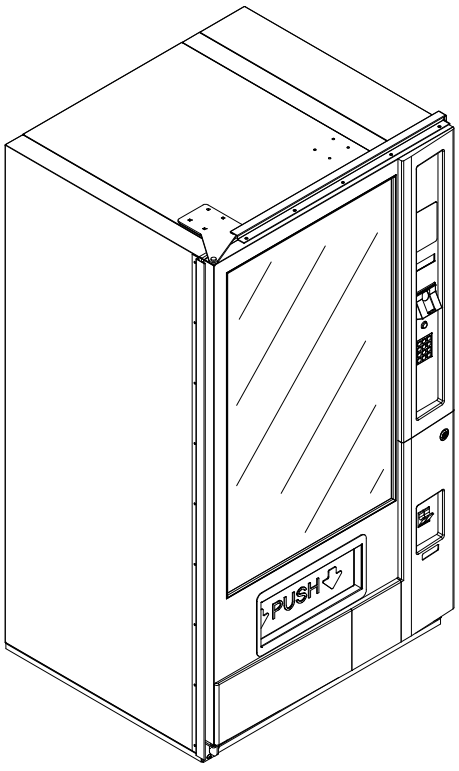
G-SNACK / G-SNACK PLUS
MASTER & SLAVE

PROGRAMMING MANUAL



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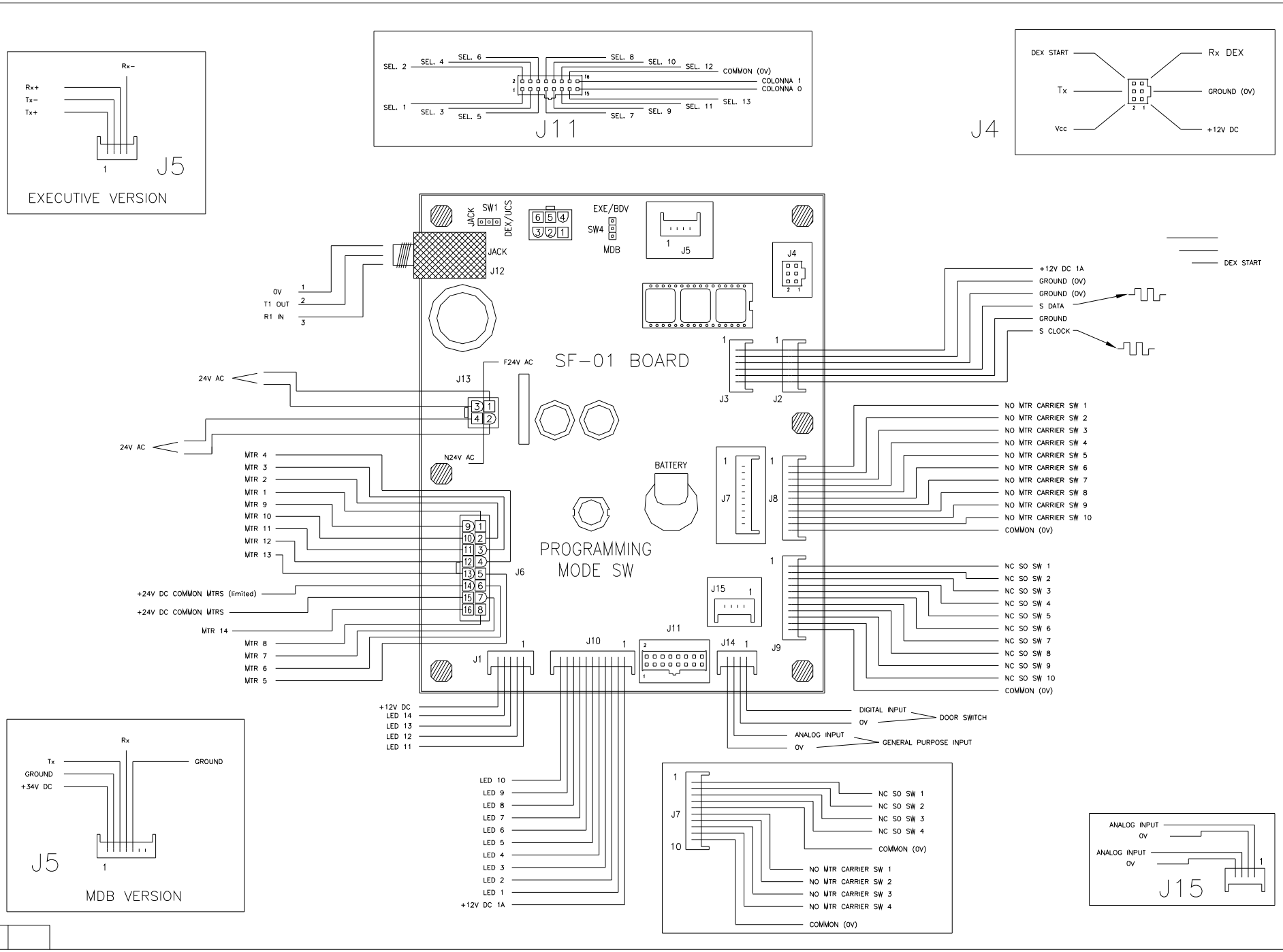

Rx−
Rx+
Tx−
Tx+
1
J5
EXECUTIVE VERSION
SEL. 2
SEL. 4
SEL. 6
SEL. 8
SEL. 10
SEL. 12
COMMON (0V)
COLONNA 1
COLONNA 0
SEL. 1
SEL. 3
SEL. 5
SEL. 7
SEL. 9
SEL. 11
SEL. 13
J11
J4
DEX START
Rx DEX
Tx
GROUND (0V)
Vcc
+12V DC
JACK
SW1
DEX/UCS
EXE/BDV
SW4
MDB
J5
J12
0V
T1 OUT
R1 IN
SF−01 BOARD
F24V AC
N24V AC
J13
24V AC
24V AC
J3
J2
J7
J8
BATTERY
PROGRAMMING
MODE SW
J6
J15
J11
J10
J14
J1
J9
+12V DC 1A
GROUND (0V)
GROUND (0V)
S DATA
GROUND
S CLOCK
DEX START
NO MTR CARRIER SW 1
NO MTR CARRIER SW 2
NO MTR CARRIER SW 3
NO MTR CARRIER SW 4
NO MTR CARRIER SW 5
NO MTR CARRIER SW 6
NO MTR CARRIER SW 7
NO MTR CARRIER SW 8
NO MTR CARRIER SW 9
NO MTR CARRIER SW 10
COMMON (0V)
NC SO SW 1
NC SO SW 2
NC SO SW 3
NC SO SW 4
NC SO SW 5
NC SO SW 6
NC SO SW 7
NC SO SW 8
NC SO SW 9
NC SO SW 10
COMMON (0V)
MTR 4
MTR 3
MTR 2
MTR 1
MTR 9
MTR 10
MTR 11
MTR 12
MTR 13
+24V DC COMMON MTRS (limited)
+24V DC COMMON MTRS
MTR 14
MTR 8
MTR 7
MTR 6
MTR 5
+12V DC
LED 14
LED 13
LED 12
LED 11
DIGITAL INPUT
0V
DOOR SWITCH
ANALOG INPUT
0V
GENERAL PURPOSE INPUT
LED 10
LED 9
LED 8
LED 7
LED 6
LED 5
LED 4
LED 3
LED 2
LED 1
+12V DC 1A
J7
NC SO SW 1
NC SO SW 2
NC SO SW 3
NC SO SW 4
COMMON (0V)
NO MTR CARRIER SW 1
NO MTR CARRIER SW 2
NO MTR CARRIER SW 3
NO MTR CARRIER SW 4
COMMON (0V)
Rx
Tx
GROUND
GROUND
+34V DC
J5
MDB VERSION
ANALOG INPUT
0V
ANALOG INPUT
0V
J15

