to the normal mode door open state.

**TEST VEND ROUTINE**

If the ENTER button is activated at the "tESr" prompt the VMC will enter the test vend routine.

Upon entry into this routine the display will show the first test routine "Uend" the description of the test routine available are the follows:

- "Uend" to test the vend motor
- "SL" to test selection switch
- "So" to test Sold out switch
- "dSP" to test 5 digit display
- "rELY" to test relays output (compressor, heater, light)
- "Temp" to test the temperature sensor
- "Uend"

Activation of the ENTER button (at the "Uend" routine) will show the column number "C01" activation of the enter button will perform the vending test for selected column, using the up or down button will change the column number. **Vends made on this routine will not increase the vend counters.** Activation of the HOME button while a column is displayed will return the VMC to the "Uend" prompt.

Activation of the HOME button at the "Uend" prompt will return to "tESr" prompt.

**"SL"**

Activation of the ENTER button (at the "SL" routine) will show the last selection button pressed "SEY" where Y is the number of the selection. Use this routine to test all the selection switch. To come back to the "tESr" menu, keep pressed the first selection for two seconds.



## "SO"

Activation of the ENTER button (at the "SO" routine) will show the sold out status of the selected column, "C XY" where XY is the column number (you can choose the column using up or down button) and Y is the sold-out state (0=column is not sold out, 1=column is sold out). Press escape button to come back to the "TEST" menu.

## "dsp"

Activation of the ENTER button (at the "dsp" routine) will test all the vertical and horizontal segment of the 5 digit display. Press escape button to come back to the "TEST" menu.

## "ELY"

Activation of the ENTER button (at the "ELY" routine) will start the relay test, the display show the first relay name and the status(X) "CnPX" press enter button to toggle the status of the relay (X=0 off, X=1 on) you can choose a different relay pressing up or down, the relay name are:

- "CnPX" refrigerant system relay
- "FanX" Evaporator fan
- "LitX" Light relay
- "HtrX" Heater relay (optional Kit)

## "tEmp"

Activation of the ENTER button (at the "tEmp" routine) will display the temperature of the detect by the sensor. If error is detected on the sensor the display will show "Sens".

Press escape button to come back to the "TEST" menu.

## PASS ROUTINE

This routine is used to access at the protected menu.

At the "PASS" prompt press enter button, the display show "nothing" press the follow sequence of selection button 4-2-3-1 (password must be entered in 10 seconds) press enter to confirm (selection 4) now you can see the first protected menu "CASH" (use up and down button to cycle on the available menu).

## CASH COUNTER ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "CASH" prompt the VMC will enter the cash counter routine. Upon entry into this routine the display will show a "CASH" / "XXXX" / "XXXX" message where "XXXX" characters are the historical total cash counters due to vends that have been recorded by the VMC.

The first quartet "XXXX" is the highest digit and the 2th "XXXX" is the lowest.

Using the UP and DOWN button at this point will change the display to "CA n" / "XXXX" / "XXXX" where n is a selection number and "XXXX" are the cash counter for that selection.

Using the UP and DOWN buttons will cycle through the available selections cash counters.

Activation of the HOME button while a selection counter is displayed will return the VMC to the "CASH" prompt.

Activation of the HOME button at the "CASH" prompt will return the VMC to unprotect area.

## SALES COUNTER ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "SALE" prompt the VMC will enter the sales counter routine. Upon entry into this routine the display will show a "SALE" / "XXXX" / "XXXX" message where "XXXX" characters are the historical total sale counters due to vends that have been recorded by the VMC.

The 1th "XXXX" are the highest digits and the 2th "XXXX" are the lowest.

Using the UP and DOWN button at this point will change the display to "SL n" / "XXXX" / "XXXX" where n is a selection number and "XXXX" are the sales counter for that selection.

Using the UP and DOWN buttons will cycle through the available selections sales counters.

Activation of the HOME button while a selection counter is displayed will return the VMC to the "SALE" prompt.

Activation of the HOME button at the "SALE" prompt will return the VMC to unprotect area.

