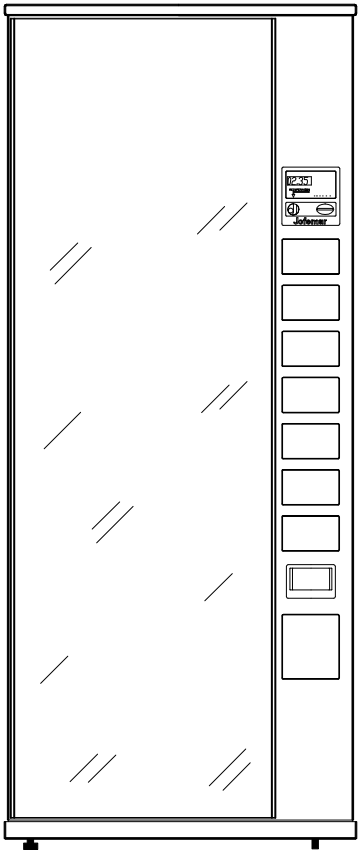
Jofemar

ARTIC 272



Jofemar S.A. (31350 Peralta (Navarra, Spain)) Tfn. 948-751212 Fax 948-750143

INDEX:

1. - Description of vending machine.

1.1 - Construction.

The metallic parts are made of 1.5 mm plate steel, protected by anti corrosion treatment and one coat of exterior paint.

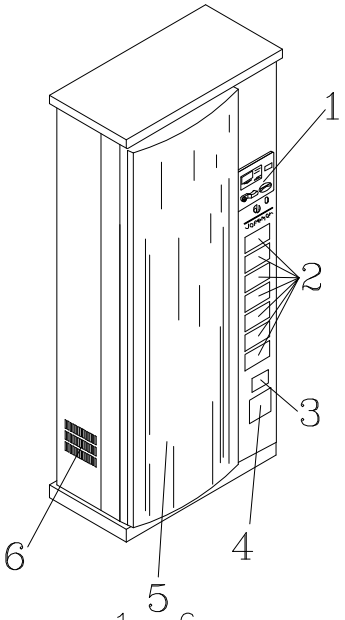


figure 1.01

1 Coin entry panel.
2 Product selection buttons.
3 Coin recovery section.
4 Product recovery section.
5 Publicity panel.
6 Ventilation grill.

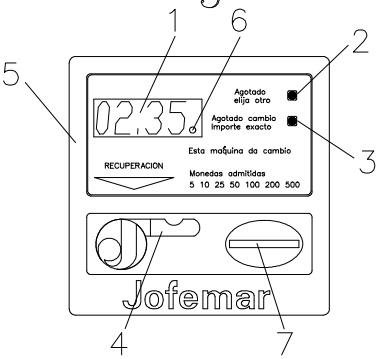


figure 1.02

1 4-digit display.
2 Sold-out indicator.
3 Out-of-change indicator.
4 Recovery lever.
5 Coin entry panel.
6 Breakdown indicator.
7 Coin entry.