SANDENVENDO SPECIFICATION FOR ELECTRONIC BOARD SF01

HARDWARE FEATURE

Power supply : 24 Volt AC 2 A rms

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 micro-controller with up to 4096 Kbit of program eprom and 256 Kbit of Eprom memory used to store Setting and audit.

External slave board (on master VMC placed near main board) used to drive the vending motors with current control and limitation.

External slave board (for slave VMC) used to drive the vending motors with current control.

External slave Optical detector board (optional for master and for slave) used to check the product delivery.

External slave Lift power board (optional only for master) used to drive lift motor.

External slave fluorescent display 2 lines 20 characters

Master and Slave optically isolated serial link for MDB

EXECUTIV

SOFTWARE FEATURE

Service Programming routine
Credit Accumulation
Coin Mechanism Interface
Consumer Manipulation and Vend process
Multi pricing
Escrow
Correct change Indicator
Manual Payout
Manual Tubes filling
Saved Error listing
Master slave capability

Cooling unit controlled by separate electronic thermostat

FUNCTION OF THE SELECTION BUTTONS

Selection Nr.: 1	Home ⌫	Abort or escape a programming point
Selection Nr.: 2	Up ⇧	Increase or next programming point by pushing selection button 2
Selection Nr.: 3	Down ⇩	Decrease or previous programming point by pushing selection button 3
Selection Nr.: 4	Enter / Store ↵	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
Selection Nr.: *	Slave selection	Request for slave selection

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

SERVICE ROUTINE

In the service mode, information such as sales by selection, total sales, total cash flow through the machine, and diagnostic error codes can be accessed by using the selection buttons and the electronic display. In addition, storage 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).

The selection switches are used to step through the various programming function as described in the 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 code for the various paths are as follows.

EROR Error routine

CPO Coin Payout Routine

TUFL Tube Fill Routine

TEST TEST Vend Routine

PASS Required a password to access on the protected menu
The password is the sequence of selection 4-2-3-1. The purpose of this password is to prevent accidental reprogramming by the operator

- **CASH** Cash counter routine
- **SALE** Sales counter routine
- **PRIC** Prices setting for master
- **PRICS *** Prices setting for Slave
- **STOS** Spaces to sales setting for master
- **STOSS *** Spaces to sales setting for Slave
- **CON** Machine configuration setting routine
- **CCOC** Overpay routine
- **LANG** Language selection
- **TIME** Time and data routine
- **LIT** Programmed switching-off of neon
- **SEC-M** Master safety temperature setting
- **SEC-S*** Slave safety temperature setting
- **PAY-S** Payment system
- **LIFT** Program lift position (optional)
- **VDSTP** 6 weekly vending inhibit period
- **PREU** password for preview mode
- **AGE C** age control program
- **RTN** Return to unprotected menu

Protected menu

RTN Return to normal mode door open state

* The slave menues are shown only if slave machine is enabled (see CON – C2).

ERROR ROUTINE

If the ENTER button is activated at the **"EROR"** prompt the VMC will enter in the error routine. If no errors have occurred since the last error reset the display will show a **"NONE"** message. If an error has been detected since the last error reset the display will show the first summary level error code that has occurred, such as **"COLJ",** which would indicate a column jam error. Using the UP or DOWN buttons will cycle through the various summary level error.

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

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

The most common errors are :

VEND	Vend Mechanism on master
VENDS	Vend Mechanism on slave
CTRL	Control error
SELS	Selection Switch
CHAR	Changer
BVAL	Bill Validator
DETEC	Optical detector
RFRG	Temperature error

MASTER VEND ERROR ROUTINE

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

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

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

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

SLAVE VEND ERROR ROUTINE (ONLY WHEN SLAVE IS ENABLED)

The function is the similar to the vend error routine, the only difference is that the error showed is **"CJXS",** and it's related to the slave machine.

ATTENTION: The vend errors (both for master and slave) are cancelled automatically when the master door is closed.

CONTROL ERROR ROUTINE

If the ENTER button is activated at the **"CTRL"** prompt the VMC will display the kind of control error, possible error is:

- **"DS"** Door switch,. the door was opened for more than 1 hour, this is considered as a door switch not working well.
- **"COM M"** Unable to communicate with motor board of master machine
- **"COM S"** Unable to communicate with motor board of slave machine
- **"COM L"** Unable to communicate with lift slave board, communication problem, lift not installed.
- **"LIFT"** The lift movement is not working correctly, could be motor blocked, motor encoder not working, micro switch for 0 position not detected, or micro switch of delivery position not detected.

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 **"EROR"** message.

SELECTION SWITCH ERROR ROUTINE

If the ENTER button is activated at the **"SEL"** prompt the VMC will display a **"SLXX"** message where **"XX**" indicates the first selection switch error (switch always closed).

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 **"EROR"** 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 "**EROR**" 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 it is possible to 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 **"EROR"** message.

OPTICAL BARRIER ERROR ROUTINE

If the ENTER button is activated at the "**DETEC**" prompt the VMC will display a "**OPTI M**", or "**OPTI S**"; this message is indicating an optical barrier error. "**m**" is the optical barrier on master machine, and "**s**" is the optical barrier of slave machine. If the ENTER button is pressed and held for two seconds the error code will be cleared.

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

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

This error appears only if the optical barrier is enabled (see menu CCOC - CONFY-C11 for master and CCOC - CONFY-C12 for slave).

NOTE: If CONFY C11 = 1, this error will disable all selection on master.

If CONFY C12 = 1, this error will disable all selection on slave.