## PRICE SETTING ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "PriC" prompt the VMC will enter the price setting routine. The display will show a "Pr 1" , if the machine is working in multi-price, or "SPri" if it's work in single price.

In multi-price mode you can choose different price for each selection, using UP and DOWN buttons will cycle through available selection (Pri 1 - Pri12) or "ALL", "ALL" is used to change the price for all selection. Activation of the ENTER button will show the actual price using UP and DOWN button will increase or decrease the price by one lowest coin value respectively.

Activation of the ENTER button while the desired price is displayed will save that price. Activation of the HOME button while a selection price is displayed, without doing an ENTER before will return the VMC to the selection display, without saving the displayed selection price.

In single price the price that you choose on "SPri" submenu, is used for all selection.

Activation of the HOME button while a selection is displayed will return the VMC to the "PriC" prompt. Activation of the HOME button returns the VMC to unprotect area.



### SPACE TO SALES SETTING ROUTINE (PROTECTED MENU)

The VMC feature allow the ability to assign for each selection button one or more column.

If the ENTER button is activated at the "SLOS" prompt the VMC will show "OPT1". The "OPT1" menu is a pre-programmed configuration (see Figure 1) for the space to sale routine, actually we have 6 pre-programmed configuration

Pre-Programmed Space to Sale (opt7-8 from v2.06)

OPT	SELECTIONS											
	1	2	3	4	5	6	7	8	9	10	11	12
1	1	1	2	2	3	4	5	6	7	8	9	10
2	1	1	2	2	3	3	4	5	6	7	8	9
3	1	1	2	2	3	4	5	6	7	None	None	None
4	1	1	2	3	4	5	6	7	8	None	None	None
5	1,2,3	1,2,3	1,2,3	4	4	5	5	6	6	7	8	None
6	1	2	3	4	5	6	7	8	9	10	None	None
7	1,2	1,2	1,2	3,4	3,4	3,4	3,4	5	6	7	8	None
8	1,2,3	1,2,3	1,2,3	4	4	4	4	5	6	7	8	None

Figure 1

If you want to create a personal profile you can use the "CSIS" (custom space to sale) submenu. When you press enter the display show the actual assignment of the first selection (the display will show alternative "SL 1" and "CXX" (or "none" if no column is assigned to the selection) where XX is the number of column). Using the button up or down will increase or decrease the selection number. To change the assignment press the enter button on the select selection, the display will show "C01 X" (where X is 0-unselected, 1-selected), pressing up or down change the column number, pressing the enter button you will be able to change the select status X (0-unselected, 1-selected). In the same way you can change all the assignment for each selection. After the last selection you will find a function called "SAUE" if you press enter at this function all the change that you have made will be saved. If you go out of the "SLOS" Routine without confirm with "SAUE" function (using home button) all the change will be lost.

### MACHINE CONFIGURATION SETTING ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "Con" prompt the VMC will enter the machine configuration setting routine. The display will show a "C1" message where the "1" indicates configuration setting number 1. Using UP and DOWN button will cycle through the available configuration setting numbers. Activation of the ENTER button while a configuration setting number is displayed will allow access to the current setting number of the displayed configuration setting.

**Activation of the ENTER button will save the displayed configuration.**  
Activation of the HOME button while configuration is displayed, without doing an ENTER before, will return the VMC to the "Con" display without saving the displayed configuration. Activation of the HOME button returns to unprotected area.

### THE FOLLOWING INFORMATION'S DESCRIBES VARIOUS MACHINE CONFIGURATION SETTINGS

#### C1 SINGLE PRICE/MULTI PRICE

This setting is used to enable the single price mode. In this mode, all selection prices are set to the same price.

- C1 = 0 Single price mode (default).
- C1 = 1 Multi price mode

#### C2 OPTIONAL FEATURES

This parameter enable or disable optional program menu:

- C2 = 0 Extended menu off (default)
- C2 = 1 Extended menu on.

#### C3 DISPLAY MESSAGE MODE

This parameter is used to enable/disable the POS message:

- C3 = 0 Display message on (default)
- C3 = 1 Display message off.