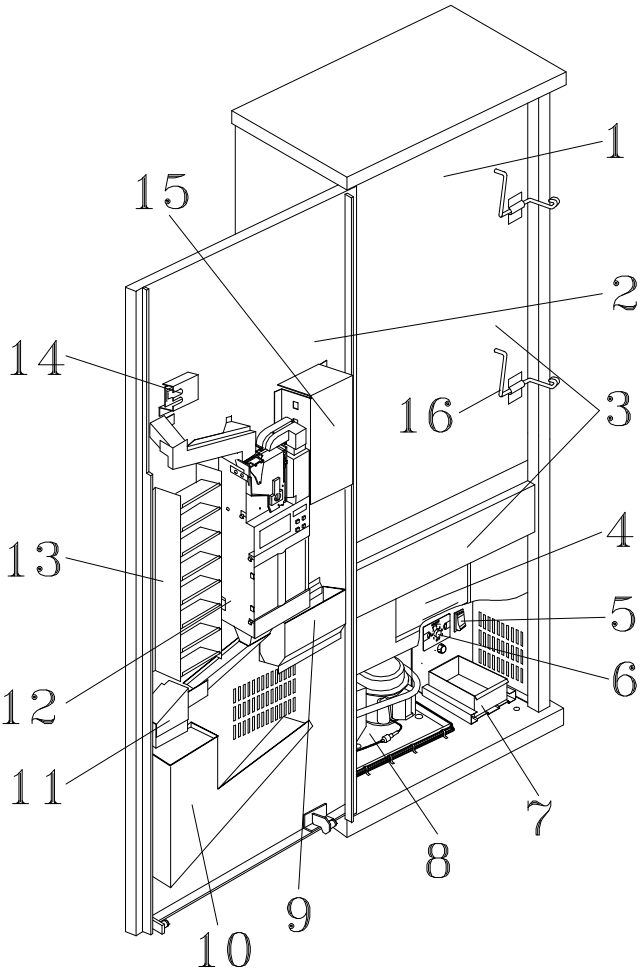


figure 1.03

1 Cabinet.
2 Exterior door.
3 Insulating doors.
4 Can exit door.
5 Main switch.
6 Thermostat.
7 Drip tray.
8 Refrigeration unit.
9 Coin deposit.
10 Product recovery section.
11 Coin recovery section.
12 Coin mechanism.
13 Product exhibition section.
14 Display.
15 Electronic control.
16 Interior door latch.

1.1.1 - Publicity panel.

The vending machine has an area for publicity of 1688 x 560 mm.

1.1.2 - Exterior door.

The selection buttons, the product exhibition section and the product recovery section are located on the exterior door.
It also has a coin slot, a display, out-of-change and sold-out indicators, and coin recovery drawer.
This door has a safety lock, that locks at three points on the main frame.

1.1.3 - Ventilation grill.

There are three ventilation grills inside for the circulation air where the compressor and condenser are located; these are found in the sides and at the back of the vending machine.
These ventilation grills must be kept free from dust and also check that they are not obstructed by plastic, papers, etc.

1.1.4 - Product retainer.

It is made up of 8 columns; 6 of which are independent, but there are two others that are joined to the same product selection button, as seen in figure 1.04. They are placed in parallel inside the refrigerated chamber.
Each double column has a capacity of 34 cans and the vending machine can sell cans of 33 and 35 cl.
The total capacity of the vending machine is therefore 272 cans.
Each double column has a product extractor activated by a 24 VDC motor. The motor alternately extracts one can from each of the two columns.
Each column also has a product sold-out detector.

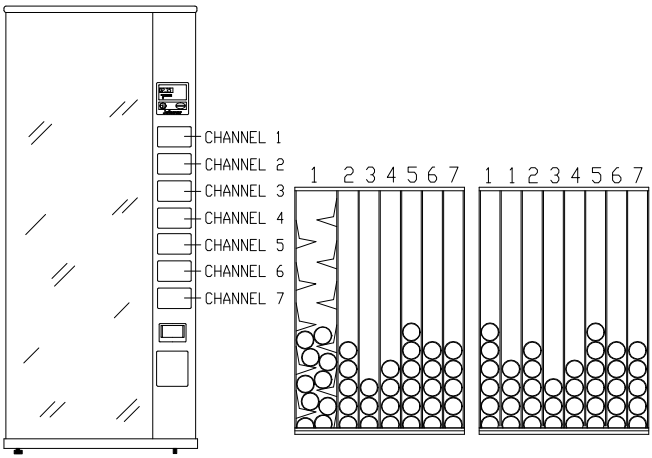
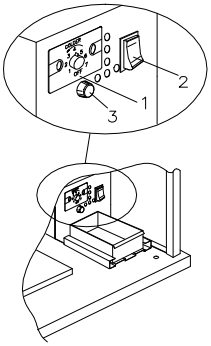


figure 1.04

1.1.5 - Refrigeration chamber.