TEMPERATURE ERROR ROUTINE

If the ENTER button is activated at the "**RFRG**", one or more of the following error messages will appear:

- "**SEN.M**" The temperature sensor of the master VMC is not connected
- "**SEN.S**" The temperature sensor of the slave VMC is not connected, will appear only when slave machine it's enable.
- "**T.MAS**" The temperature of the master VMC has exceeded the safety level for more than an hour, and the set selections have been inhibited, see menu "**SEC.M**".
- "**T.SLA**" The temperature of the slave VMC has exceeded the safety level for more than an hour and the set selections have been inhibited, see menu "**SEC.S**"

Pressing the Entry button for some seconds cancels the error.

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 "**EROR**" message.

COIN PAYOUT ROUTINE (work only on 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.

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

Pressing the ENTER button will pay out the displayed coin type.

Activation of the HOME button while a coin value is displayed will return the VMC to the **"CPO"** prompt.

TUBE FILL ROUTINE (work only on MDB)

If the ENTER button is activated at the **"TUFL"** prompt the VMC will enter the tube fill routine and will show the value of the coin introduced.

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.

TEST ROUTINE

If the ENTER button is activated at the "**TEST**" prompt the VMC will enter the TEST vend routine.

Upon entry into this routine the display will show the first TEST routine " **VEND**" or the description of the TEST routine available are the follows:

" **VEND**" to TEST the vend motor on master machine
" **VENDS**" to TEST the vend motor on a slave machine (only if slave is enable)
"**SL**" to TEST selection switch
"**RELAY**" to TEST the relays that command the light
"**TEMP**" to read the master and slave probe temperature
"**POWER**" to visualize the data of the last 6 power on and off operations.
"**LIFT**" to TEST the lift (if installed)

“ **VEND** “

Activation of the ENTER button (at the “ **VEND** “ routine) will show the column number “**CXY**” (**X** is number of row, **Y** is number of column). Activation of the enter button will perform the vending TEST for selected column, using the up or down button will change the column number.

Vends made on this routine will not increase the vend counters.

Activation of the HOME button while a column is displayed will return the VMC to the " **VEND** "prompt.

Activation of the HOME button at the **" VEND** " prompt will return to “**TEST**” prompt.

“**VENDS**” (shown only if slave is enabled)

TEST vends from slave machine. Same functions as in “**Vend**” for master machine.

” **SL**”

Activation of the ENTER button (at the ” **SL**” routine) will show the last selection button pressed “**SE***Y*” where *Y* is the number of the selection. Use this routine to TEST all the selection switch. To come back to the “**TEST**” menu, keep pressed the first selection for two seconds.

“**RELAY**”

Entering the “**RELAY**” routine the display will show:

“**LIT M**” relay that drive the lights of the master machines

“**LIT S**” relay that drives the lights of the slave machines (only if slave is enable)

Pushing the ENTER button will switch the corresponding relay, to exit the function push the HOME button, to select the relay to be TESTed push the UP or DOWN buttons.

“**TEMP**”

Activation of the ENTER button in the “**TEMP**” routine will show the temperature of the master machine, pushing the UP button will show the temperature of the slave machine. If the probe is disconnected “**ERR**” will appear instead of the temperature. Push the HOME button to return to the main menu.

“**POWER**”

Pushing the ENTER button in the “**POWER**” routine will show the date, hour and the temperature (master and slave) of the last switching on of the machine.

Pushing the UP and DOWN buttons will show the last 6 events (switching on and switching off). Push the HOME button to exit the “**POWER**” routine.

“**LIFT**”

Entering this routine the display will show near the word “**LIFT**”, 5 values (0 or 1) that indicate the lift status:

1 if 0 the main board of the lift works correctly, if 1 the board doesn’t work.

2 if 0 the micro switch on delivery lift position is not pressed, if 1 the micro switch is pushed (or disconnected since is N.C. signal).

3 if 0 the micro switch on lift position isn’t pressed, if 1 the micro switch is pushed (or disconnected since is N.C. signal).

4 if 0 the last command has been done correctly, if 1 the motor doesn’t move or the encoder has no signal.

5 if 0 the last command has been done correctly, if 1 the lift has gone in timeout.

The number in the lower line (value can be increased or decreased with the UP and DOWN buttons) shows the destination position of the lift. Pushing the Enter button the lift goes to the selected position, pushing 0 the lift goes UP; pushing 5 the lift goes to the delivery area.

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

PASS ROUTINE

This routine is used to access at the protected menu.

At the “**PASS**” prompt press enter button, display will be dark no chracters shown, press the follow sequence of selection button 4-2-3-1-4 (password must be entered within 10 seconds) press Enter to confirm (selection 4) now you can see the first protected menu “**CASH**” (use UP and DOWN button to cycle on the available menu).

CASH COUNTER ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "**CASH**" prompt the VMC will enter the cash counter routine. Upon entry into this routine the display will show the "**TOTAL**" cash counter (master plus slave machine). Using UP and DOWN button you can read the counter on that order:

- "**TOTAL**" Master plus slave total counter
- "**TOTAL MASTER**" Only master total counter
- **“SHELF X MASTER**” Counter divided by shelf (x=1-8) for master
- **“SEL. XX MASTER”** Counter per selection (xx =11-88) for master
- "**TOTAL SLAVE**" Only slave total counter
- **“SHELF X SLAVE**” Counter divided by shelf (x=1-8) for slave
- **“SEL. XX SLAVE”** Counter per selection (xx =11-88) for slave

Press ENTER to go directly from master to slave counter.

Pressing button “0” the machine will show “**CLEAR**”, if you want to clear all the counter (also the historical counter), you must digit the programming password (2-3-1-4) correctly, otherwise the counter are not cleared.

Activation of the HOME button while a selection counter is displayed will return the VMC to the "**CASH**" prompt. Push button # 2 to advance to the next menu.
Activation of the HOME button at the "**CASH**" prompt will return the VMC to the unprotect area.

SALES COUNTER ROUTINE (protected menu)

If the ENTER button is activated at the "**SALE**" prompt the VMC will enter the sales counter routine. This routine has the some structure, and use the some command, of cash routine. Please refer to “**CASH**” menu for description.

MASTER PRICE SETTING ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "**PRIC** " prompt the VMC will enter the price setting routine, the display will show a "**PR 11**” price on motor 11; if you are in MDB you can choose “**COIN**” for coinage price and “**KEY**” for cashless price, to activate different price see “**CON**”-“**C1**” submenu.

An “*” symbol near the column means that this motor is not installed (or have an error) see STOS configuration.

In multi-price mode you can choose different price for each selection; using UP and DOWN buttons will cycle through available column (**11 – 88**) or “**ALL**”, “**ALL**” is used to change the price on all selection. Activation of the ENTER button will show the actual price using UP and DOWN button will increase or decrease the price by one lowest coin value respectively.

Button 5 and 6 (fast up, fast down) works in this menu, they increase or decrease selection by 8 positions (change tray), this selection is used also to fast increase or decrease price value.

It is possible to copy current price to next selection pressing “#” button (the display must show PR. XX without the value) .

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. Push button # 2 to advance to the next menu. Activation of the HOME button returns the VMC to unprotected area.