#### C4 OPEN DOOR DISPLAY MODE

This parameter is used to change the MIS data information that you can read when the door of VMC is open:

- C4 = 0 Display only the Existing Error or none (default)
- C4 = 1 Display total Sales, total Cash and Existing Error or none.

#### C5 RESET COUNTER MODE

This parameter determines how the VMC have to reset the MIS internal counter:

- C5 = 0 All the re-settable counter will be reset only using a reset command on MIS communication mode (default).
- C5 = 1 All the re-settable counter will be reset when you open the door, read one of the re-settable counter and close the door.

#### C6 RESERVED FOR FUTURE USE

#### C7 SAVE CREDIT MODE



This parameter determines how the VMC have to manage the credit:

- C7 = 0 Clear the credit if nothing happen in the last five minutes (default).
- C7 = 1 Keep the credit indefinitely.

#### C8 FORCE VEND

This parameter is used to prevents the use of the machine like a coin changer. When forced vend is enable you can obtain escrow only in this cases:

- if you insert money and make a selection (full or empty selection is the same)
- if you put coin that you can obtain like escrow (coins that go in the tube of the coinage) and you don't reach the maximum price.
- C8 = 0 Force vend disable (default).
- C8 = 1 Force vend enable.

#### C9 MULTI VEND

This parameter enable or disable automatic escrow process:

- C9 = 0 Multi Vend disable (you obtain automatically the escrow after the selection) (default)
- C9 = 1 Multi Vend enable (you can use your escrow to make another selection, or if you want escrow, you have to press the escrow button)

#### C10 BILL ESCROW MODE

This parameters allows the escrow of bill. If enabled and the last bill inserted takes the credit over the maximum price, the bill be held in the escrow position, and can be returned as escrow. If the function is disabled, bills go always to the stacker. The valid value are:

- C10 = 0 Bill escrow enabled (default)
- C10 = 1 Bill escrow disabled.

#### C11 TYPE MACHINE

This parameters define the kind of machine for special setting like central Soldout led instead of separate led.

- C11 = 0 D door machine separate soldout led
- C11 = 1 Modular door machine. Central soldout led using led column 1.

#### C12 COOLING UNIT CONTROL MODE

This parameters enable the electronic control of cooling unit. The valid value are:

- C12 = 0 Cooling unit electronic control enabled (default)
- C12 = 1 Cooling unit electronic control disabled (for manual thermostat)

### CORRECT CHANGE ONLY CONTROL (protected menu)

#### CORRECT CHANGE RULE

IF IN CCOC CON=0 (means the VMC manage automatically the changer setting)

CCU correct change value

If (changer is able to change back (CCU value + Maximum Price)/correct change led is OFF

Else correct change led if ON

If correct change led is ON or is OFF the VMC automatically accept only coins than can be return or can return the equivalent credit with other coins.

ACC (Unconditional acceptance value) is automatically managed equal to the Maximum price

IF IN CCOC CON=1 (means the VMC manage the changer setting according to CONFY setting)

Correct change led is set regarding the C2 (Low change equation ) and C3 (minimum coins Tube level)

If correct change is OFF VMC accept coins set in C06 and C07

If correct change is ON VMC accept coins set in C08 and C09

ACC (Unconditional acceptance value) is automatically managed equal to the Maximum price

If the ENTER button is activated at the "CCOC" prompt the VMC will show the actual overpay status "ConX", where X is 0(overpay not allowed) or 1(overpay allowed).

allowed), use up or down button to select the other submenu available ("CCU", "ACC" and "Conf"), or press enter button to change X value.

"CCU" if you press enter at the "CCU" prompt, the display show the actual maximum value used by VMC to work in correct change situation, you can change the value using up or down button.

