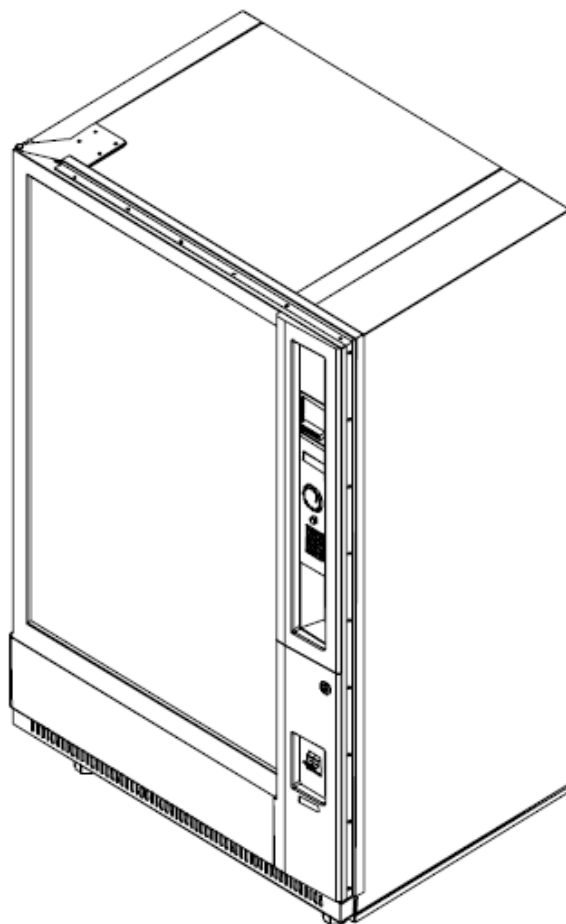


**GLASSFRONT  
VENDING MACHINES  
G-DRINK GF6 / GF9 – DR6 / DR9**

**PROGRAMMING MANUAL**



CE

**Vendo**  
SANDEN

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## 1 SPECIFICATION FOR ELECTRONIC BOARD SF01

### HARDWARE FEATURE

- Power supply: 24 Volt DC
- 14 motor outputs 24 VDC 1 A
- 14 motor micro-switches
- 14 sold-out micro-switches
- 14 sold-out leds
- 26 selections switches
- 1 Door switch
- 3 Analogics inputs (for temperature control)
- 1 Real time clock
- 1 Jack plug for DEX/UCS audit output.
- 1 Serial TTL output.

The board uses an XA 16bit microcontroller with up to 4096 Kbit of program EPROM and 256 Kbit of EPROM memory used to store Settings and audit.

External slave board (placed on the box transformer) used to control refrigerant system, fluorescent tube.

External slave board (placed near main board) used to drive 64 vending motor with current control and limitation.

External slave Optical detector board used to check the product fall down.

External slave fluorescent display 2 lines 20 characters

Master and Slave optically isolated serial link for MDB

### SOFTWARE FEATURE

- Service Programming routine (standard ENG,ITA,FR,GERM,SPA)
- Possible to have Customize programming & vend messages using WinDEX
- Credit Accumulation
- Coin Mechanism Interface
- Consumer Manipulation and Vend process
- Multi pricing
- Escrow
- Correct change Indicator
- Manual Payout
- Manual Tubes filling
- Saved Error listing - Audit
- Cooling unit control by separate electronic control unit
- MDB 5 different tubes values
- Possible to link selections in up to 10 groups
- Slave MDB board controlling the lift and bucket part

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## 1.1 DESCRIPTION OF FUNCTIONS AND FEATURES

### INITIALISATION

Each time the door is open and closed, the lift and catcher system will perform an initialisation in order to detect the shelves position. In order to avoid not needed initialisations, if the door is open for less than 60 secondes, the initialisation is not performed assuming nothing has changed rearding the shelf configuration during this short time. During initialisation the machine will automatically detect the position and the number of shelves. Only setting the number of trays (2 or 3 trays) is required.

Selection counting starts at the left side of the upper shelf with number 11 to 16 (or 19), next shelf starts with 21 to 26 (or 29) and then going to the bottom shelf.

Maximum number of shelves is 7.

2 Trays means 6 columns/selections per shelf

3 Trays means 9 columns/selections per shelf

From version software V1.29, at power ON the lift will proceed first to the delivery bucket in order to download remaining product in the hand bucket.

### LOADING FACILITY

In order to allow easier loading of the bottom shelf, pushing the delivery flap will move the bucket to the right side, pushing the flap again will move the bucket to the left side.

### DRUM FEATURE

When a product is detected inside the drum, the LED light is switched on in the drum, and the drum is unlock and goes in position open. If the product is not removed after 2 minutes the light is switched off, while the message "REMOVE THE PRODUCT" alternatively with arrows pointing in downwards is displayed. When the product is removed, the lights will blink a short time before closing the drum

### SOLD-OUT FEATURE

A magnetic sensor included in the delivery door flap allows the detection of the product falling down the drum, if a selection is done with no product inside the columns, the machine will put this selection in soldout until the door is open-close assuming the selection has been reloaded.

### GRAPHIC DISPLAY

During standby, in normal condition the machine will scroll a message in graphic 16x8 bits higher character alternatively with correct change status message if any.

Also when the product have been detected the display will scroll the message "REMOVE THE PRODUCT" alternatively with arrows pointing in downwards.

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## SPACE TO SALE FACILITY

It is possible to group selections of the same product to one group.

- Up to 10 Groups of 63 selections
- Price per Group to avoid mistakes
- Copy function for quick setting

## DOOR SWITCHES

For security purpose 2 Door switches are included in the machine, 1 for the slave lift control board and cooling unit and 1 to main board. If one of the door switches is not in closed position nothing in the lift side is allowed to move. Also the cooling unit is stopped.

## **VEND CONDITIONS MODE**

Conditions are:

- Doors switches are closed
- Delivery flap is closed
- Drum is in closed position with not product inside and no errors reported
- Initialisation of the slave memory and shelves report has been properly done
- No error in the lift and bucket are reported (see Lift error list). If an error is continuously reported by the slave controller, any movement or initialisation will be performed by the master until no error is reported. (see ERROR ROUTINE)
- MDB communication is working correctly

## **VEND DETECTION PROCESS**

The product is detected when crossing the delivery inner flap by a magnetic sensor which have the contact open when the door is open for more than 15mm.

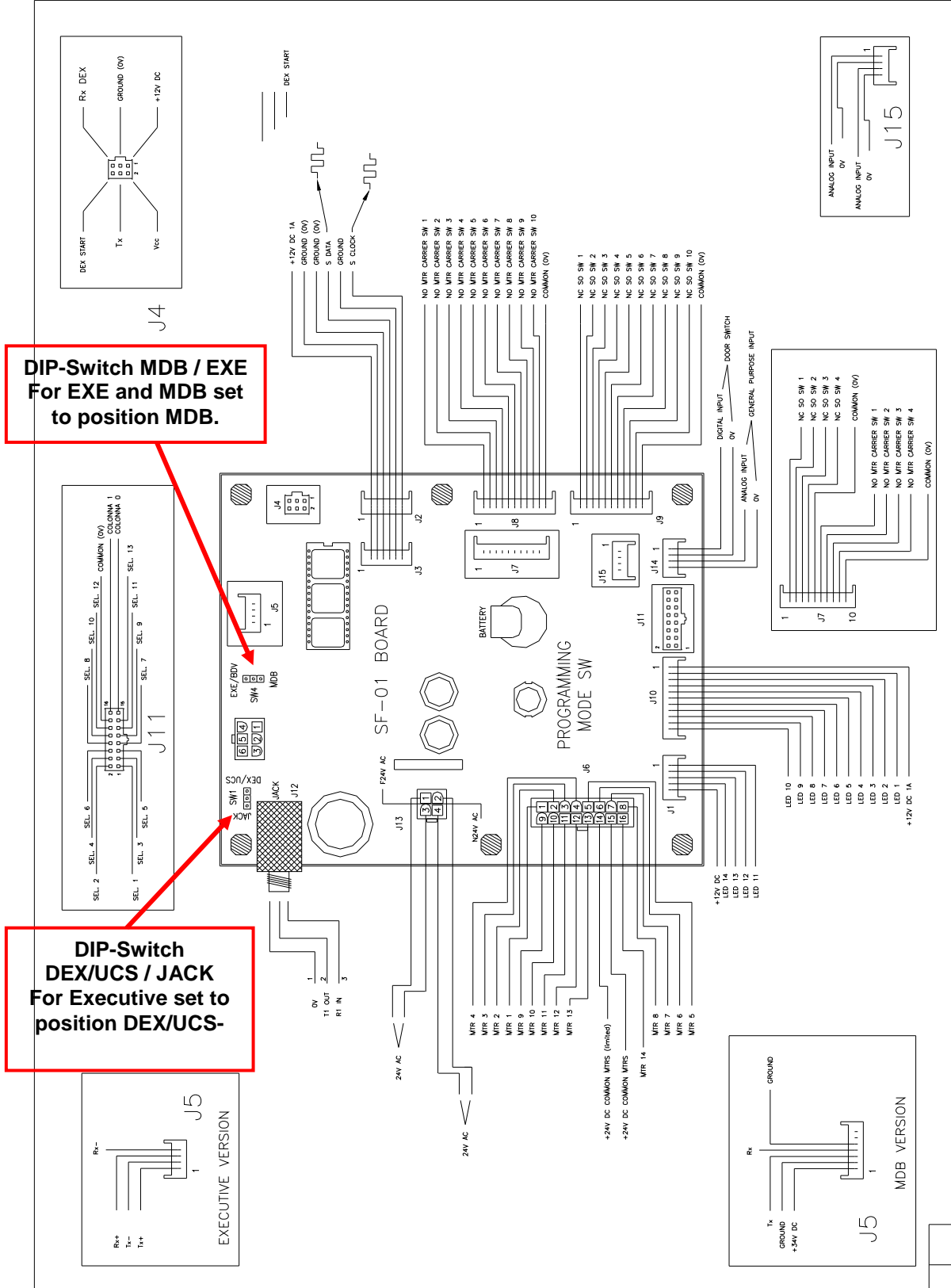
This detection will cause the vend price deduction from the established credit, if not the selection will be in soldout and the credit can be returned or an other selection is possible.