If the VMC is working on price holding (with CONFY C2 = 2) the price menu is used to program the line of price holding.

SLAVE PRICE SETTING ROUTINE
(PROTECTED MENU SHOWN ONLY IF SLAVE IS ENABLED)

The function is the same as the previous menu, only the set prices are for the Slave machine, and the menu is called "**PRIC S**"

MASTER SPACE TO SALES SETTING ROUTINE (PROTECTED MENU)

This function is used to recognise the number and the position of the motors installed in the machine. This configuration must be used every time one or more motors are added or taken off.

If the ENTER button is activated at the "**STOS"** prompt the VMC will show "**AUTO**".

Pressing again selection 4 on "**AUTO**" menu, the machine starts from column 11 to column 88 and TESTs all the motors installed (near the number of the motor TESTed OK will appear if the motor works correctly, if not NO will appear if the motor is not installed or if defective.

The auto-configuration takes 4 minutes to be completed.

Special functions:

- This configuration is stored in a non volatile memory you can stop this auto- configuration keeping pressed selection 1.
- Pressing selection 5 on "AUTO" menu, the machine will enable all the motors without TESTing them (this is useful to TEST defective motors).
- Pressing selection 0 on "AUTO" menu, the machine will TEST only the motors that haven't already been found by the VMC.

SLAVE SPACE TO SALES SETTING ROUTINE (PROTECTED MENU SHOWN ONLY IF SLAVE IS ENABLED)

The function is the same as the previous menu, only the set prices are for the Slave machine and the menu is called "**STOS S**".

MACHINE CONFIGURATION SETTING ROUTINE (PROTECTED MENU)

If the ENTER button is activated at the "**CON**" prompt the VMC will enter the machine configuration setting routine. The display will show a "**C01**" message where the "0**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. Push button # 2 to advance to the next menu. Activation of the HOME button returns to unprotected area.

THE FOLLOWING INFORMATION DESCRIBES VARIOUS MACHINE CONFIGURATION SETTINGS

C01 CASHLESS SYSTEM PRICE (ONLY MDB)

This setting is used to allow different vend price with cashless MDB:

C01 = 0 same price for Coinage and cashless

C01 = 1 different price for Coinage and cashless

C02 SLAVE ENABLE (EXTENDED MENU)

This parameter enables or disables the slave machine and relative programming menu:

C02 = 0 Slave machine not installed, normal menu.

C02 = 1 Slave machine installed, extended menu.

C03 EXTRA ROTATION

This parameter is used to activate an extra rotation of the spiral if the product fall is not detected by the optical barrier (it works only with optical barrier enable) this parameter is used for master and slave.

C03 = 0 Extra rotation disable.

C03 = 1 Extra rotation enable.

C04 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:

C04 = 0 Display only the Existing Error or NONE

C04 = 1 Display total Sales, total Cash and Existing Error or NONE (default).

C05 RESET COUNTER MODE

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

C05 = 0 All the re-settable counter will be reset only using a reset command on MIS communication mode (command DEX-UCS).

C05 = 1 All the re-settable counter will be reset when you open the door, read at least one of the re-settable counter and close the door.

C06 SOLD-OUT MODE

This parameter is used to enable sold-out status of the spirals; if it's enable (C6 = 1) when the optical barrier doesn't detect the product, the VMC set the spiral in sold-out status. This feature is applied for master and slave.

The sold-out are cleared (also for the slave) when the door of the master is open.

If the optical barrier is disable, this feature doesn't works.

C06 = 0 column always available

C06 = 1 column inhibited if empty was detected by previous vend

C07 SAVE CREDIT MODE

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

C07 = 0 Clears the credit if nothing happens in the last five minutes (default).

C07 = 1 Keeps the credit indefinitely.

C08 FORCE VEND

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

- If you insert money and make a selection (full or empty selection is the same)
- If you put coins that you can obtain like escrow (coins that go in the tube of the coinage) and you don't reach the maximum price.

C08 = 0 Force vend disable (default).

C08 = 1 Force vend enable.

C09 MULTI VEND

This parameter enables or disables automatic escrow process:

C09 = 0 Multi Vend disable (you obtain automatically the escrow after the selection) (default)

C09 = 1 Multi Vend enable (you can make multi vend, when you want escrow, you have to press the escrow button)

C10 BILL ESCROW MODE

This parameter allows the escrow of bill. If enabled and the last bill inserted takes the credit over the maximum price, the bill will 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 LIFT ENABLE

This parameter enable the lift (optional kit):

C11 = 0 Lift disable (default)

C11 = 1 Lift enable.

C12 LIFT EXTRA MOVEMENT

This parameter enable (if lift is enable in C11) an additional movement on second vend attempt to facilitate the product delivery:

C12 = 0 No additional movement. (default)

C12 = 1 Lift make an additional UP movement after the 2nd delivery attempt.

C13 MACHINE TYPE SETTING FOR LIFT CONTROL

This parameter is used to set the max. lift travel height (upper position).

C13 = 0 G-Snack Standard

C13 = 1 G-Snack Plus

Activation of the HOME button will return the VMC to the "**CON**" prompt. Push button # 2 to advance to the next menu.
Activation of the HOME button at the "**CON**" prompt will return the VMC to the unprotect area.

CORRECT CHANGE ONLY CONTROL (protected menu)

CORRECT CHANGE RULE (MDB only)

IF IN CCOC CON = 0 VMC manages automatically the changer setting

CCU correct change value

If (changer is able to change back (CCU value + Maximum Price))correct change message is not showed otherwise correct change message will be show.

On this mode the VMC automatically accepts only coins and /or bill that can be returned to the customer.

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

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

Correct change led is set according to C2 (Low change equation) and C3 (minimum coins Tube level) setting.

If correct change is OFF VMC accept coins set in CONFY - C06 and C07 and bill set on CONFY- C4.

If correct change is ON VMC accept coins set in CONFY - C08 and C09 and bill set on CONFY- C5.

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 ""**CON X**", 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. The submenu are:

CCU If you press enter at the "**CCU**" prompt, the display shows the actual value, you can change it using up or down button.

ACC If you press enter at the "**ACC**" prompt, the display shows the actual value, you can change it using up or down button

CONFY (Submenu, are used by VMC only if CCOC-CON = 1) if you press enter at the "**CONFY**" prompt, the display shows"**C1**", using up or down button you can choose the other submenu ("**C1**"-"**C12**"), which have this function:

CONFY

C01 COINAGE KEYPAD ACTIVATION (COINAGE MDB)

C01 = 0 Disabled
C01 = 1 Enabled

C02 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

E is the highest coin value reported in the tubes

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

0 : TUBE A and TUBE B and TUBE C and TUBE D
1 : TUBE A or TUBE B or TUBE C
2 : TUBE A only
3 : TUBE B only
4 : TUBE C only
5 : TUBE D only
6 : TUBE B or TUBE C or TUBE D
7 : TUBE A and TUBE B or TUBE C
8 : TUBE A and TUBE B or TUBE D
9 : TUBE A and TUBE C or TUBE D
10 : TUBE B and TUBE C or TUBE D
11 : TUBE A and TUBE D or TUBE C
12 : TUBE B and TUBE D or TUBE A
13 : TUBE A or TUBE C
14 : TUBE A or TUBE B and TUBE C
15 : TUBE A or TUBE B
16 : TUBE A and TUBE B and TUBE C and TUBE D and TUBE E
17 : TUBE A or TUBE B or TUBE C or TUBE D or TUBE E

ATTENTION:
When using **Executive** please be aware to set **"CONFY"** parameter C2 to 0 otherwise machine is working in **"Price holding"** mode.