The product container is located in this chamber, along with the evaporator and fan.
In the lower part there is also a drain hole to evacuate liquid to an evaporation tray placed at the base of the vending machine and outside the refrigeration chamber.
The working temperature is determined by a variable thermostat. The thermostat is found at the base of the cabinet.
The chamber has a volume of 254 litres.

1 Thermostat.
2 Main switch.
3 Fuse.



1.1.6 - Refrigeration unit.

It is made up of a compressor and a condenser located in the lower part of the cabinet and very near the ventilation grill, and also an evaporator placed inside the refrigeration chamber.
The unit is controlled by a thermostat with an off position (0) and seven positions that permit the regulation between 0 and 7°C.
The kind of refrigeration gas is indicated on the compressor.

1.1.7 - Electronic control system.

It is made up of one printed circuit board, that contents the power supply that provides 5 and 24 VDC and the control block, which governs all the operations of the vending machine, as well as the programming options, the product and coin counts for MDB machine. The electronic system controls the extractors and product sold-out switches, the selection buttons, the four-digit display, the product sold-out and out-of-change indicators, as well as communication with the coin mechanism.

1.1.8 - Coin mechanism.

- **J2000** compact (see adjunct manual).
MDB protocol or **A protocol** (EXECUTIVE) is used in communication between machine and coin mechanism, in function to type of machine.

1.1.9 - Dimensions and weight.

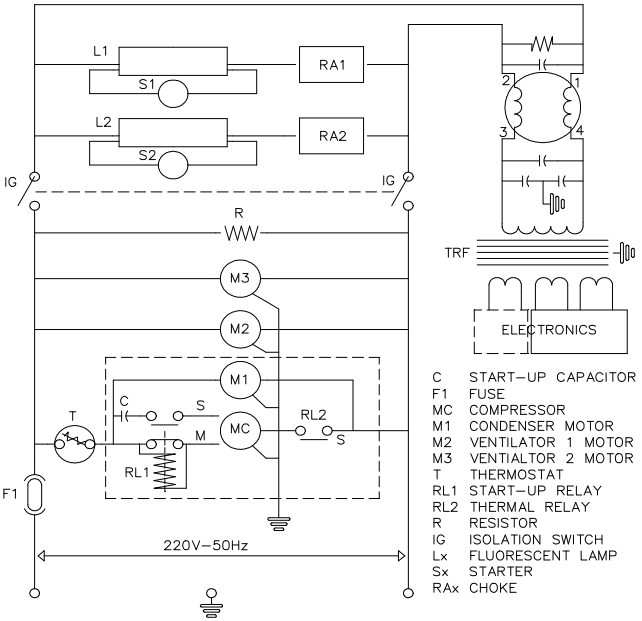
Dimensions (mm.).
Weight (Kg.).

	Height	Width	Depth	Weight
Free standing machine	1780	725	530	210
Crated machine	1875	735	565	235

2. - Electric specifications.

Supply voltage: 220 ± 10% VAC.
Maximum power: 600 W.
Maximum current: 10 A.

The refrigeration unit, fluorescent lights, ventilator motors and transformer work at 220 VAC, so no work should be carried out on the vending machine without first disconnecting the mains.



2.1 - Electrical pre-installation.

Prepare a 220 ± 10% VAC, 50Hz and 10A supply, protected with an automatic connection system. The base of the connection should be of the same type of that of the plug of the vending machine (European, with earth). Adhere to the norms of the Low Voltage Installation Rules and verify the effectiveness of the earth once the vending machine is installed.

3. - Installation and switching on.

3.1 - Installation.

The vending machine should never be transported horizontally.
The vending machine should not be installed near hot devices (stoves, radiators...etc.).
Avoid obstruction of the grills at the front and rear of the cabinet to permit the free movement of air to the interior, where the motor is found.
Leave a distance of 20 centimeters separation between the rear of the vending machine and the wall or other elements.
This model have wheels to facilitate the movement and placement, to level the vending machine use the regulating foot found at the front of the machine.
It is important to make sure that the level is correct, since the vending machine should work in a vertical position, as this will avoid noises and vibrations thus lengthening the life of the refrigerator system.
The vending machine should never be washed with water under pressure.