As the product drop in the drum, another infrared sensor will detect the product and opens the drum. As soon as the product is removed the light will flash and the drum is closing.

IF THE PRODUCT IS NOT DETECTED IN THE DRUM, BUT SEEN CROSSING THE DELIVERY INNER FLAP DOOR GATE, THE DRUM IS OPENING AND STAYS OPEN FOR A FIXED TIME (INDEPENDANTLY IF THE PRODUCT IS REMOVED). IF THE PRODUCT IS DETECTED WHILE THE DRUM IS TURNING OR DURING THE PRODUCT IS REMOVED THE PREVIOUS MODE FUNCTION IS CANCELLED AND TIMER IS RESET.

TO IMPROVE THE DETECTION LEVEL, ON THE TOP OF THE INFRARED SENSOR PUSH THE BUTTON FOR 1 SECOND AND RELEASE IT WHEN THE LED IS BLINKING QUICKLY IN THAT WAY THE MAXIMUM THRESHOLD IS SET TO THE MAXIMUM.













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**DIP-Switch MDB / EXE  
For EXE and MDB set  
to position MDB.**

**DIP-Switch  
DEX/UCS / JACK  
For Executive set to  
position DEX/UCS-**

## FUNCTION OF SELECTION BUTTONS IN THE SERVICE MODE

|                  |   |   |  |
|------------------|---|---|--|
| Selection Nr.: 1 |    | back<br>           | Abort or escape a programming point                                  |
| Selection Nr.: 2 |    | up<br>             | Increase or next programming point by pushing selection button 2     |
| Selection Nr.: 3 |    | down<br>           | Decrease or previous programming point by pushing selection button 3 |
| Selection Nr.: 4 |   | Enter / Store<br> | Call or store a programming point by pushing selection button 4      |
| Selection Nr.: 0 |  | Price set to zero   |  |
| Selection Nr.: 5 |  | Fast up   | Fast increase of price or column                                     |
| Selection Nr.: 6 |  | Fast down   | Fast decrease of price or column                                     |
| Selection Nr.: # |  | Copy function   | Copy price on next column  |

**Password 4-2-3-1-4**

**Entry by selection button**

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



## 2 SERVICE MODE

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 column assignments and vend pricing can be set in this mode using the same techniques. The service mode can only be entered when the vendor door is open and when the service mode switch is activated (placed in the middle of the electronic board).

To step through the various programming functions each of the selection switches is given a specific function (see previous page)

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 codes for the various paths are as follows.

|                            |   |
|----------------------------|---|
| <b>ERROR ROUTINE</b>       | Error routine                                   |
| <b>TUBES PAYOUT</b>        | Coin Payout Routine (work only MDB)             |
| <b>TUBES FILLING</b>       | Tube Fill Routine (work only MDB)               |
| <b>VEND TEST</b>           | Test Vend Routine                               |
| <b>PASS</b>                | Password required to access the protected menus |
| <b>CASH COUNTER</b>        | Cash counter routine                            |
| <b>SALE COUNTER</b>        | Sales counter routine                           |
| <b>CASH PRICES SETTING</b> | Prices setting routine                          |
| <b>KEY PRICES SETTING</b>  | Prices setting cashless MDB (from V 0.21)       |
| <b>SPACE TO SALE</b>       | Spaces to sales setting routine                 |
| <b>OPTION SETTING</b>      | Machine configuration setting routine           |
| <b>MDB SETTING</b>         | MDB related setting                             |
| <b>LANGUAGE SETTING</b>    | Language selection                              |
| <b>TIME SETTING</b>        | Time and data routine                           |
| <b>LIGHT SETTING</b>       | Light control routine                           |
| <b>REFRIGERATION</b>       | Refrigeration control routine (not used)        |
| <b>PAYMENT SETTING</b>     | Payment system                                  |
| <b>VEND INHIBITION</b>     | Daily vending inhibit period                    |
| <b>AGE CONTROL</b>         | Daily age control period                        |
| <b>RETURN TO VEND</b>      | Return to unprotected menu                      |

**PROTECTED MENUES**

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

## 2.1 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 "**LIFT**", which would indicate a lift 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.

### LIFT ERROR ROUTINE

If the ENTER button is activated at the "**LIFT**" prompt the VMC will display a "**ERRxx**" message where XX indicates the kind of error 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.

### LIFT ERROR LIST

- ERR01** Jamming or speed error on the Y vertical motor
- ERR02** Home switch Y not found or connected
- ERR03** Optical Y sensor doesn't found shelves position
- ERR04** Jamming or speed error on the X horizontal motor
- ERR05** Home switch X not found or connected
- ERR06** Optical X sensor doesn't found columns position
- ERR07** Slave unit error or initialisation missing
- ERR08** Slave unit Memory error or initialisation corrupted
- ERR09** Vend error
- ERR10** Initialisation error or wrong shelves setting
- ERR11** Bucket jammimg or missing signal
- ERR12** Lock error ,missing contact on the slave board
- ERR13** Slave door switch contact missing
- ERR14** Hopper switch error contact missing
- ERR15** Slave error power supply 24Vdc
- ERR16** Delivery Flap door remaining open or switch missing
- ERR17** Wrong shelves number detected

**These potential errors will be automatically cleared at the door closing, then a new initialisation will be performed to check if the failure (error) is remaining.**

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## DRUM ERROR LIST

|              |   |
|--------------|---|
| <b>OPEN</b>  | Open position missing,motor or switch close position missing  |
| <b>CLOSE</b> | Close position missing,motor or switch close position missing |
| <b>LOCK</b>  | locking error ,motor or detection switch missing              |
| <b>UNLOC</b> | Unlocking error ,motor or detect switch missing               |
| <b>DETEC</b> | Product detection error                                       |

**These potential errors will be NOT automatically cleared at the door closing, manual clearing is required.**

## 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.

**Be careful if door switch doesn't work the cooling system is disabled!**

## 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 "**CHAR**" 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.

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## 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.

## BILL VALIDATOR ERROR ROUTINE

If the ENTER button is activated at the **"BVAL"** prompt the VMC will display a **"BC"** message indicating a bill validator communication error, a **"BFUL"** 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 **"BRCH"** 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.

## INDEPENDENT COOLING UNIT SETTING

**The cooling unit is managed by an independent control unit, including LED display and buttons.**

If a different temperature is required inside the refrigerated cell, it is sufficient to change the set-point on the electronic control unit, always keeping present the small variation of temperature caused by the starting and stop cycles.

Example:

If an average product temperature of 8°C is needed,  
program the "set-point" at 7°C

Please refer to the instruction at the end of this manual.

## 2.2 PROGRAMMING

### COIN PAYOUT ROUTINE (ONLY IN MDB)

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.