C02 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. On this mode each time you press a selection the machine sends to the payment system the number of selection pressed in the following format:

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

C02 = 0 The prices are stored in the VMC and they are sent to payment system.

C02 = 2 The machine works in price holding and the line of the price must be programmed on the “PRIC (PRICs” for the Slave) menu. The machine shows the price stored on the payment system if it supports the price show feature.

C03 LOW CHANGE LEVEL (MDB MODE)

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

C03 WAITING AFTER VEND REQUEST (EXECUTIVE) UP TO SW V1.38

To add extra time after vend request for long answers from Executive cashless payment systems. Setting range: 0 up to 250 sec.

C03 NOT USED (EXECUTIVE MODE) FROM SW V 1.39

C04 BILL ACCEPTED (EQUAL TO "C6" AND "C7")

Bills accepted when "CORRECT CHANGE" LED is OFF

C05 BILL ACCEPTED IN LOW CHANGE CONDITION (EQUAL TO "C8" AND "C9")

Bills accepted when "CORRECT CHANGE" LED is ON

C06 & C07 COINS ACCEPTED BY THE CHANGER

C06 = Coins 1 to 8

C07 = Coins 9 to 16

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

Each coin has a binary value as:

C06:	coin	1	=	1	**C07:**	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 coins 1 – 2 – 3 – 4 –13 – 15 have to be accepted, the correspondent values have to be added to find the set value:

C06 = 1 + 2 + 4 + 8 = **15**

C07 = 16 + 64 = **80**

C08 & C09 COINS ACCEPTED BY THE CHANGER
IN LOW CHANGE CONDITION

This parameters are used to determine the coins accepted by the changer, **when the VMC is in low change condition**. The values of this submenu are calculated in the same way as for “C06”,“C07” submenu.

C10 RESET TO THE FACTORY SETTING (DEFAULT VALUES)

Be careful using this option; after reset all parameters are set to default values and all counter (also the total counter) are reset to 0. After reset it is necessary to perform an auto configuration (see “STOS” menu) and to check all parameters.

Reset procedure

Set in menu **CONFY** parameter "C10" to the value **18** and press button 4 to confirm.

Turn off the machine: Press and hold pressed the button on the board and switch on the machine. Wait until the end of the initialisation, indicated by the display message "RESET". Release the button on the board.

C11 OPTICAL BARRIER MASTER (OPTIONAL)

This menu is used to enable the optical barrier detection of the product for master machine:

C11 = 0 optical barrier disable not installed

C11 = 1 optical barrier enable, and if not working properly inhibits all the selections.

C11 = 2 optical barrier enable, and if not working correctly the machine will disable it and will suppose that each motor rotation a product is sold.

C12 OPTICAL BARRIER SLAVE (OPTIONAL)

This menu is used to enable the optical barrier detection of the product for slave machine:

C12 = 0 optical barrier disable not installed

C12 = 1 optical barrier enable, and if it doesn't works all the selection is inhibited.

C12 = 2 optical barrier enable, and if it doesn't works the machine will disable it and will suppose that each motor rotation a product is sold.

Activation of the HOME button will return the VMC to the "**CCOC**" prompt. Push button # 2 to advance to the next menu.
Activation of the HOME button at the "**CCOC**" prompt will return the VMC to the unprotect area.

LANGUAGE CONFIGURATION (protected menu)

If ENTER button is activated at the "**LANG**" prompt the VMC will show the actual language used by VMC. Using up or down to toggle through the available language:

- "**ENGL.**" English
- "**ITAL.**" Italian
- "**FREN.**" French
- "**SPAN.**" Spanish
- "**GERM.**" German
- "**GREE.**" Greece
- "**CUSTO**" Customer message programmed by DEX.
-

NOTE: If no message is programmed display will be dark when the door is closed.

Press enter to confirm the new language or escape to return to the "**LANG**" prompt.
Push button # 2 to advance to the next menu.
Activation of the HOME button at the "**LANG**" prompt will return the VMC to the unprotect area.

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 :

"**ENB *X***" 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 "**ENB X**" message,

"**MONTH**" Press enter show actual month, up down modify the value, enter to confirm, home to come back at "**ENB X**" message,

"**DATE**" Press enter show actual date, up down modify the value, enter to confirm, home to come back at "**ENB X**" 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 "**ENB X**" 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 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,

"**START**" Set the start date and time of light energy saving using the following submenu:

"**DAY**" Select the days of the week for start function, press enter to cycle through the days, press enter to change the status of the day (0 =not selected, 1= selected). 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

"**HOUR**" Press enter to change the start hour and minute for selected day.

"**STOP**" Set the stop date and time of light energy saving 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), 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.

"**HOUR**" Press Enter to change the stop hour and minute for selected day.

TEMPERATURE CONTROL - MASTER (PROTECTED MENU)

This function is used to inhibit assigned selections loaded with temperature sensitive products in case the inner temperature exceeds for more than 1 hour the temperature safety level (**T.SEC**). The selections with a lower number than **S.SEC** are inhibited. The reactivation is done by cancelling the "**T.MAS**" errors. If a machine with enabled temperature time control is switched off, the selections will be disabled if after power on the temperature is higher than **T.SEC**.

Menu "**SEC.M**" has the following submenues:

"**DSP *X*"** Master temperature display. *X* = 1 enabled - *X* = 0 disabled. If the selections are inhibited by the temperature control, "#" is displaye next to the temperature.

"**ENB *X***" Used to enable (X = 1) or disable (X = 0) the temperature time control,

"**T.SEC**" Temperature safety level, programmable from 4° to 20°C:

"**S.SEC**" Selections to be inhibited when temperature exceeds safety level. Press Enter to change the last selection controlled by the safety function (the temperature of all selections lower than S.SEC value is controlled).

TEMPERATURE CONTROL - SLAVE (PROTECTED MENU SHOWN ONLY IF SLAVE IS ENABLED)

The "**SEC.S**" menu has the same functions as the previous one, it controls the temperature of the selections of the slave machine.