3.2 - Switching on.

As a safety measure and to avoid damage to the refrigeration circuit, wait for two hours prior to plugging in the vending machine after finishing the operations of unpacking and installation.
To switch on, plug in the vending machine and turn the thermostat regulator to the position desired.
The machine leaves the factory regulated to work correctly at a ambient temperature of up to 30°C, if placed at above this temperature the thermostat should be positioned at the maximum.
In these conditions is possible that the machine makes more water than normal and cannot evaporate it all, making it necessary to periodically check the amount of water in the evaporation tray and remove it if necessary.

WARNING:

In order to ensure the correct work of the vending machine, do the first loading of tubes through address 25 of J-2000 (see adjunct manual).

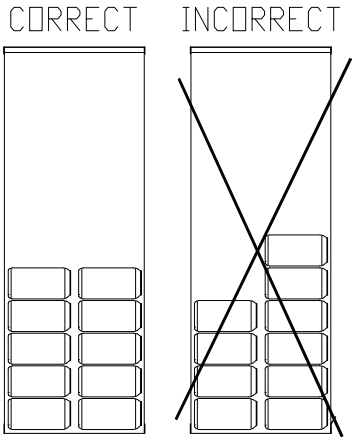
3.3 - Product exhibition.

The vending machine has a maximum of 7 selections, in whose keys (in the interior) there is a place for the product or photograph of the product.
The price should also be placed (if desired) and programmed at the corresponding address (see section 5).
Disconnect the vending machine (unplug it) when carrying out this operation or for any reason that any repair work is undertaken inside the vending machine, except the reloading of products or programming.

3.4 - Reloading the vending machine.

Open the insulating door that gives access to the cold storage chamber and place one can on top of another until the desired columns are filled.

Loading of the product should be carried out equally in the double columns of the machine, since there is only one extractor for both columns and as soon as one of them runs out of cans the other also is deactivated.



4. - Sale mode.

4.1 - MDB

A bill reader or a card reader which use MDB protocol can be connected to this machine. Also it is possible to connect a J100 card reader of JOFEMAR and make sales, programming the machine and obtain accountings using a card. At switching on, the display shows the clock and we can introduce coins, bills or one card. Machine only accept coins or bills which it can recover. The maximum value of credit that we can introduce is the value of maximum refund (see address "__16"). When coins or bills have been introduced, the display shows the credit and the card reader is inhibited. This credit is shown on display until we choose a product or we press recovery. If machine has not got product, coins and bills are inhibited. When one card has been introduced bills and coins are inhibited, the display shows the clock and the customer can make only one sale.

4.1.1 - Token sales.

Tokens will be accepted only when they are programmed in the validator. We can program tokens value at address "x_24" of machine.
There are two working modes with tokens :

1- If token value is zero, upon acceptance the display shows "0000" and a sale will be carried out independently of the programmed price of the product.

2- If token value is not zero, upon acceptance the display shows the token value and we can made sales until the credit is spent. As well, we can cancel this credit pressing recovery after first sale.

Upon a token has been accepted all coins are inhibited by machine.

4.2 - Executive

A bill reader CBV protocol , card reader A protocol, card reader JOFEMAR and RS232 out of data to printer can be connected to this compact. You can select if the compact retains the prices or they were communicated by the machine whenever a sale channel is selected (address on “0_30” of compact). If the compact works in retention, the maximum programmable price is 9999 units of real currency (address on “__1” to “__10” of compact), and the prices in machine must be programmed with value, channel x base currency (address on “__00” of machine). If the prices are controlled by the machine (address on “__00” of machine), the maximum price programmable will be 250 units of base currency (value programmed in address “__48” of compact).

5. - Programming mode.

To enter the programming mode, as well as to leave the same and to access the distinct programming addresses, it is necessary to press the button on the control board.
To modify the content of the programming addresses, the selection buttons of the vending machine and the recovery lever are used.
They should be used in the following order and manner described for each address.