**Push button number 5 to the corresponding coin value and 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 (ONLY IN MDB)

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 ENTER button is pressed at the **"TEST"** prompt the VMC will enter the test routine. Upon entry into this routine the display will show the first test **"SELE"** the description of the test routines available are the follows:

|                |                          |
|----------------|--------------------------|
| <b>"SELE"</b>  | to test selection switch |
| <b>"DRUM"</b>  | delivery drum test       |
| <b>"POWER"</b> | Power on off time &date  |
| <b>"VEND"</b>  | Test vends               |
| <b>"FAIL"</b>  | Historical of jamming    |

### **" SELE"**

Activation of the ENTER button (at the **" SELE"** 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. From software version 0.08 there is the possibility to test the delivery eyelet switch, when you open the delivery flap the display show **"DELIV"**. To come back to the **"TEST"** menu, keep pressed the first selection for two seconds.

### **"DRUM"**

Drum test allows to test and drive separate functions

|                 |  |
|-----------------|--|
| <b>"LOCK"</b>   | Put the drum in lock position  |
| <b>"UNLOCK"</b> | Put the drum in unlock position  |
| <b>"OPEN"</b>   | Put the drum in open position<br>(Be careful to proceed the unlock position before using open and close test )   |
| <b>"CLOSE"</b>  | Put the drum in locked position<br>(Be careful to proceed the unlock position before using open and close test ) |

**"POWER"** Show the power-on / off and date&time of the vendor

### **"VEND"**

This parameter is used to set the number of test vends (1 to 255) to be performed after the door is closed. Test vends are not recorded.

### **"FAIL"**

Displays the historical data of the lift failures during vend process.

Press ENTER button to display the last 10 failures - Snn Hour / Minute/ Day

Press UP button to visualize the next failure

Press button 5 to clear all failures

(Failure clearing must be performed after installation of new software from version 1.35d)

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

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## PASS ROUTINE

This routine is used to access at the protected menus.

At the **"PASS"** prompt press enter button, the display will be blank, 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 & MONEY COUNTER ROUTINE (protected menu)

If the ENTER button is activated at the **"CASH"** prompt the VMC will enter the cash counter routine. It is possible to display **MONEY COUNTER** and **CASH COUNTER**

### MONEY COUNTER

If the ENTER button is activated at the **"MONEY"** prompt, the VMC will enter the money counter routine.

Upon entry into this routine the display will show a **"C BOX" / "XXXX" / "XXXX"** message where **"XXXX"** characters are the total money entered into the cashbox. Use up button to see the money counter submenu:

- **"C BOX" / "XXXX" "XXXX"** total money to cashbox
- **"C TUB" / "XXXX" "XXXX"** total money to the coinage tube
- **"C RET" / "XXXX" "XXXX"** total money returned as change.
- **"C MAN" / "XXXX" "XXXX"** total money returned via manual payout submenu.
- **"C CAR" / "XXXX" "XXXX"** money paid using a card.
- **"C BIL" / "XXXX" "XXXX"** total money introduced in bill validator

Money counters can be reset in the same way as MIS counters (see C5 in Menu Configuration).

### CASH COUNTER

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 digits 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. Use the UP and DOWN buttons to display the individual selection 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 the unprotected 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 is the historical total sales counter.

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.

Use the UP and DOWN buttons to display the individual selection 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 the unprotected area.

## PRICE SETTING ROUTINE FOR CASH PAYMENTS (protected menu)

### CASH PRICE ROUTINE PER SELECTION AND GROUPS.

If the ENTER button is activated at the "PRIC" prompt the VMC will enter the price setting routine. The display will show a "Pr 11" price on upper left column. Up to **GRP10**

An "\*" symbol near the column means that this one is not installed.

In multi-price mode you can choose different price for each selection; using UP and DOWN buttons will cycle through available column (11 – 79) or "ALL", "ALL" is used to change the price for all selection (**excluding group 1 to 10**). 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.

On this menu the buttons 5 and 6 (fast up, fast down) are active to increase or decrease selections by 8 positions (change tray) and to to fast increase or decrease price value.

Is possible to copy current price to next selection pressing "#" button.

To clear price (set price = 0) press selection "0".

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.

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 unprotected area.

**From software version 0.10 if the VMC is working on Executive price holding (with menu C2=2 see below), the price menu is used to program the line of price holding.**



## **NOTE FOR CASH & CASHLESS PRICE SETTING**

Price setting includes a price setting for Group1 to Group10, if a selection is connected to a group, the selection price is disregarded, but the price set in the corresponding group is used

## **PRICE SETTING ROUTINE FOR CASHLESS SYSTEMS (only in MDB)**

This menu allows to set different vend prices for payments via cashless systems.

If the ENTER button is activated at the "KEY PRIC" prompt the VMC will enter the cashless vend price setting routine.

From version 1.40 three price lists for cashless vend prices are available.

The method to program cashless prices is the same as for cash price setting routine.

## **SPACE TO SALES SETTING ROUTINE (protected menu)**

### **TRAY & GROUP CONFIGURATION**

#### **TRAY**

This menu is used to set the configuration of the machine, you have to do it only when you change the control board.

Choice available is 2 Trays or 3 Trays

**GF6** = 2 trays per shelf (6 columns/selections)

**GF9** = 3 trays per shelf (9 columns/selections)

#### **GROUP**

The Group menu allows to assign selections to groups of selections (purpose is to dispense the same products placed in different shelves first in first out to prevent from ageing).

Sel xx will let to choose the selection number 11 to 79 to be connected to one of the 10 groups using the up and down button (NO means no connection to group) and GRP1 to GRP10 means connection to Group 1 to Group10.

When selections are connected to a group, these selections are dispensing alternatively, independent from the selected selection number.

If a selection is assigned to a group, the vend price is not the selection price but the price set for the group (see group price setting )

#### **V-POS**

Parameter to adjust the bucket height (product delivery position) at the delivery flap.

V-pos value can be set in steps of 1mm from 0 to 5mm

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## **MACHINE CONFIGURATION SETTING ROUTINE (protected menue)**

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.

### C1 RESERVED FOR FUTURE USE

### C2 SLAVE UNIT ENABLE (Only with Master & Snack Slave software)

This parameter enables or disables the slave unit and related programming menu:

C2 = 0 Slave machine not installed, normal menu.

C2 = 1 Slave machine installed, extended menu aktiv.

### C3 EXTRA ROTATION FOR SNACK SLAVE UNIT (Only with Master & Snack Slave software)

This parameter is used to activate an extra rotation of the spiral if the product is not detected by the optical barrier:

C3 = 0 Extra rotation disable.

C3 = 1 Extra rotation enable.

### 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

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

## C5 RESET COUNTER MODE

This parameter determines the MIS internal counter reset method:

C5 = 0 All resettable counter will be reset only using a reset command on MIS communication mode (default).

C5 = 1 All resettable counter will be reset when you open the door, read one of the resettable counter and close the door.

## C5 RESET COUNTER MODE (From Version V 1.40)

C5 = 0 All resettable counter will be reset only using a reset command on MIS communication mode (default).

C5 = 1 All resettable counters will be reset after each DEX reading.

## C6 SOLD-OUT MODE FOR SNACK SLAVE UNIT

This parameter is used to enable sold-out status of a selection when the optical barrier does not detect a product.

**The sold-out status is reset when the door switch of the master is actuated.**

C6 = 0 selection always available

C6 = 1 selection inhibited if "empty" was detected by the previous vend

## C7 SAVE CREDIT MODE

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

C7 = 0 Clear the credit if nothing happens in the last five minutes (default).

C7 = 1 Keep the credit indefinitely.

## C8 FORCED VEND

This parameter is used to prevent the use of the machine as a coin changer. When forced vend is enabled you can obtain escrow only in the following cases:

- If coins are inserted and a selection is made (full or empty selection is the same).
- If you insert a coin that you can obtained through escrow (coins that go to the tube of the coinage) and you don't reach the maximum price.

C8 = 0 Forced vend disabled (default)

C8 = 1 Forced vend enabled.

**Note:** If a cashless system with reload facility is used Forced Vend is automatically disabled.

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## C8 FORCE VEND (From Version V1.40)

This parameter is used to prevent the use of the machine as a coin changer. When forced vend is enabled you can obtain escrow only in the following cases:

- If coins are inserted and a selection is made (full or empty selection is the same).
- If you insert a coin that you can obtain through escrow (coins that go to the tube of the coinage) and you don't reach the maximum price.

C8 = 0 Forced vend disabled (default).

C8 = 1 Forced vend enabled.

**Note:** If a cashless system with reload facility is used, Forced vend can be enabled.

## C9 MULTI VEND

This parameter enables or disables automatic change process:

C9 = 0 Multi Vend disabled (change dispensed automatically after vend) (default)

**If C9 is set to 0, the max coin acceptance = maximum selection price**

C9 = 1 Multi Vend enabled (you can use your change to make another selection, or to press the coin return button to get your change)

**If C9 is set to 1, the max. coin acceptance level must be set in CCOC>>>ACC**

## 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 values are:

C10 = 0 Bill escrow enabled (default)

C10 = 1 Bill escrow disabled.