PAYMENT SYSTEM (PROTECTED MENU)

Pressing confirm at "**PAY-S**" prompt the VMC will enter the payment system configuration routine. The display will show a "**MDB**" for multi drop bus or "**EXE**" for executive bus. Choose the payment system using up or down, and confirm pressing enter; the machine will restart.
When you change this parameter, you have to move the DIP switch (placed between the "MDB" and "EXE" connector) from MDB to EXE position, follow the serigraphy on the board.

LIFT CONFIGURATION (PROTECTED MENU, ONLY SHOWN WHEN LIFT IS ENABLED)

This function defines the stop positions of the lift, for each selection (optional module). It is important to consider the following points:

- The first lower shelf (from the bottom) cannot use the lift.
- The highest shelf must always use the lift to sell products.
- To load the highest shelf, it is necessary to push down the lift manually (the safety micro-switch of the lift must not be activated).
- We recommend for the upper shelves to stop the lift 50mm lower than the shelf for reliable product dispense.

Pressing ENTER at the "**LIFT**" prompt the machine shows "**HOME**", pressing UP and DOWN passes the shelves "**TR 2" – "TR 8**" (from shelf 2 to 8), pressing Enter shows "**ALL**" for programming the same position for all the selections of the shelf; in case of the "**HOME**" position the value of the position is shown directly.

Pressing UP and DOWN runs through the selection of the selected shelf. Pressing Enter shows the programmed position.
The position start from 9 to 59 from top to bottom (this number is the number of the hole used to fix the tray). When you change a position you can check it using selection 5 (move the lift to that position).
It is important to start the test from default position (upper side of the machine) if the lift is not on the start position press selection 6 (reset to start pos.).

NOTE: To disable the lift for a shelf or individual selection set the lift position to 0.

If the lift has an error, it can be disabled (see menu CON C11), clear the error, move the lift manually (power off the machine before) on top position and disable the upper shelf.
To do it use the daily vend inhibited period and set START1 = 00.00, STOP1 = 23.59 TR 6 = 1 (6th shelf disabled from 00.00 to 23.59).

VEND INHIBITED PERIOD (PROTECTED MENU)

It is used to inhibit the vend on programmed trays, on 6 periods each day of the week.

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

"**ENB** *X* "	Used to enable X = 1 or disable X = 0 the inhibit period function,
"**START 1**"	Set the start time (HH mm) of the first inhibited period of the day
"**STOP 1**"	Set the stop time (HH mm) of the first inhibited period of the day
"**DAY 1**"	Set the day of the week when first stop period is used:
"**MON Y**"	Monday, where y = 0 not enabled y = 1 enabled
"**TUE Y**"	Tuesday, where y = 0 not enabled y = 1 enabled
"**WED Y**"	Wednesday, where y = 0 not enabled y = 1 enabled
"**THU Y**"	Thursday, where y = 0 not enable y = 1 enabled
"**FRI Y**"	Friday, where y = 0 not enabled y = 1 enabled
"**SAT Y**"	Saturday, where y = 0 not enabled y = 1 enabled
"**SUN Y**"	Sunday, where y = 0 not enabled y = 1 enabled
"**ALL Y**" until	Set all day of the week y = 0 not set y = 1 set
"**START 6**"	Set the start time (HH mm) of the 6th inhibited period of the day
"**STOP 6**"	Set the stop time (HH mm) of the 6th inhibited period of the day
"**DAY 1**"	Set the day of the week to apply the 6th inhibit period
"**TRAY**"	Set tray on master to be inhibited, TR 1 x (x = 0 not selected x = 1 selected)
"**TRAYS**"	Set tray on slave to be inhibited only when slave is enable
"**LIT X**"	x = 0 lights remain on during inhibition, x = 1 lights are off during inhibition, (works only when all trays are inhibited)

During this period the vend on the selected tray is stopped and the VMC shows the message "NO VEND UNTIL hh:mm" when you press an inhibited selection.

"PREV" PREVIEW PASSWORD SETTING MODE (PROTECTED MENU)

The PREVIEW function allows to display audit data - Cash and Sales - by selection and total machine as well as diagnostic information with outer door closed after a five digit code has been inserted in sequence via the keyboard.

At the **PREV** prompt press button # 4 to enter the menu.

Display shows the actual password i.e. **0 1 2 3 4** (0 is fixed, second digit is flashing and can be changed).

Change second digit using button # 2 up or button number # 3 down.

Confirm setting of second digit by pushing button # 4.

Display shows: **0 1 2 3 4** (third digit is flashing and can be changed).

Change third digit using button # 2 up or button number # 3 down.

Confirm setting of third digit by pushing button # 4.

Display shows: **0 1 2 3 4** (fourth digit is flashing and can be changed).

Change fourth digit using button # 2 up or button number # 3 down.

Confirm setting of fourth digit by pushing button # 4.

Display shows: **0 1 2 3 4** (fifth digit is flashing and can be changed).

Change fifth digit using button # 2 up or button number # 3 down.

Confirm setting of fifth digit by pushing button # 4.

Display shows: **PREV.** Press button # 2 to advance to the next menu.

AGE CONTROL (PROTECTED MENU, ADDITIONAL HARDWARE REQUIRED TO READ IDENTITY CARD)

This function is used to permit some selection only to authorized person (about age discrimination or use of special validation card, depending of the hardware kit used); this validation can be enabled only on some periods of the week.
The programming function are:

"**ENABLE**"	"**ENB** *X* " Used to enable (X=1) or disable (X=0) Age control,
"**START**"	Set the start date and time of Age control request using the following submenu:
"**DAY**"	Select the days of the week for start function, press enter to cycle through the days, press enter to change the status of the day (0 = not selected, 1 = selected). 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
"**HOUR**"	Press enter to change the start hour and minute for selected day.
"**STOP**"	Set the end date and time of Age control request 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), 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.
"**HOUR**"	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 program all the selection of this tray (OFF = not selected, ON = selected)
"**CO XY**"	To program the single selection (OFF = not selected, ON = selected)
"**TRAYS X**"	Choose the tray on the slave to be controlled, this function it's available only when the slave it's enable, pressing enter:
"**ALL**"	To program all the selection of this tray (OFF = not selected, ON = selected)
"**CO XY**"	To program the single selection (OFF = not selected, ON = selected)
"**LIGHT C**"	Light control (ENB=1 enable, ENB=0 disable), this function is used to turn on the light only when age control is passed by the customer (if no credit it's inserted the light will be turned off after 1 minute).

The age validation could be made before selection, in that case the customer has 1 minute to enter the credit and make the selection.

A customer doesn't need to be re-validate, until a credit it's avaiable.

Activation of the HOME button will return the VMC to the "**AGE-C**" prompt. Push button # 2 to advance to the next menu.