5.1 - Programming addresses.

The symbol “x” indicates various values.

“__00” PRICE PROGRAMMING

The display will show “__00”. Upon pressing a channel the display will show the present price of that channel.
If we wish to modify it, press the same channel again and the price begins at the minimum quantity and following presses increase it; activating the recovery increases the price in larger jumps; if button of the channel is maintained pressed the price will increase quickly.
The increases depends on base currency programmed in J-2000. The maximum value of price is 255 * base currency.

“x_01” SALES COUNTS (MDB)

To go from one option to another use the recovery.

0_01 - Partial accounting of sales carried out. When we press a channel the number of sales carried out from that channel since its last reset to zero is shown. Resetting is carried out in field 9 of this option, or obtaining a RS232 ticket.
In the event of being greater than 9999, it is shown in two 2 fields. The first of them is the greater part.

1_01 - Partial accounting of lost sales. This functions in the same way as the previous.

2_01 - Total accounting of sales by channel. On pressing a channel, accounting from when the machine was installed is shown. This cannot be reset to zero. When it reaches values above 9999 it is shown in 2 fields.

3_01 - Accounting of lost sales. This functions in the same way as the previous.

4_01 - Sales accounting. Pressing button 1 the total sales count carried out by all channels is shown. This cannot be reset to zero.
Pressing button 2, the partial sales count since its last reset from field 9 is shown.

5_01 - Sales value. On pressing button 1 the value of the sales since the installation of the machine is shown. This cannot be reset to zero.
Pressing button 2 the accounting since the last reset or the last time a ticket was obtained via the RS232 is shown.

6_01 - Money in the coin deposit. Pressing button 1 the money directed to the coin deposit is shown. This cannot be reset to zero.
Pressing button 2 the partial count since the last reset or the last time a ticket was obtained via the RS232 is shown.

7_01 - Money in the tubes. Pressing button 1 the money in the tubes at present is shown.

8_01 - Money introduced in the bill reader. Pressing button "1" the money directed to the bill reader is shown. This one cannot be reset to zero.
Pressing button "2" the partial count since the last reset or the last time a ticket was obtained via the RS232 is shown.

9_01 - Resetting partial counts. When in this option, if button 1 is pressed the partial counts that can be consulted at address _01 are reset. The display will flash for a few moments to indicate that the partial counts have been reset.
To leave, press the programming button and the display will show "x_01".

"__02" RELOADING & COUNTS IN THE CHANGE TUBES (MDB)

J-2000 can govern 5 tubes. If there is tubes with the same coin, only one tube is recognized by machine and coin count of this tube(in machine) is the amount of coin counts of tubes(in J-2000). Coin count of each tube(in machine) has got 3 coins less than coin counts of each tube(in J-2000).

Upon introducing coins into the vending machine through the coin admission slot only the coins destined for the change tubes will be accepted; the display will show the number of coins in the tube of the value of the coin introduced. Upon reaching the coin maximum it will reject subsequent coins.

Do not manually reload the tubes!!

- Coin Counts.
Pressing channel 1 to 5 we can see the counts of tubes 1 to 5.

"__03" UNLOADING THE CHANGE TUBES (MDB)

Pressing channel 1 to 5 we unload one coin from tubes 1 to 5.
After unloading the coins, the display will show the number of coins that are left in the tube.
The J-2000 will only work while the number of coins is not zero.

"x_04" ACCOUNTANCY (MDB)

The vending machine offers 11 different accountancies. Press channel 1 to change from one to another and channel 2 to see the amount on display. All the accountancies have a maximum value of 9.999.999 and are shown in two fields, the 3 digits of larger value and the following 4 remaining digits.
The following accountancies cannot be reset to zero.