## C11 EVENT REPORTING MODE (From Version V1.40)

C11 = 0 The Events (EA1&EA2) are reported during a normal DEX readout session.

C11 = 1 As an Event occurs, the VMC will send ENQ to advise a new EVENT is available, the ENQ will be send every second until DL 0 is received or a DEX readout session has been performed.

Refer to chapter 2.4 Event Table on page 36

## C12 RESERVED FOR FUTURE USE

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## CORRECT CHANGE ONLY CONTROL CCOC (protected menu)

### CORRECT CHANGE RULE

**If in CCOC CON = 0** (means the VMC automatically manages the changer settings)

If changer is able to give the change back (CCU (correct change value) + Maximum Price) correct change LED is OFF. Otherwise correct change LED is ON

If correct change LED is ON or OFF the VMC automatically accepts only coins than can be returned 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 manages 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 LED is OFF VMC accept coins set in C06 and C07

If correct change LED 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

Use up or down button to select the other submenu available ("CCU", "ACC" and "CONFY"), 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 (see CON>>>C9)

**“MCARD”** If enter is pressed at the **“MCARD”** prompt, the display show the actual maximum revalue amount accepted. Parameter MCARD is used to limit the credit accepted with cashless systems.  
Maximum credit on cashless systems is managed as follows:

### Revalue

If amount of inserted cash + actual cashless credit > MCARD value  
Revalue is prohibited.

If amount of inserted cash + actual cashless credit < MCARD value  
Revalue is allowed.

### Cashless Vend

If cashless credit > MCARD value Vend is prohibited.

If cashless credit < MCARD value Vend is allowed.

If **MCARD** is set to 0 control on revalue or cashless vend is disabled.

## “CONFY”

This menu and submenu are used by VMC only if overpay is allowed CCOC CON = 1.  
If enter is pressed 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:

### “C1” KEYPAD ACTIVATION (COINAGE)

C1 = 0 Coinage key pad disabled

C1 = 1 Coinage key pad enabled

### “C2” LOW CHANGE EQUATION (MDB MODE)

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 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:**

C2 = 0 Normal Executive mode

C2 = 1 **"Price holding"**  
(see next page)

## **"C2" PRICE HOLDING (EXECUTIVE MODE)**

If you set C2 = 1 and payment system is set to executive, the machine works in price holding mode; it means that the price is stored on payment system. In this mode each time you press a selection the machine sends to the payment system the n.º of selection pressed in this way:

Sel 11 pressed – send 1 to payment system  
Sel 18 pressed – send 8 to payment system  
Sel 21 pressed – send 9 to payment system  
...  
Sel 46 pressed – send 30 to payment system  
...  
Sel 88 pressed – send 64 to payment system

If C2 = 0 the prices are stored on vending machine, and they are sent to payment system.

If C2 = 2 (from version 0.10) the machine works in price holding and the line of the price must be programmed on the "PRICE" menu the machine show the price stored on the payment system if it's support the price show feature.

## **"C3" LOW CHANGE LEVEL (MDB MODE)**

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

## **"C3" WAITING TIME AFTER VEND REQUEST (EXECUTIVE MODE)**

This parameter is used to add extra time after vend request for long answers from Executive cashless systems. Setting range: 0 up to 250 sec.

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

Bills to accept when "CORRECT CHANGE" LED is OFF

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

Bill to accept when "CORRECT CHANGE" LED is ON



## “C6” + “C7”

**PARAMETERS ARE USED TO DETERMINE UP TO 16 COINS TO BE ACCEPTED.**

C6 = coins 1 to 8

C7 = coins 9 to 16

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

Each coin has a binary value as:

|            |        |   |     |            |         |   |     |
|------------|--------|---|-----|------------|---------|---|-----|
| <b>C6:</b> | coin 1 | = | 1   | <b>C7:</b> | 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:

$$C6 = 1 + 2 + 4 + 8 = \mathbf{15}$$

$$C7 = 16 + 64 = \mathbf{80}$$

## “C8” + “C9”

**PARAMETERS ARE USED TO DETERMINE COINS TO BE ACCEPTED WHEN THE VMC IS IN LOW CHANGE CONDITION.**

The values of these submenus are calculated in the same way as “C6” + “C7” submenu.

## "C10" RESET TO THE FACTORY SETTING ( DEFAULT VALUES )

Be careful when using this option as you loose all configuration parameters on the machine and reset all the counters (also the total counter), you also loose the configuration of the vending trays, therefore it is necessary to make an auto configuration (see “STOS” menu).

C10 = 18 Reset value

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 and wait 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.

## "C11" MARKETING FEATURE "PRODUCT HAND MOVEMENT"

This feature is only enabled when no credit is inserted and the machine is not in out of order status.

An interval time in minutes between the movements can be set:

C11 = 0 Feature disabled

C11 = 1 to 256 minutes: Lift / Product hand moving every C11 value in minutes.

## ASSET NUMBER ID 106

If enter is pressed at the "ID106" prompt, the display show the actual Asset number

- Use button 2 & 3 to change the value at the prompted number
- Use button 4 & 5 to change the prompted number

## TOKEN

If enter is pressed at the "TOKEN" prompt, the display show the actual Token value for 1 Bill, this value will increment the credit when a special bill is accepted from the validator.

- Use button 2 & 3 to change the value at the prompted number
- Use button 4 to Confirm

## LANGUAGE CONFIGURATION (protected menu)

If ENTER button is activated at the "LANG" prompt the VMC will show:

**VEND:** For setting the language for customer information

**PROG:** For setting the language for the service program

For both can be chosen the the actual language used by VMC. Use up or down buttons to toggle through the available languages:

|         |  |
|---------|--|
| "CUSTO" | <u>Customized language to be set with WinDEX</u> |
| "ENGL"  | English  |
| "ITAL"  | Italian  |
| "FREN"  | French   |
| "SPAN"  | Spanish  |
| "GERM"  | German   |
| "DUTC"  | Dutch  |

Press enter to confirm the new language or escape to return to the "LANG" prompt.

**NOTE:** To remove customized messages automatically in case of wrong programming proceed as follows:

- Switch off the power supply to the machine.
- Press button 0 and keep it pressed while you switch on the power supply.
- Wait a few seconds until you release button 0.
- All programming message will be restored in English.
- It is possible to set different languages for customer information and service program.

## 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 values are:
  - "AUS" Australian rules
  - "EU" European rules
  - "NA" North America rules
  - "OFF" No daylight 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,
- "STRT" Set the start time using the follow submenu:
  - "DAY" 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.

## PAYMENT SYSTEM (EXTENDED MENU)

Pressing button 4 at the "PAY-S" prompt the VMC will enter the payment system configuration routine. The display will show "MDB" for multi drop bus or "EXE" for Executive protocol. Choose the payment system using up or down, and confirm by pressing enter; the machine will restart.

**When you change this parameter to Executive, do not move the DIP-switch on the control board placed between the "MDB" and "EXE" connector. These DIP-switch must stay all the time in MDB position.**

**For Executive payment systems an interface (P/N 141216) is required. The power supply on the 15 pin Molex1991 connector is 24VDC (not anymore 24VAC)**

**In Executive the DEX/UCS data exchange protocol is not supported. However, the DIP-switch DEX/UCS- JACK must be in position DEX/UCS**

## DAILY VEND INHIBITED PERIOD (EXTENDED MENU)

It is used to inhibit the vend on certain trays, for up to 6 periods each day.

If ENTER button is activated at the "VDSTP" prompt the VMC will enter the daily vend inhibit period control routine with the follow submenu:

- "ENB X" Used to enable (X=1) or disable (X=0) the inhibited period function,
- "START1" 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
- "START2" 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
- "START3" 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
- "START4" 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
- "START5" 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
- "START6" 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
- "TRAY" Choose the tray to be inhibited
- "LIT X" 1 to turn off the light during inhibit period, 0 to leave the light on

**If a customer wants to purchase from an inhibited selection the message "NO VEND UNTIL hh:mm" is displayed.**

## AGE CONTROL

### NOTE: ADDITIONAL HARDWARE IS REQUIRED TO READ IDENTITY CARD)

This function is used to permit sales from some selection only to authorized person (after age discrimination or use of special validation card, depending of the hardware used); this validation can be enabled only on some periods of the week.