"ACC" if you press enter at the "ACC" prompt, the display show the actual maximum value accepted, even if the VMC doesn't know if it has the change, you can change the value using up or down button

"ConfY" (this menu, and submenu, are used by VMC only if overpay is allowed), if you press enter at the "ConfY" prompt, the display show "C1", using up or down button you can choose the other submenu ("C1"- "C10"), which have this function:

## "Conf"

### "C1" KEYPAD ACTIVATION (COINAGE)

C1 = 0 (OFF) C1 = 1 (ON)

### "C2" LOW CHANGE EQUATION

This parameter defines the exact change equation. The combination of the empty states assume the exact change state

A is the lowest coin value reported in the tubes

D is the highest coin value reported in the tubes

**If the tubes are empty according to these equations the CORRECT CHANGE led is ON**

0 : TUBE A and TUBE B and TUBE C and TUBE D  
1 : TUBE A or TUBE B or TUBE C

2 : TUBE A only

3 : TUBE B only

4 : TUBE C only

5 : TUBE D only

6 : TUBE B or TUBE C or TUBE D

7 : TUBE A and TUBE B or TUBE C

8 : TUBE A and TUBE B or TUBE D

9 : TUBE A and TUBE C or TUBE D

10 : TUBE B and TUBE C or TUBE D

11 : TUBE A and TUBE D or TUBE C

12 : TUBE B and TUBE D or TUBE A

13 : TUBE A or TUBE C

14 : TUBE A or TUBE B and TUBE C

15 : TUBE A or TUBE B

#### ATTENTION:

When using executive please be aware to set into the programming menu "Conf" C2 and C3 to zero otherwise machine is working in "Price holding"

### "C3" LOW CHANGE LEVEL

This number will be deducted to the coins tubes number reported by the changer in order to calculate according to the low change equation the CORRECT CHANGE status

### "C4" BILL ACCEPTED ( EQUAL TO "C6" AND "C7" )

Bill to accept when "CORRECT CHANGE" is OFF

### "C5" BILL ACCEPTED IN LOW CHANGE CONDITION ( EQUAL TO "C7" AND "C8" )

Bill to accept when "CORRECT CHANGE" is ON

"C6", "C7" This parameter is used for determining the 16 accepted coins by the changer.

Coin 1 is assumed to be the smallest coin, and coin 16 the highest.

C6 = coins 1 to 8

C7 = coins 9 to 16

Each coin has a binary value as

In C6	coin 1	=	1	In C7	coin 9	=	1
coin 2	=	2		coin 10	=	2	
coin 3	=	4		coin 11	=	4	
coin 4	=	8		coin 12	=	8	
coin 5	=	16		coin 13	=	16	
coin 6	=	32		coin 14	=	32	
coin 7	=	64		coin 15	=	64	
coin 8	=	128		coin 16	=	128	

**EXAMPLE:** If you want to accept coin 1 - 2 - 3 - 4 - 13 - 15 you must add the correspondent values

$$C6 = 1 + 2 + 4 + 8 = 15$$

$$C7 = 16 + 64 = 80$$

"C8", "C9" This parameter is used for determining the 16 accepted coins by the changer, when the VMC is in low change condition. The value of this submenu are calculated on the same way like "C6", "C7" submenu.

### C10 RESET TO THE FACTORY ( DEFAULT VALUE )

Be careful using this option you lose all the configuration parameters on the machine and reset all the counters (also the total counter).

AVAILABLE RESET OPTION	SPACE TO SALES OPTION
"C10" = 18 / 2D	Option 1
"C10" = 19 / 1D	Option 1
"C10" = 20 / 2D	Option 1
"C10" = 21 / 4D	Option 1
"C10" = 22 / 2D	Option 6
"C10" = 23 / 4D	Option 6

Put value **option** on the ConfY "C10" submenu and press button 4 to confirm.

Turn off the machine: Press and keep pressed the button on the board and turn on the machine waiting until the end of initialisation of the board (when you read message "RESET" on the display). Release the button on the board.

Now you have to reprogram all parameters.

### PREVIEW VEND PASSWORD SETTING MODE (PROTECTED MENU)



If ENTER button is activated at the "PREU" prompt the VMC will show the actual password for preview function of VMC. The first number of the digit will be flashing, using up or down, you can change the value, pressing enter button will go to the next digit. Press enter on the last digit to confirm the new password, or press escape to exit without saving.