"RTN" RETURN TO OPEN DOOR MODE

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

APPENDIX A

PROGRAMMING DIAGRAM

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4° th SUB MENU	DESCRIPTION
EROR					Error routine
	NONE				No errors exits
	VEND				Vend mechanism error on master
		CJ XX			Column jam in column XX (from 11 to 88)
	VEND S				Vend mechanism error on slave
		CJS XX			Column jam in column XX (from 11 to 88)
	CTRL				Control system summary error
		DS			Door switch
		COM M			Communication error on master mtr board
		COM S			Communication error on slave mtr board
		COM L			Communication error on Lift board
		LIFT			Lift movement not working
	SEL				Selection switch error
		SLXX			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
	BVAL				Bill validator summary error
		BC			Bill validator communication error
		BFUL			Bill validator stacker full
		BILL			Detective 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
	RFRG				Temperature error
		SEN.M			Master temperature sensor error
		SEN.S			Slave Temperature sensor error
		T.MAS			Master safety temperature
		T.SLA			Slave safety temperature
	DETEC				Sensor error
		OPTI M			Master Optical barrier error
		OPTI S			Slave Optical barrier error
CPO					Coin Pay Out routine (only MDB)
	tube 1-5 value				Display coin value
	tube 1-5 value				Dispense coin while showing value

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4° th SUB MENU	DESCRIPTION
TUFL					Tube Fill routine (only MDB)
	value of tube				Display tube count
TEST					Test routine
	VEND				Vend test master
		CO 11-88			Vending motor test, only configured motor is showed
	VEND S				Vending motor test for slave
		CO 11-88			Vending motor test, only configured motor is showed
	SELE				Selection switch test
		SL X			Where X is the selection number
	RELAY				Relay test
		LIT M			Activates Master relay lights
		LIT S			Activates Slave relay lights
	TEMP				Temperature probe reading
	POWER				Displays last details of switching on and off
	LIFT				Lift test
		XX			Lift positioning
PASS					Password entry 10 seconds to enter 4-2-3-1-ENTER
	CASH				Cash counter display
		TOTAL			Total cash counter Master + Slave
		TOTAL MASTER			Total cash counter Master only
		SHELF X MASTER			Cash counter per shelf X Master
		SEL XX MASTER			Cash counter per selection Xx Master
		TOTAL SLAVE			Total cash counter Slave only
		SHELF X SLAVE			Cash counter per shelf X Slave
		SEL XX SLAVE			Cash counter per selection Xx Slave
			CLEAR		Press 0 + 2-3-1-4 to clear all the counter cash and sale
	SALE				Product sales display
		TOTAL			Total sale counter Master + Slave
		TOTAL MASTER			Total sale counter Master only
		SHELF X MASTER			Sale counter per shelf X Master
		SEL XX MASTER			Sale counter per selection Xx Master
		TOTAL SLAVE			Total sale counter Slave only
		SHELF X SLAVE			Sale counter per shelf X Slave
		SEL XX SLAVE			Sale counter per selection Xx Slave
			CLEAR		Press 0 + 2-3-1-4 to clear all the counter cash and sale
	PRIC				Price setting routine master
		COIN			Price setting for coinage
		KEY			Price setting for cashless (MDB) with CON C01 = 1
			PR 11-88		From selection 11 to 88
			COPY		Use “#” key to copy price on next selection
			ALL		Set all master price at the some value
				dd.cc	Edit price (00.00 - 99.99)
	PRIC S				Price setting for slave machine
		COIN			Price setting for coinage
		KEY			Price setting for cashless (MDB) with CON C01 = 1
			PR 11-88		From selection 11 to 88
			COPY		Use “#” key to copy price on next selection
			ALL		Set all master price at the some value
				dd.cc	Edit price (00.00 – 99.99)
	STOS				Motor detection routine for master
		AUTO			Automatic configuration

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4° th SUB MENU	DESCRIPTION
	STOS S				Motor detection routine for slave
		AUTO			Automatic configuration
	CON				Configuration menu
		C01			0 = same price coinage and cashless – 1 = different price
		C02			Slave machine 0 = disable - 1 = enable
		C03			Extra rotation of spirals 0 = disable - 1=enable
		C04			Open door message 0= Error – 1 = counter & error
		C05			Counter reset mode 0=after audit 1=after read using menu
		C06			Sold-out 0 = disable – 1 = enable
		C07			Save credit 0 = clear after 5 min. – 1 = save unconditionally
		C08			Force vend 0 = disable – 1 = enable
		C09			Multi vend 0 = disable – 1 = enable
		C10			Bill Escrow 0 = enable – 1 = disable
		C11			0 = lift not installed - 1 = lift installed
		C12			0 = lift normal – 1 = lift extra movement
		C13			Machine type setting for lift 0 = Standard 1 = G-Snack Plus
	CCOC				Correct change only control
		CON X			Allow consumer overpay routine
			CON X		Edit mode X = 0 overpay not allowed – X = 1 allowed
		CCU			Correct change Value
		ACC			Unconditional acceptance value
		CONFY			Custom coinage configuration
			C01		Changer Keypad 0 = disable – 1 = enable
			C02		Low change equation 0 to 16
			C03		Low change level
			C04		Accepted bills
			C05		Accepted bills in low change condition
			C06		Accepted coins 0-255
			C07		Accepted coins 0-255
			C08		Accepted coins in low change 0-255
			C09		Accepted coins in low change 0-255
			C10		Factory reset
			C11		Optical Master 0= dis. 1=ena. always 2=ena. If no problem
			C12		Optical Slave 0= dis. 1=ena. always 2=ena. If no problem
	LANG				Language selection routine
		ENG			
		…			ENG, ITA, FRE, SPA, GER, GRE, CUSTOM
		CUSTO			
	TIME				Time and date routine
		ENB X			Edit mode x = 1 enable - x = 0 disable
		YEAR			Year setting
			yy		Edit year, 00 - 99 (Y2K)
		MONTH			Month setting
			mm		Edit month, 01 - 12
		DATE			Date setting
			dd		Edit date, 01 - 31
		HOUR			Hour and minute setting
			hh mm		Edit hour (00 - 24)
			hh mm		Edit minute (00 - 59)
		DST			Daylight savings time code
			OFF		No daylight savings used
			AUS		Australian rules
			EU		European rules
			NA		North American rules