The programming function are:

- **"ENB X"** Used to enable (X = 1) or disable (X = 0) Age control.
- **"START"** Start date and time of Age control request.
- **"DAY"** Select the days of the week to start function, press enter to cycle through the days, press enter to change the status of the day (0 = not selected, 1 = selected). Pressing Enter it is possible to select a day. In addition to the days (abbreviated in English) there is a submenu **"ALL"** that selects and changes all the days of the week
- **"HOOR"** Press enter to change the start hour and minute for selected day.
- **"STOP"** Set the end date and time of Age control request
- **"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), pressing Enter again it is possible to select a day. In addition to the days (abbreviated in English) there is a submenu **"ALL"** that selects and changes all the days of the week.
- **"HOOR"** Press Enter to change the stop hour and minute for selected day.
- **"TRAY X"** Choose the tray on the Master to be controlled, pressing enter:
  - **"ALL"** To assign all selections of this tray (OFF = not assigned, ON = assigned)
  - **"CO XY"** To assign single selections (OFF=not selected, ON=selected)
- **"TRAY S X"** Choose the tray of the Slave (If avail) to be controlled, pressing enter:
  - **"ALL"** To program all selections of this tray (OFF=not selected, ON=selected)
  - **"CO XY"** To program single selections (OFF=not selected, ON=selected)
- **"AGE"** **Allows to set level of age (Used only in the MDB age control)**  
     **Age16: 16years old**                      **Age18: 18years old**

## RETURN TO OPEN DOOR MODE

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

## 2.3 MENU DIAGRAM

| MAIN MENU     | 1 st SUB MENU | 2 nd SUB MENU | 3 rd SUB MENU | 4 th SUB MENU | DESCRIPTION   |
|---------------|---------------|---------------|---------------|---------------|---|
| ERROR ROUTINE |               |               |               |               | Error routine                                       |
|               | NONE          |               |               |               | No errors exits                                     |
|               | LIFT          |               |               |               | Lift mechanism summary error                        |
|               |               | ERRXX         |               |               | See corresponding error                             |
|               | CTRL          |               |               |               | Control system summary error                        |
|               |               | DS            |               |               | Door switch   |
|               |               | RAN           |               |               | RAM check sum of service mode settings              |
|               |               | ACLO          |               |               | AC supply low                                       |
|               |               | SF            |               |               | Scaling factor incompatibility                      |
|               | SEL           |               |               |               | Selection switch summary error                      |
|               |               | SLXX          |               |               | Selection switch error in switch XX (01 - 12)       |
|               | CHAR          |               |               |               | Changer summary error                               |
|               |               | CC            |               |               | Changer communication error                         |
|               |               | TS            |               |               | Tube sense error                                    |
|               |               | IC            |               |               | Changer inlet chute blocked                         |
|               |               | TJXX          |               |               | Tube pay out jam in coin type XX                    |
|               |               | CRCH          |               |               | Changer ROM check sum                               |
|               |               | EE            |               |               | Excessive escrow attempts                           |
|               |               | NJ            |               |               | Coin jam  |
|               |               | LA            |               |               | Low acceptance rate                                 |
|               |               | DIS           |               |               | Disconnected acceptor                               |
|               |               | ROUT          |               |               | Coin routing error                                  |
|               | BUAL          |               |               |               | Bill validator summary error                        |
|               |               | BC            |               |               | Bill validator communication error                  |
|               |               | BFUL          |               |               | Bill validator stacker full                         |
|               |               | BILL          |               |               | Defective bill validator motor                      |
|               |               | BJ            |               |               | Bill validator jammed                               |
|               |               | BRCH          |               |               | Bill validator ROM check sum error                  |
|               |               | BOPn          |               |               | Bill validator stacker is open or out of position   |
|               |               | BS            |               |               | Bill validator sensor error                         |
|               | CRDR          |               |               |               | Card reader summary error                           |
|               |               | CRC           |               |               | Card reader communication error                     |
|               |               | CRXY          |               |               | Card reader non-transient error; code X, sub-code Y |
|               | DRUM          |               |               |               | Drum summary error                                  |
|               |               | LOCK          |               |               | Fail to lock  |
|               |               | UNLOCK        |               |               | Fail to unlock                                      |
|               |               | OPEN          |               |               | Fail to open  |
|               |               | CLOSE         |               |               | Fail to close                                       |

| MAIN MENU           | 1 st SUB MENU             | 2 nd SUB MENU | 3 rd SUB MENU | 4 th SUB MENU | DESCRIPTION                                      |
|---------------------|---------------------------|---------------|---------------|---------------|--|
| <b>TUBE PAYOUT</b>  |                           |               |               |               | Coin Pay Out routine (only MDB)                  |
|                     | tube 1-4 value            |               |               |               | Display coin value                               |
|                     | tube 1-4 value            |               |               |               | Dispense coin while showing value                |
| <b>TUBE FILLING</b> |                           |               |               |               | Tube Fill routine (only MDB)                     |
|                     | value on tube             |               |               |               | Display tube count                               |
| <b>TEST</b>         |                           |               |               |               | Test routine                                     |
|                     | SELE                      |               |               |               | Selection switch test                            |
|                     |                           | SL X          |               |               | Where X is the selection number                  |
|                     | DRUM                      |               |               |               | Drum Test functions                              |
|                     | POWER                     |               |               |               | Counter of power interruptions                   |
|                     | VEND                      |               |               |               | Vend test 1 to 255 test vends after door closed  |
|                     | FAIL                      |               |               |               | Historical counter of lift failures              |
| <b>PASS</b>         |                           |               |               |               | Password entry 10 seconds to enter 4-2-3-1-ENTER |
|                     | <b>CASH COUNTER</b>       |               |               |               |  |
|                     |                           | MONEY         |               |               | Money counter                                    |
|                     |                           |               | C-BOX         |               | Money introduced in cash box                     |
|                     |                           |               | C-TUB         |               | Money introduced in tubes                        |
|                     |                           |               | C-RET         |               | Money returned                                   |
|                     |                           |               | C-MAN         |               | Money manually payout                            |
|                     |                           |               | C-CAR         |               | Money paid with cashless                         |
|                     |                           |               | C-BIL         |               | Monney introduced in banknote reader             |
|                     |                           | CASH          |               |               | Cash counter display                             |
|                     |                           |               | XXXX          |               | Machine historical total cash                    |
|                     |                           |               | CA X          |               |  |
|                     |                           |               | XXXX          |               | Selection resettable                             |
|                     | <b>SALE COUNTER</b>       |               |               |               |  |
|                     |                           | SALE          |               |               | Product sales display                            |
|                     |                           |               | XXXX          |               | Machine historical                               |
|                     |                           | COL X         |               |               |  |
|                     |                           |               | XXXX          |               | Selection resettable                             |
|                     | <b>CASH PRICE SETTING</b> |               |               |               |  |
|                     |                           | PR 11         |               |               | Price used for cash payed vends                  |
|                     |                           | ...           |               |               | Price selection 11 until                         |
|                     |                           | PR88          |               |               | Price selection 88                               |
|                     |                           | ALL           |               |               | Same price for all selections                    |
|                     |                           | GROUP1        |               |               |  |
|                     |                           | GROUP10       | dd.cc         |               | Edit price (00.00 - 99.99)                       |



| MAIN MENU | 1 st SUB MENU              | 2 nd SUB MENU | 3 rd SUB MENU | 4 th SUB MENU | DESCRIPTION                                     |
|-----------|----------------------------|---------------|---------------|---------------|---|
|           | <b>KEY PRICE SETTING 1</b> |               |               |               | Price list 1 for cashless (only MDB)            |
|           |                            | PR 11         |               |               | Price selection 11                              |
|           |                            | ...           |               |               | until   |
|           |                            | PR88          |               |               | Price selection 88                              |
|           |                            | ALL           |               |               | Same price for all selections                   |
|           |                            | GROUP1        |               |               |   |
|           |                            | GROUP10       | dd.cc         |               | Edit price (00.00 - 99.99)                      |
|           | <b>KEY PRICE SETTING 2</b> |               |               |               | Price list 2 for cashless (only mdb)            |
|           | <b>KEY PRICE SETTING 3</b> |               |               |               | Price list 3 for cashless (only mdb)            |
|           | <b>SPACE TO SALES</b>      |               |               |               | Space to sales routine                          |
|           |                            | TRAY          |               |               | Number of tray (2or3) per shelf                 |
|           |                            | GROUP         |               |               | Group setting                                   |
|           |                            | V-POS         |               |               | Delivery position adjustment                    |
|           | <b>OPTION SETTING</b>      |               |               |               | Configuration menu                              |
|           |                            | C 1           |               |               | Not used  |
|           |                            | C 2 *         |               |               | Snack slave unit 0=not connected 1=connected    |
|           |                            | C 3 *         |               |               | Snack slave unit Extra rotation of spiral       |
|           |                            | C 4           |               |               | Open door message 0=Error 1=counter & error     |
|           |                            | C 5           |               |               | Counter reset mode                              |
|           |                            | C 6 *         |               |               | Snack slave unit Sold-out 0=disable 1=enable    |
|           |                            | C 7           |               |               | Save credit 0=clear after 5 min. 1= no clearing |
|           |                            | C 8           |               |               | Forced vend 0=disable 1=enable                  |
|           |                            | C 9           |               |               | Multi vend 0=disable 1=enable                   |
|           |                            | C 10          |               |               | Bill Escrow 0= enable 1= disable                |
|           |                            | C 11          |               |               | Event reporting mode                            |
|           |                            | C 12          |               |               | Not used  |
|           | <b>MDB SETTING</b>         |               |               |               | Correct change only control                     |
|           |                            | CONx          |               |               | Allow consumer overpay routine                  |
|           |                            |               | CONx          |               | Edit mode (0/1)                                 |
|           |                            | CCU           |               |               | Correct change Value                            |
|           |                            | ACC           |               |               | Unconditional acceptance value                  |
|           |                            | MCARD         |               |               | Maximum cashless credit                         |
|           |                            | CONFY         |               |               | Custom coinage configuration                    |
|           |                            |               | C01           |               | Changer Keypad 0-disable 1-enable               |
|           |                            |               | C02           |               | Low change equation 0 to 14                     |
|           |                            |               | C03           |               | Low change level                                |
|           |                            |               | C04           |               | Accepted bills                                  |
|           |                            |               | C05           |               | Accepted bills in low change condition          |
|           |                            |               | C06           |               | Accepted coins 1 - 8                            |
|           |                            |               | C07           |               | Accepted coins 9 – 16                           |