The preview function allow the customer to see the MIS data with the door close. The correct password must be inserted in 10 seconds when the door is closed, on that way you can show the cash and the sale menu, after 5 minutes, if no button is pressed, the VMC return on vending mode.

#### LANGUAGE CONFIGURATION (PROTECTED MENU)

If ENTER button is activated at the "Lang" prompt the VMC will show the actual language used by VMC, using up or down to toggle through the available language:

- "Eng" English
- "Frn" French
- "Ger" German
- "Ita" Italian
- "Port" Portuguese
- "Esp" Spanish
- "Slo" Slovene

Press enter to confirm the new language or escape to come back on the "Lang" prompt.

#### TIME CONFIGURATION (PROTECTED MENU)

If ENTER button is activated at the "Time" prompt the VMC will enter the machine on the time setting routine with the follow submenu :

- "EnbX" time status (X=0 time disable, X=1 time enable), press enter to modify X value.
- "YEAR" press enter show actual year, up down modify the value, enter to confirm, home to come back at "EnbX" message.
- "nth" press enter show actual month, up down modify the value, enter to confirm, home to come back at "EnbX" message.
- "DATE" press enter show actual date, up down modify the value, enter to confirm, home to come back at "EnbX" message.
- "Hour" press enter show actual hours-minutes, up down modify the value hours, enter to blanking minutes up or down to modify minutes, enter to confirm, home to come back at "EnbX" message.
- "dst" daylight saving time, press enter to modify the country, the available value are:

- "AUS" Australian rules
- "EU" European rules
- "NA" North America rules
- "OFF" no saving time

#### LIGHT CONTROL (PROTECTED MENU)

If ENTER button is activated at the "Lit" prompt the VMC will enter the machine on the light control routine with the follow submenu :

- "Enb X" Used to enable (X=1) or disable (X=0) the light control.
- "Str" Set the start time using the follow submenu:
- "DAY" select the days of the week for start function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected)
- "Hour" press enter to change the start hour and minute for selected day
- "Stop" Set the stop time using the follow submenu:
- "DAY" select the days of the week for stop function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected)
- "Hour" press enter to change the stop hour and minute for selected day.
- "VDSTP" light off during Vend stop period, if in EnbX X=1 then the lights are turned off during vend stop period if X=0 lights still on during vend stop period.

#### TEMPERATURE CONTROL (PROTECTED MENU)

If ENTER button is activated at the "Frg" prompt the VMC will enter the machine on the temperature control routine with the follow submenu :

- "Enb X" Used to enable (X=1) or disable (X=0) the temperature time control.
- "Str" Set the start time using the follow submenu:
- "DAY" select the days of the week for start function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected)
- "Hour" press enter to change the start hour and minute for selected day.
- "Stop" Set the stop time using the follow submenu:
- "DAY" select the days of the week for stop function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected)
- "Hour" press enter to change the stop hour and minute for selected day.
- "degX" Set the temperature scale (where X=C for Celsius degree, X=F for Fahrenheit).
- "SEp" Set point setting, press enter to change set point for refrigerant system (note the value is expressed in °C, or °F according to "deg" configuration), the default value is 15.5 °C (35°F).
- "Stor" Storage temperature setting, press enter to change temperature setting (note the value is expressed in °C, or °F according to "deg" configuration), the default value is 15.5 °C (50°F).



"dSPX" Enable or disable the temperature display. If you set X = 1 (enable) the VMC will show the temperature after the POS message. The default value is 0 (disable).

# **DISCOUNT SETTINGMODE (PROTECTED MENU)** (EXTENDED MENU)

If ENTER button is activated at the "disc" prompt the VMC will enter the machine on the discount control routine with the follow submenu :

- "Enb X" Used to enable (X=1) or disable (X=0) the discount setting.
- "Strt" Set the start time using the follow submenu:
  - "dAY" select the days of the week for start function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected)
  - "Hour" press enter to change the start hour and minute for selected day.
- "Stop" Set the stop time using the follow submenu:
  - "dAY" select the days of the week for stop function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected)
  - "Hour" press enter to change the stop hour and minute for selected day.
- "SEL n X" Set the Selection (n = number of selection) that are enable to the discount (X = 0 disable, X = 1 enable), or "ALL X" for all selections.
- "LESS" Set the amount of the discount for the selected selections.