0_04: Money received in the tubes.
1_04: Money accumulated in the coin deposit.
2_04: Money returned from the tubes as change.
3_04: Money unloaded at address "__03".
4_04: Value of overpayment.
5_04: Value of sales.
6_04: Value of sales in out-of-change.
7_04: Value of discounts in sales with cards.
8_04: Value of sales using tokens.
9_04: Value of sales using cards.
0._04: Value of money recharged in cards.

"__05" SETTING OF THE CLOCK (MDB)

The vending machine permits the programming of minutes to years. Pressing channel 1 will change from one to another. The display will show:

0_05: Minutes.
1_05: Hours.
2_05: Day of the month.
3_05: Month.
4_05: Year.

To programme the clock, select the field that is desired with selection button 1. Pressing 2 will show what is presently programmed on the clock; consecutive presses of 2, will increase it. If channel 2 is maintained pressed the amount will increase quickly. To end the programming, press channel 1.

"__06" CHECKING BREAKDOWNS

Press the channel to be checked. If the display shows:
___0: channel correct.
___1: damage to the motor or to the out-of-product microswitch.

Only for channel 1:
___0: channel correct.
___1: 1st Column broken.
___2: 2nd Column broken.
___3: 1st and 2nd column broken.
Remember that the two double columns in this model are controlled by the same selection button number 1.

Upon activating recovery the following faults may be shown:
0000: Machine correct.
0001: Error in J-2000.
0004: Error in EEPROM. (EXECUTIVE)
0080: Error of writing in EEPROM. (EXECUTIVE)
0800: Selection button broken.

In the case that the display indicates other digits it would be the result of two or more breakdowns.

"__07" RESETTING OF ALL BREAKDOWNS

Activating recovery will reset the breakdowns of address "__06", except the J-2000 breakdowns and error in eeprom (EXECUTIVE). To reset J-2000 breakdowns see adjunct manual.

"x_08" MANUAL HANDLING

The left-hand number represents the channel that we are going to use manually.
Press channel 1 to select the sales column.
Pressing channel 2 will activate the motor of that column while the channel is pressed.
Pressing button "3" the out of change indicator will flash.
Pressing button "4" the sold out indicator will flash.

DO NOT ACTIVATE THE REFUND AS THE VENDING MACHINE WILL DO AN INTERNAL TEST WHICH MAY DEPROGRAMME THE ADDRESSES.
IF IT DOES ENTER, MAINTAIN CHANNEL 1 PRESSED UNTIL __08 APPEARS ON THE DISPLAY.

"__09" JOINING CHANNELS

This applies to the channels with water so that a button without an extractor works jointly with a button that has an extractor. Both buttons must be programmed with the same price to be able to join them at this address.

1st.- Press recovery and the decimal point of the right digit will appear.
2nd.- Press consecutively the channels that you wish to join and then press recovery.
3rd.- Repeat 2nd step for each of the channel groups that you wish to join.

To see the groups that are programmed press recovery, the groups of channel numbers will be shown on the display. Upon pressing the programming button to exit, if joining is wrong the display will flash and will not exit the address; if the programming button is pressed again all the channels will remain independent and the following address will be consulted.

"__10" COIN INHIBITION (MDB)

Upon pressing channel 2, the display will show 01_0. The zero shows that coin 01 is not inhibited. If channel 1 is pressed the display will show 01_1 indicating that coin 01 is inhibited.
Press channel 2 to proceed to the following coin.
Press button "3" to see the value of the coin.
The coin codes are in the appendix **"Programming coins in change tubes".**

"x_11" RECOVERY OPTION (MDB)

The display will show two possible codes:
0_11: Recovery is possible if there is change in the tubes.
1_11: Money cannot be recovered until a purchase is made.
Press channel 1 to go to the next option.

"x_15" SALES OPTION (MDB

The display will show 4 codes; to go from one option to another, press button “1”.

0_15: Simple sale : when a sale is made, the vending machine will automatically give the change. At the petition of a sale it will accept if the credit is equal to the price or there are enough coins to give the exact change. If there are not enough coins to give change the out of change indicator will flash.