\* Parameter only available when Master & Snack Slave software is installed.

| MAIN MENU | 1 st SUB MENU           | 2 nd SUB MENU | 3 rd SUB MENU | 4 th SUB MENU | DESCRIPTION                               |
|-----------|-------------------------|---------------|---------------|---------------|---|
|           |                         |               | C08           |               | Accepted coins in low change 1 - 8        |
|           |                         |               | C09           |               | Accepted coins in low change 9 - 16       |
|           |                         |               | C10           |               | Factory reset                             |
|           |                         |               | C11           |               | Mktg feature Lift / Hand movement         |
|           |                         | ID 106        |               |               | Asset number                              |
|           |                         | TOKEN         |               |               | Value for bill used as "token"            |
|           | <b>LANGUAGE SETTING</b> |               |               |               | Language selection routine                |
|           |                         | CUST0         |               |               | Language for customer information         |
|           |                         | PROG          |               |               | Language for programing menu              |
|           | <b>TIME SETTING</b>     |               |               |               | Time and date routine                     |
|           |                         | ENBX          |               |               | Current setting                           |
|           |                         |               | Enbx          |               | Edit mode (0/1)                           |
|           |                         | YEAR          |               |               | Year setting                              |
|           |                         |               | yy            |               | Edit year, 00 - 99 (Y2K)                  |
|           |                         | MTH           |               |               | Month setting                             |
|           |                         |               | mm            |               | Edit month, 01 - 12                       |
|           |                         | DATE          |               |               | Date setting                              |
|           |                         |               | dd            |               | Edit date, 01 - 31                        |
|           |                         | HOUR          |               |               | Hour and minute setting                   |
|           |                         |               | hhmm          |               | Edit hour (00 - 24)                       |
|           |                         |               | hhmm          |               | Edit minute (00 - 59)                     |
|           |                         | DST           |               |               | Daylight saving time code                 |
|           |                         |               | OFF           |               | No daylight saving used                   |
|           |                         |               | AUS – EU -NA  |               | Australian, European, North American rule |
|           | <b>LIGHT SETTING</b>    |               |               |               | Lighting control routine                  |
|           |                         | ENBX          |               |               | Enable Light time manage                  |
|           |                         |               | ENBx          |               | X current setting (0 disable/1 enable)    |
|           |                         | STRT          |               |               | Start light off period                    |
|           |                         |               | DAY           |               | Start day setting                         |
|           |                         |               |               | NONX          | non, tue, ued, thu, Fri, sat, Sun, or ALL |
|           |                         |               |               | ...           | non, tue, ued, thu, Fri, sat, Sun, or ALL |
|           |                         |               |               | ALLX          | Edit mode (0/1)                           |
|           |                         |               | HOUR          |               | Start hour and minute setting             |
|           |                         |               |               | hhmm          | Edit hour (00 - 24)                       |
|           |                         |               |               | hhmm          | Edit minute (00 – 59)                     |
|           |                         | STOP          |               |               | Stop light off period                     |
|           |                         |               | DAY           |               | Stop day setting                          |
|           |                         |               |               | NONX          | non, tue, ued, thu, Fri, sat, Sun, or ALL |
|           |                         |               |               | ...           | non, tue, ued, thu, Fri, sat, Sun, or ALL |
|           |                         |               |               | ALLX          | Edit mode (0/1)                           |
|           |                         |               | HOUR          |               | Stop hour and minute setting              |
|           |                         |               |               | hhmm          | 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   |
|-----------|------------------------|---------------|---------------|---------------|---|
|           | <b>PAYMENT SETTING</b> |               |               |               | Payment system  |
|           |                        | MDB           |               |               | MDB   |
|           |                        | EXE           |               |               | Executive   |
|           | <b>VEND INHIBITION</b> |               |               |               | Vend inhibit period (daily)                                 |
|           |                        | ENB x         |               |               | 0 = disable – 1 = enable                                    |
|           |                        | START1        |               |               | Start 1° period   |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | STOP1         |               |               | Stop 1° period  |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | START2        |               |               | Start 2° period   |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | STOP2         |               |               | Stop 2° period  |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | START3        |               |               | Start 3° period   |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | STOP3         |               |               | Stop 3° period  |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | START4        |               |               | Start 4° period   |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | STOP4         |               |               | Stop 4° period  |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | START5        |               |               | Start 5° period   |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | STOP5         |               |               | Stop 5° period  |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | START6        |               |               | Start 6° period   |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | STOP6         |               |               | Stop 6° period  |
|           |                        |               | hhmm          |               | Hours:minutes   |
|           |                        | TRAY          |               |               | Tray to be inhibited  |
|           |                        |               | Tr.1 x-Tr.8 x |               | Set to 1 to chose the inhibit tray                          |
|           |                        | LIT X         |               |               | 0 leave the light on<br>1 turn off the light during inhibit |

| MAIN MENU | 1 st SUB MENU      | 2 nd SUB MENU | 3 rd SUB MENU | 4 th SUB MENU | DESCRIPTION                                       |
|-----------|--------------------|---------------|---------------|---------------|---|
|           | <b>AGE CONTROL</b> |               |               |               | Age control routine                               |
|           |                    | ENBX          |               |               | Enable Age control                                |
|           |                    |               | ENBx          |               | X current setting (0 disable/1 enable)            |
|           |                    | START         |               |               | Start age control period                          |
|           |                    |               | DAY           |               | Start day setting                                 |
|           |                    |               |               | NONX          | non, tue, ued, thu, Fri, sat, Sun, or ALL         |
|           |                    |               |               | ...           |   |
|           |                    |               |               | ALLX          | Edit mode (0/1)                                   |
|           |                    |               | HOUR          |               | Start hour and minute setting                     |
|           |                    |               |               | hhmm          | Edit hour (00 - 24)                               |
|           |                    |               |               | hhmm          | Edit minute (00 – 59)                             |
|           |                    | STOP          |               |               | Stop age period                                   |
|           |                    |               | DAY           |               | Stop day setting                                  |
|           |                    |               |               | NONX          | non, tue, ued, thu, Fri, sat, Sun, or ALL         |
|           |                    |               |               | ...           |   |
|           |                    |               |               | ALLX          | Edit mode (0/1)                                   |
|           |                    |               | HOUR          |               | Stop hour and minute setting                      |
|           |                    |               |               | hhmm          | Edit hour (00 - 24)                               |
|           |                    |               |               | hhmm          | Edit minute (00 – 59)                             |
|           |                    | TRAY          |               |               | Connect the tray to Age control                   |
|           |                    |               | CO xx         |               | Connect the columns xx of the tray to age control |
|           |                    | AGE           |               |               | In MDB age control to set age 16 or 18 years      |
|           | <b>RETURN</b>      |               |               |               | Return to vend mode                               |

## 2.4 EVENT TABLE - EVADTS 6.1 (FROM VERSION V1.40)

PA7\*CA For Cash  
 PA7\*DA\*1 For Cashless price 1  
 PA7\*DA\*2 For Cashless price 2  
 PA7\*DA\*3 For Cashless price 3  
 PA7\*TA\*1 Token