# **VENDING DEPTH CONTROL (PROTECTED MENU)** (EXTENDED MENU)

If the ENTER button is activated at the "SdEP" prompt the VMC will enter on the depth control routine, showing the column number and the depth status.

**EXAMPLE:** "01 4" means column n°1 has four product each rows (4 depth)  
You can change for each column the depth value (valid value are: 1,2,3,4; actually 3 work like 4).

**ATTENTION:** AT MODEL 680 MD-7 WITH SEVEN WIDE COLUMNS SET VENDING DEPTH CONTROL TO 4 AND SET THE DEPTH MODE BY ADJUSTING THE MOTOR CAM.

# **DAILY VEND INHIBITED PERIOD (PROTECTED MENU) (FROM V2.08)** (EXTENDED MENU)

If ENTER button is activated at the "dudIP" prompt the VMC will enter the machine on the daily vend inhibited period control routine with the follow submenu :

- "Enb X" Used to enable (X=1) or disable (X=0) the inhibited period function.
  - "Strt1" Set the start time (HH mm) of the first inhibited period of the day
  - "Stop1" Set the stop time (HH mm) of the first inhibited period of the day
  - "Strt2" Set the start time (HH mm) of the second inhibited period of the day
  - "Stop2" Set the stop time (HH mm) of the second inhibited period of the day
  - "Strt3" Set the start time (HH mm) of the third inhibited period of the day
  - "Stop3" Set the stop time (HH mm) of the third inhibited period of the day
  - "Strt4" Set the start time (HH mm) of the fourth inhibited period of the day
  - "Stop4" Set the stop time (HH mm) of the fourth inhibited period of the day
  - "Strt5" Set the start time (HH mm) of the fifth inhibited period of the day
  - "Stop5" Set the stop time (HH mm) of the fifth inhibited period of the day
  - "Strt6" Set the start time (HH mm) of the 6th inhibited period of the day
  - "Stop6" Set the stop time (HH mm) of the 6th inhibited period of the day
- During this period the vend is stopped and the VMC show the message "NO VEND UNTIL hh:mm", using the "VDSTP" function on "LT" submenu you can turn off the light during the inhibited period

# **RETURN TO OPEN DOOR MODE**

If the ENTER button is activated at the "rtn" prompt the VMC will exit to normal open door routine.



# APPENDIX A PROGRAMMING DIAGRAM

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4 th SUB MENU	DESCRIPTION
<b>Error</b>					
None					Error routine
Uend					No errors exits
	CJjXX				Vend mechanism summary error
					Column jam in column XX (00 - nn)
					Control system summary error
					Door switch
					RAM check sum of service mode settings
					AC supply low
					Scale factor incompatibility
					Machine inlet chute sensor is blocked
					Machine inlet chute is blocked
					Selection switch summary error
					Selection switch error in switch XX (01 - 12)
					Space to sales summary error
					Unassigned column for column XX
					Changer summary error
					Changer communication error
					Tube sense error
					Changer inlet chute blocked
					Tube pay out jam in coin type XX
					Changer ROM check sum
					Excessive escrow attempts
					Coin jam
					Low acceptance rate
					Disconnected acceptor
					Coin routing error
					Bill validator summary error
					Bill validator communication error
					Bill validator stacker full
					Defective bill validator motor
					Bill validator jammed
					Bill validator ROM check sum error
					Bill validator stacker is open or out of position
					Bill validator sensor error
					Card reader summary error
					Card reader communication error
					Card reader non-transient error, code X, sub-code Y
					Refrigeration summary error
					Temperature sensor defective or unplugged
					Cabinet temperature too cold
					Cabinet temperature too hot
					Cooling system not cooling
					Heating system not heating
					Coin Pay Out routine
					Display coin value
					Dispense coin while showing value