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4° th SUB MENU	DESCRIPTION
	LITE				Lighting control routine
		ENB X			Enable Light power manage
			ENB X		X current setting 0 = disabled - 1 = enabled
		START			Start light off period
			DAY		Start day setting
				MON X	
				…	MON, TUE, WED, THU, FRI, SAT, SUN, or ALL
				ALL X	Edit mode (0/1)
			HOUR		Start hour and minute setting
				hh	Edit hour (00 - 24)
				mm	Edit minute (00 – 59)
		STOP			Stop light off period
			DAY		Stop day setting
				MON X	
				…	MON, TUE, WED, THU, FRI, SAT, SUN, or ALL
				ALL X	Edit mode (0/1)
			HOUR		Stop hour and minute setting
				hh	Edit hour (00 - 24)
				mm	Edit minute (00 – 59)
	SEC.M				Master safety temperature routine
		DSP X			Enable x = 1 or disable x = 0 display Master temperature
		ENB X			Enable x = 1 or disable x = 0 temperature safety
		T.SEC			Set the max. temperature level
			yy		From 4°C to 20°C
		S.SEC			Setting last selection to be inhibited in case of temp error
			11-88		From 11 to 88
	SEC.S				Slave safety temperature routine
		DSP X			Enable x = 1 or disable x = 0 display Slave temperature
		ENB X			Enable x = 1 or disable x = 0 temperature safety
		T.SEC			Set the max. temperature level
			yy		From 4°C to 20°C
		S.SEC			Setting last selection to be inhibited in case of temp error
			11-88		From 11 to 88
	PAY-S				Payment system
		MDB			MDB
		EXE			Executive
	LIFT				Lift position program
		HOME			Home position
		TR X			Tray to be programmed from 2 to 8
			ALL		All motors of X shelf
			X1… X8		Select the motor of X shelf
				YY	0 = not use lift, YY = lift position for tray X
	VDSTP				Vend inhibit period (Weekly)
		ENB X			X=1 enable x=0 disable
		START 1-6			Start 1°-6° period
			hhmm		Hours and minutes start
		STOP1-6			Stop 1°-6° period
			hhmm		Hours and minutes stop
		DAY 1-6			Day of week to use 1°-6°period
			MON X		MON, TUE, WED, THU, FRI, SAT, SUN, or ALL
			…		
			ALL X		Edit mode (0/1)

MAIN MENU	1 st SUB MENU	2 nd SUB MENU	3 rd SUB MENU	4° th SUB MENU	DESCRIPTION
		TRAY			Tray on master to be inhibited
			TR 1 x -TR 8 x		X = 0 not inhibited X = 1 inhibited
		TRAY S			Tray on slave to be inhibited
			TR 1 x-TR 8 x		X = 0 not inhibited X = 1 inhibited
		LIT X			Light off during inhibit period only when all tray are select
	PREV				Set Preview password at door close
		0 - - - -			Change the blinking digit use up-down confirm with enter
	AGE C				Age control program
		ENB			Enable Age control function
			ENB X		X current setting (0 disable/1 enable)
		START			Start Age control request period
			DAY		Start day setting
				MON X	
				…	MON, TUE, WED, THU, FRI, SAT, SUN, or ALL
				ALL X	Edit mode (0/1)
			HOUR		set hour and minute to start
				hh	Edit hour (00 - 24)
				mm	Edit minute (00 – 59)
		STOP			Stop Age control request period
			DAY		Stop day setting
				MON X	
				…	MON, TUE, WED, THU, FRI, SAT, SUN, or ALL
				ALL X	Edit mode (0/1)
			HOUR		Stop hour and minute setting
				hh	Edit hour (00 - 24)
				mm	Edit minute (00 – 59)
		TRAY X			Tray X of master machine
			ALL		Set all tray x selection
				ON-OFF	Turn on-off age control for all tray X of master
			CO X1… X8		Select the motor of X shelf
				ON-OFF	Turn on-off age control for single selection of master
		TRAYS X			Tray X of slave machine
			ALL		Set all tray x selection
				ON-OFF	Turn on-off age control for all tray X of slave
			CO X1… X8		Select the motor of X shelf
				ON-OFF	Turn on-off age control for single selection of slave
		LIGHT C			The light are only when age control passed
			ENB X		X current setting 0 = disabled – 1 = enabled)
	RTN				Return to unprotect mode
RTN					Return to sales mode

TEMPERATURE ADJUSTMENT

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).

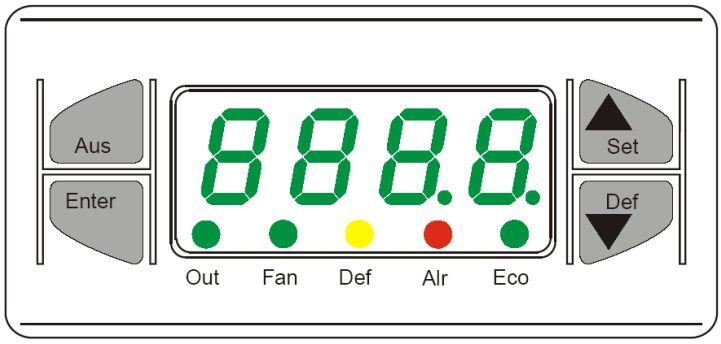


Photo 1

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.
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 :

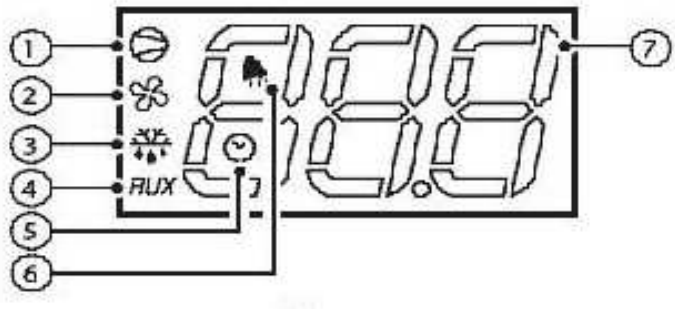
- “E-P1” probe for ambient temperature is down or disconnected.
- “E-P2” probe for evaporator is down or disconnected.

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.

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-Segment LED

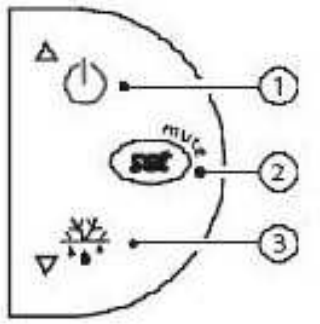


Key board

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.

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. - The probe signal is interrupted or in short circuit. - 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). It flashes if there are other alarms.
E1 flashing	Evaporator probe error. - The probe signal is interrupted or in short circuit. - Probe is not compatible with the instrument.
EE visualized during functioning or activation	Error in reading of the machine parameters. See memorised data errors
EF visualized during functioning or activation	Error in reading of the working parameters. 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. - The door switch is not working correctly. - 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

G-SNACK / G-SNACK PLUS

MASTER & SLAVE

REVISION	TYPE OF REVISION	DATE
Rev.1	SVE English original	
Rev.2	SVE English version revised	14.03.2008
Rev.3	Software release 1.01	20.01.2009
Rev.4	Software release 1.08	
Rev.5	Software release 1.14	01.12.2009
Rev.6	Software release 1.32	25.11.2011
Rev.7	Manual updated. SW 1.38: CON C13 Machine type setting added.	27.01.2012 SVG
Rev. 8	SW 1.39: CCOC CONFY C03 corrected. Menue LIFT corrected – setting 0 = Lift disabled.	13.04.2012 SVG