Event Reporting EA1 & EA2 (EVADTS 6,1)

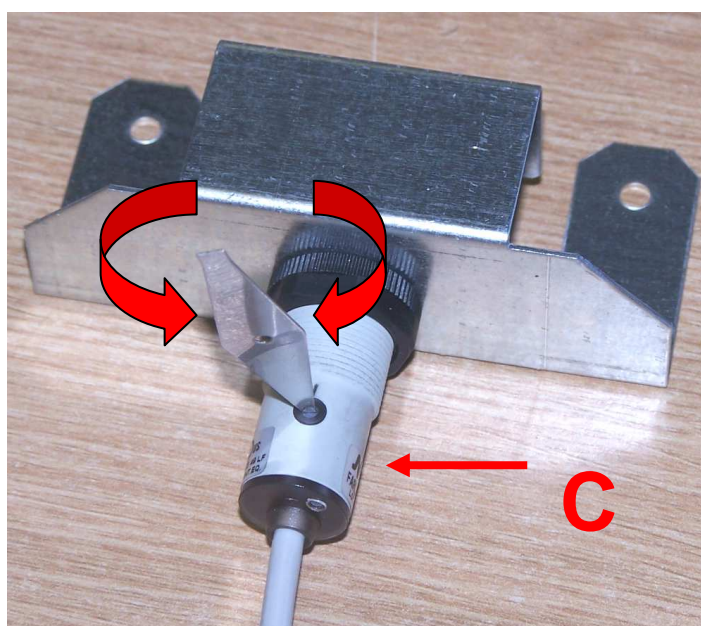
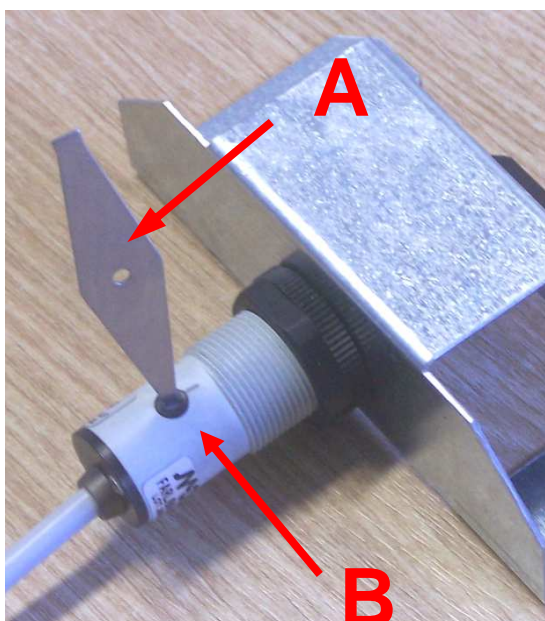
Event List reported DATE & TIME ,State active not active , Event Counter

| LIFT ERROR               | DRUM ERROR              | SOLDOUT STATUS           |
|--------------------------|-------------------------|--------------------------|
| EA1*EJM_1*111216*170957  | EA1*EJE_1*111216*170957 | EA1*ELB_1*111216*170957  |
| EA2*EJM_1*7*7**0         | EA2*EJE_1*7*7**0        | EA2*ELB_1*7*7**0         |
| EA1*EJM_2*111216*170957  | EA1*EJE_2*111216*170957 | until                    |
| EA2*EJM_2*13*13**0       | EA2*EJE_2*7*7**0        | EA1*ELB_64*111216*170957 |
| EA1*EJM_3*111216*170957  | EA1*EJE_3*111216*170957 | EA2*ELB_64*7*7**0        |
| EA2*EJM_3*7*7**0         | EA2*EJE_3*7*7**0        |                          |
| EA1*EJM_4*111216*170957  | EA1*EJE_4*111216*170957 | <b>DOOR OPEN STATUS</b>  |
| EA2*EJM_4*7*7**0         | EA2*EJE_4*9*9**0        | EA1*EGS*111216*170957    |
| EA1*EJM_5*111216*170957  | EA1*EJE_5*111216*170957 | EA2*EGS*7*7**0           |
| EA2*EJM_5*13*13**0       | EA2*EJE_5*7*7**0        |                          |
| EA1*EJM_6*111216*170957  | EA1*EJE_6*111216*170957 | <b>DOOR CLOSE STATUS</b> |
| EA2*EJM_6*7*7**0         | EA2*EJE_6*7*7**0        | EA1*EGT*111216*170957    |
| EA1*EJM_7*111216*170957  |                         | EA2*EGT*7*7**0           |
| EA2*EJM_7*9*9**0         | <b>PAYMENT SYSTEM</b>   |                          |
| EA1*EJM_8*111216*170957  | EA1*EGN*111216*170957   |                          |
| EA2*EJM_8*7*7**0         | EA2*EGN*7*7**0          |                          |
| EA1*EJM_9*111216*170957  | EA1*EAF*111216*170957   |                          |
| EA2*EJM_9*7*7**0         | EA2*EAF*7*7**0          |                          |
| EA1*EJM_10*111216*170957 | EA1*EAD*111216*170957   |                          |
| EA2*EJM_10*10*10**0      | EA2*EAD*7*7**0          |                          |
| EA1*EJM_11*111216*170957 | EA1*EAO*111216*170957   |                          |
| EA2*EJM_11*13*13**0      | EA2*EAO*7*7**0          |                          |
| EA1*EJM_12*111216*170957 | EA1*EAM*111216*170957   |                          |
| EA2*EJM_12*7*7**0        | EA2*EAM*7*7**0          |                          |
| EA1*EJM_13*111216*170957 | EA1*EAN*111216*170957   |                          |
| EA2*EJM_13*7*7**0        | EA2*EAN*7*7**0          |                          |
| EA1*EJM_14*111216*170957 | EA1*ENH*111216*170957   |                          |
| EA2*EJM_14*7*7**0        | EA2*ENH*7*7**0          |                          |
| EA1*EJM_15*111216*170957 | EA1*ENG*111216*170957   |                          |
| EA2*EJM_15*7*7**0        | EA2*ENG*7*7**0          |                          |
| EA1*EJM_16*111216*170957 | EA1*ENI*111216*170957   |                          |
| EA2*EJM_16*9*9**0        | EA2*ENI*7*7**0          |                          |
| EA1*EJM_17*111216*170957 |                         |                          |
| EA2*EJM_17*7*7**0        |                         |                          |

### 3 DRUM SENSOR ADJUSTMENT

If the product is not detected in the drum, but seems to be detected by the delivery flap sensor, the drum will open for a fixed time (independent whether the product is removed).  
**If the product is detected while the drum is turning or the product is removed, the previous mode function is cancelled and the timer is reset.**

Instruction for adjusting the photocell:






1. Insert the adjusting key "A", supplied with the photocell, in the cut "B" on the front side.
2. Turn the adjusting key until led "C" positioned on the lower side of the photocell is on.
3. Turn the adjusting key in the opposite direction until the led is off.
4. Turn in the opposite direction and stop the adjustment immediately after the led is on.
5. Check the change of the led from on (product not present) to off (product present) by passing an object between the photocell and the reflector.

## 4 TEMPERATURE ADJUSTMENT

### 4.1 COOLING UNIT CONTROL SERETEC DSM 5030 USED UNTIL FEBRUARY 2010

The temperature adjustment can be done in a very simple and direct way through the electronic control unit. Please proceed as follows:

To visualize the set temperature, press and release  key, the set temperature appears on display with blinking mode for approx. 10 seconds.

If you wish to modify this value, while it is blinking, press  key to increase, or press  key to decrease it. Wait till the controller exits from the programming mode and return to the operating mode (showing the internal temperature of the cell), which is registered automatically.

The so-called set-point is the temperature, which makes the compressor stop, because it reaches the ideal temperature to maintain the products loaded in the vending machine. The compressor will re-start when it exceeds the set-point temperature + parameter tDIF (delta temperature).

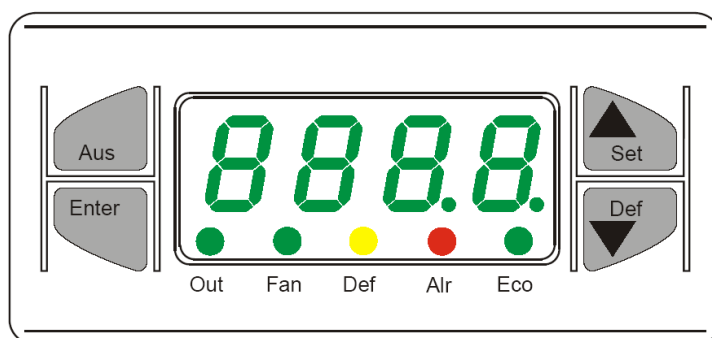


Photo 1



## Description and function of the SERETEC electronic cooling unit control.

The electronic control unit operates and commands the cooling system, it checks all the related components, compressor, fans and defrosting system and it is independent from the electronics that commands all the vending machine.