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4 th SUB MENU	DESCRIPTION
<b>UIFL</b>					
					Value on tube
					Tube Fill routine
					Display tube count
					Test routine
					Vend testing
					1 - 12
					Selection switch testing
					Where X is the selection number
					Sold out testing
					Display changing state
					1 - 12
					Display changing state
					Display testing
					Relay testing
					Compressor Display changing state (0/1)
					Evaporator Display changing state (0/1)
					Light Display changing state (0/1)
					Heater Display changing state (0/1)
					Temperature Sensor Test
					Password entry 10 seconds to enter 4-2-3-1-ENTER
					Cash counter display
					Machine historical
					Selection re-settable
					Product sales display
					Machine historical
					Selection re-settable
					Price setting routine
					If in single price
					If in multi price
					1 - 12
					Edit price (00.00 - 99.99)
					Space to sales routine
					6 (mm.) Preset options
					Custom space to sales
					Alternate selection number with columns currently assigned,
					or "none"
					1 - 12
					Alternate selection number with columns currently assigned,
					or "none"
					Edit mode (0/1)
					Save the current settings



MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4 th SUB MENU	DESCRIPTION
Con					Configuration menu
	C 1				0=single price – 1=multi price
	C 2				Optional Feature 0=disable 1=enable
	C 3				Display message 0=on 1=off
	C 4				Open door message 0=Error 1=counter & error
	C 5				Counter reset mode 0=after audit 1=after read using menu
	C 6				Reserved
	C 7				Save credit 0=clear after 5 min. 1=save unconditionally
	C 8				Force vend 0=disable 1=enable
	C 9				Multi vend 0=disable 1=enable
	C 10				Bill Escrow 0= enable 1= disable
	C 11				Machine Type 0=Ddoor 1=Modular door
	C 12				Temperature control 0=electronic 1=thermostat
CCOC					Correct change only control
	ConnX				Allow consumer overpay routine
	CCU				Edit mode (0/1)
	AAC				Correct Change Value
	ConfY				Unconditional acceptance value
					Custom coinage configuration
					Reserved
					Low change equation 0 to 14
					Low change level
					Accepted bills
					Accepted bills in low change condition
					Accepted coins 0-255
					Accepted coins 0-255
					Accepted coins in low change 0-255
					Accepted coins in low change 0-255
PtEU					Factory reset
	pppp				Preview data password routine
					Edit four digit password
Lang					Language selection routine
	Eng				Eng, Fin, GER, ItA, Port, ESP, SLO
	ESP				
Time					
	EnbX				Time at/d date routine
					Current setting
	YEAR				Edit mode (0/1)
					Year setting
	nth				Edit year, 00 - 99 (YZK)
					Month setting
	dAIE				Edit month, 01 - 12
					Date setting
	HOUR				Edit date, 01 - 31
					Hour and minute setting
	dst				Edit hour (00 - 24)
					Edit minute (00 - 59)
					No daylight savings time code
					Daylight savings time code
					No daylight savings used
					Australian rules
					European rules
					North American rules

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4 th SUB MENU	DESCRIPTION	
LT	EnbX	Enbx	Enbx	nonX	Lighting control routine Enable Light time manage X currente setting (0 disable/1 enable) Start light off period Start day setting	
		Enbx	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1)		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		day	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Start day setting		
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Stop light off period
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Stop day setting		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Stop light off period
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Stop day setting		
	Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)			
hhmm	Edit minute (00 - 59)					
RFIG	EnbX	Enbx	Enbx	nonX	Refrigeration routine Enable refrigerant controlled by time X currente setting (0 disable/1 enable) Start refrigeration low performance period (using storage T) Start day setting	
		Enbx	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1)		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		day	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Start day setting		
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Stop refrigeration low performance period (using storage T)
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Stop day setting		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Stop refrigeration low performance period (using storage T)
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
	Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)			
hhmm	Edit minute (00 - 59)					
V/SIP	EnbX	Enbx	Enbx	nonX	Vend Stop during light off period (0 disable - 1 enable) Refrigeration routine Enable refrigerant controlled by time X currente setting (0 disable/1 enable) Start refrigeration low performance period (using storage T) Start day setting	
		Enbx	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1)		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		day	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Start day setting		
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Vend Stop during light off period (0 disable - 1 enable)
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Vend Stop during light off period (0 disable - 1 enable)
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
	Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)			
hhmm	Edit minute (00 - 59)					
SEIP	EnbX	Enbx	Enbx	nonX	Set point for normal operation Set point for low performance Storage temperature for low performance period Edit storage temperature POS temperature display enable Edit mode (0/1)	
		Enbx	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1)		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		day	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Start day setting		
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Set point for normal operation
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Set point for low performance		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Storage temperature for low performance period
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit storage temperature		
	Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)			
hhmm	Edit minute (00 - 59)					
dspX	EnbX	Enbx	Enbx	nonX	POS temperature display enable Edit mode (0/1)	
		Enbx	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1)		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		day	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL POS temperature display enable		
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1)
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
		Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)		
		hhmm	Edit minute (00 - 59)			
		Stop	day	nonX		non, tue, wed, thu, Fri, sat, Sun, or ALL
		ALLX	nonX	non, tue, wed, thu, Fri, sat, Sun, or ALL		
	Hour	hhmm	Start hour and minute setting Edit hour (00 - 24)			
hhmm	Edit minute (00 - 59)					



MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4 th SUB MENU	DESCRIPTION
DISC	Enbx	Enbx	nonX	nonX	Discount routine Enable Discount setting X current setting (0 disable/1 enable) Start Discount period Start day setting
	Sirt	DAY	ALLX	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1) Start hour and minute setting
		Hour	hhmm	hhmm	Edit hour (00 - 24) Edit minute (00 - 59)
	Stop	DAY	nonX	nonX	Stop Discount period Stop day setting
		Hour	ALLX	ALLX	non, tue, wed, thu, Fri, sat, Sun, or ALL Edit mode (0/1) Stop hour and minute setting
		Hour	hhmm	hhmm	Edit hour (00 - 24) Edit minute (00 - 59)
	SEL	SEL 01-12 x			Selection enabled for discount X = 1 enable x=0 disable
	LESS	dd.cc			Amount of discount Edit Amount (00.00 99.99) Set column depth routine
SEEP	01 X				01 - 12 Current setting Edit mode (0 - 4)
	12 X	12 x			Daily vend inhibited period Start of 1st inhibit period
dudip	Sirt1	hhmm			Hour -minute Stop of 1st inhibit period
	Slop1	hhmm			Hour -minute Start of 2nd inhibit period
	Sirt2	hhmm			Hour -minute Stop of 2nd inhibit period
	Slop2	hhmm			Hour -minute Start of 3rd inhibit period
	Sirt3	hhmm			Hour -minute Stop of 3rd inhibit period
	Slop3	hhmm			Hour -minute Start of 4th inhibit period
	Sirt4	hhmm			Hour -minute Stop of 4th inhibit period
	Slop4	hhmm			Hour -minute Start of 5th inhibit period
	Sirt5	hhmm			Hour -minute Stop of 5th inhibit period
	Slop5	hhmm			Hour -minute Start of 6th inhibit period
	Sirt6	hhmm			Hour -minute Stop of 6th inhibit period
	Slop6	hhmm			Hour -minute Return to sales mode
Rin					

## ORDER OF SELECTION BUTTONS

### VDI Landscape

SEL.1	SEL.2
SEL.3	SEL.4
SEL.5	SEL.6
SEL.7	SEL.8
SEL.9	SEL.10

### VDI Marketing Landscape

SEL.1	SEL.2	SEL.3
SEL.4	SEL.5	SEL.6
SEL.7	SEL.8	SEL.9

### VDI Marketing door

SEL.1	SEL.2	SEL.3	SEL.4
SEL.5	SEL.6	SEL.7	SEL.8
SEL.9	SEL.10	SEL.11	SEL.12

### VDI D'Door

SEL.1
SEL.2
SEL.3
SEL.4
SEL.5
SEL.6
SEL.7
SEL.8
SEL.9

## ORDER OF COLUMNS

10	9	8	7	6	5	4	3	2	1
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