As shown in photo 1, the electronic control unit has a 4 digit 7-segment LED display, 5 colored signal LEDs and 4 command keys.

For this vending machine model, the keys normally used are on the right side, "set" arrow up and "def" arrow down.

The "set" key is used to show the set-point and to increase the set value, the "def" key is used to decrease the set-point value (as described in the previous paragraph) and also to do a forced defrosting, sometimes useful when inconveniences arise.

Example: an object remains jammed (a piece of paper, an empty product or other different objects) between the delivery chute and the door, causing a strange entry of air inside the refrigerated cell, which, depositing on the evaporator, freezes and blocks the air passage causing a malfunction.

To do a forced defrosting and not a programmed one, push the "Def" key for at least 5 seconds, and the defrosting cycle will start immediately.

The 5 colored LEDs, situated under the temperature display, indicate the operating status of the cooling system's components, as follows :

- Green LED light "out" indicates the status of compressors,
  - If the light is fixed, the compressor is on.
  - If the light blinks, the compressor is stand-by to start.
  - If the light is off, the compressor is off.
- Green LED light "fan" indicates the status of internal fans,
  - If the light is fixed, the fans are on.
  - If the light blinks, the fans are stand-by to start.
  - If the light is off, the fans are off.
- Yellow LED light "def" indicates the status of defrosting cycle,
  - If the light is fixed, the defrost cycle is on.
  - If the light blinks, it is stand-by to start defrost cycle.
  - If the light is off, the defrost is not activated.
- Red LED light "alr" indicates, that the door of the vending machine is open.
  - In this case, if the compressor and the fans were working when the door is opened, the electronic control unit will be turned off and put them in stand-by. To reactivate them just after the door closure, in order to avoid the cooling system to work in abnormal way, the display alternately shows the temperature and "A-di".
  - In this case, the LEDs "out" and "fan" are blinking.
- Green LED light "eco" is not used for this model.



Moreover, the electronic control unit is able to show a malfunction of temperature sensors, by indicating the following messages on the display :

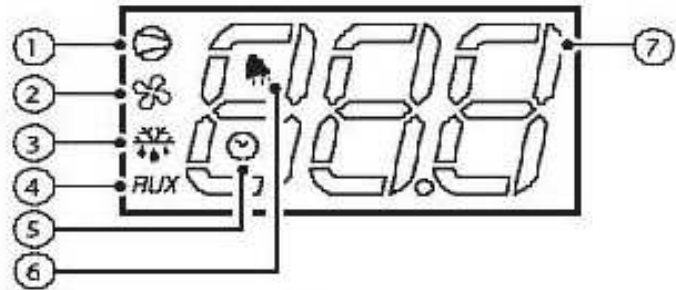
- “E-P1” probe for ambient temperature is down or disconnected.
- “E-P2” probe for evaporator is down or disconnected.

The cooling system is controlled by various parameters inserted in the software of the electronic control unit and cannot be modified by the users. This is to avoid any possible and unintentional modifications to the parameters, that may cause some malfunctions to the cooling system. In any case, for a special request, it is always possible to contact the technical assistance who may support you for various problems.

## 4.2 ELECTRONIC COOLING UNIT CONTROL CAREL USED FROM MARCH 2010

### Display

1. Compressor led
2. Fan led
3. Defrost led
4. Auxiliary exit
5. Clock
6. Alarm
7. 7-LED Segment

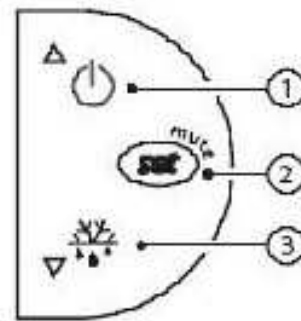


### Key board

**Key 1 UP**, in normal function if pushed for more than 1 second, it visualizes the temperature of probe 2 (evaporator). If pushed during the visualization of the set point it increases the set value.

**Key 2** pushed more that 1 second allows the visualization and setting of the set point.

**Key 3 DOWN**, pushed for more than 3 seconds starts or stops the defrost, and if it is pushed during the visualization of the set point it decreases the set value.



### To check and adjust the temperature.

- Push for more than 1 second SET, to visualize the temperature of the set point;
- Increase or decrease the value with UP or DOWN;
- Push SET to confirm the new value.

### Description and function of the CAREL Electronic cooling unit control.

When switching on the control unit for the first times there will be a delay of three minutes in the compressor and evaporator fan starting .

During normal working, the compressor will stop only after reaching the set point temperature and the evaporator fans will work always.

When opening the door (if there is a door switch) both the compressor (if working) and fans will stop.

When closing the door, the fans will start immediately, while the compressor will have a delay of three minutes from the last switching off, even if the door is closed before.

|  |    |               |
|--|----|---------------|
| GLASSFRONT VENDING MACHINES                | CE | Rev. 1.12     |
| MODELLS: G-DRINK SVE GF6 / GF9 – DR6 / DR9 |    | Page 41 of 42 |

## Description of the main signals and alarms

| Code   | Description  |
|--|--|
| LED flashing   | Inserting a function or a delay in timing  |
| ES   | The compressor has a timing delay when starting, therefore the LED of the compressor on the display starts to flash                  |
| E0 still or flashing                                     | Temperature probe error.<br>- The probe signal is interrupted or in short circuit.<br>- Probe is not compatible with the instrument. |
| E0 alarm signal is stable                                | It is the only alarm present (the temperature value is no longer shown).<br>It flashes if there are other alarms.                    |
| E1 flashes   | Evaporator probe error.<br>- The probe signal is interrupted or in short circuit.<br>- Probe is not compatible with the instrument.  |
| EE visualized during functioning or activation           | Error in reading of the machine parameters.<br>See memorised data errors   |
| EF visualized during functioning or activation           | Error in reading of the working parameters.<br>See memorised data errors.  |
| Ed flashing  | The last defrosting finishes when exceeding the maximum time. The indication disappears if the next defrost is finished correctly.   |
| dF flashing  | Defrosting in progress: It is not an alarm signal but an indication that the cooling unit is doing a defrosting.                     |
| The control unit display and all the LED's are flashing: | - The door is open.<br>- The door switch is not working correctly.<br>- The door remains open for more than one hour.                |

The cooling unit is controlled by various parameters inserted in the software of the control unit and unchangeable by the user to avoid unwanted modifications to the same parameters, that could cause a malfunctioning of the cooling unit. In any case, for any particular needs it is possible to contact the technical assistance service that will assist you in various problems

**PROGRAMMING MANUAL EN**  
**GLASSFRONT VENDING MACHINE**  
**G-DRINK SVE GF6 / GF9 –DR6 / DR9**

| REVISION | DATE                       | TYPE OF REVISION  |
|----------|----------------------------|---|
| 1.0      | 30 <sup>th</sup> Mar. 2009 |   |
| 1.1      | 04 <sup>th</sup> May 2009  |   |
| 1.2      | 18 <sup>th</sup> May 2009  |   |
| 1.3      | 11 <sup>th</sup> June 2009 |   |
| 1.4      | 18 <sup>th</sup> June 2009 | Group of selections implemented   |
| 1.5      | 11 <sup>th</sup> Nov 2009  | Age control – Money Counters implemented  |
| 1.6      | 05 <sup>th</sup> May 2010  | MDB Age control - New Reset   |
| 1.7      | 22 <sup>th</sup> Sep 2010  | Bucket position adjustment - Fail Historic  |
| 1.8      | 12 <sup>th</sup> Dec 2010  | CONFY – C3 used in Executive  |
| 1.9      | 02 <sup>nd</sup> Feb 2011  | CONFY – C11 used for marketing feature<br>"Product hand movement"   |
| 1.11     | May 2012                   | Modifications from Software Version 1.40:<br>CON – C 8 Forced vend rule for cashless systems implemented.<br>CCOC New parameter MCARD in order to limit the credit accepted with cashless.<br>CCOC New menu ID106 to setup Asset number on the machine reported in ID106.<br>2 additional cashless price lists (total 3) implemented.<br>CON – C 11 Event reporting mode implemented.<br>CON - C 5 Counter reset mode modified to be in line with EVADTS.<br>German menu-names corrected. |
| 1.12     | 24 <sup>th</sup> May 2012  | Modifications from Software Version 1.41:<br>CCOC New parameter "Token" value for 1 bill i.e. 1 USD   |
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