1_15: Mixed simple sale : when a sale is made, the change is automatically given. If there is not enough change, the credit will be shown on the display, permitting other purchases.

2_15: Multiple sale : after a purchase, the remaining credit is shown on the display to make another purchase.
If no more purchases are desired, the recovery must be used.

3_15 : Free sale : coins, bills and cards are inhibited. While clock is shown on display we can make sales by pressing some channel. The accounts do not increase.

In the options Simple and Simple Mixed Sale, credit will only be accepted up to the maximum price.

“__16” MAXIMUM RECOVERY (MDB)

At this address the maximum permitted value of recovery is programmed.
Pressing channel 2 the display shows the value programmed at present. Pressing again starts it at minimum value and successive presses of channel 1 or 2 increase it in small or large quantities.
The maximum value of maximum recovery is 255 * base currency and the minimum value is the great price programmed.

“__17” PROGRAMMING CHANNELS FOR BOTTLES OF WATER

If the vending machine is adapted for the sale of bottles of water, the columns that are adapted should be programmed at this address.

The extractor of the channels selected will carry out a complete revolution, in the case of water bottles...etc.

The vending machine can be configured for a maximum of 4 channels for water.
Upon reaching this address activate recovery, the display will show “___.”. Following this it will show the column numeration and channel buttons that have to be activated for the adaptation to work correctly.

Adapted Water Column Channel
1 + 1.....1
2 + 3.....2
4 + 5.....4
6 + 7.....6

The display will show the button pressed (example: “___1” for button number 1).
To leave this address, activate recovery and the display will show “__17”.
To see the channels programmed in this address press button “1” in the main menu of this address (while “__17” is shown on display).

In the event of programming a channel for cans as a channel for water bottles, the vending machine will deliver two cans for each sale from that channel.
Programming at this address must be carried out whenever a modification is made.

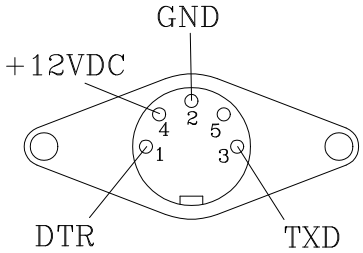
"__20" PRODUCT CODE (MDB)

Pressing the corresponding channel the present code will appear. Pressing channels 1 to 4 increases each one of the digits. Activating recovery fixes the code.

If recovery is activated now both higher digits of the vending machine number appear. Channels 3 and 4 increase these digits. If recovery is activated again the four lower digits appear and are increased with channels 1 to 4.
The product codes are 4 digits and the machine number is 6.

"__21" SERIAL OUTLET RS-232C (MDB)

This address permits the vending machine operator to obtain a ticket of the sales counts.
The information is transmitted via the RS232C serial interface, having an ASCII format, with one start bit, 8 data bits and one stop bit (Baud rate: 1200). The RS232C interface is connected to a 180° DIN 5 terminal.



Printer Function	Machine Function	pin
RXD	TXD	3
DTR	DTS	1
Earth	Earth	2
Power	12V	4

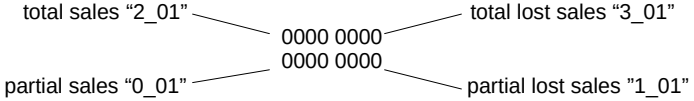
To obtain a ticket (count data), connect the printer and press channel 1.
The vending machine will only transmit (using the TXD line) when the Data Terminal Ready (DTR) line of the terminal or printer is activated; this way data is not transmitted unless the printer is able to receive.
If the DTR line is deactivated once the transmission has started it will wait for 5 seconds for it to be activated again. After this period the transmission will be aborted.

Example of a ticket obtained :
TICKET No.
0000
ID.No.
000000 .... "__20"
DATE & TIME
02-08-93..day-month-year.... "2_05" - "3_05" - "4_05"
17:34..hour:minutes... "1_05" : "0_05"
PAYOUT COINS
000....tube nº 1.... "__02"
000....tube nº 2.... "__02"
000....tube nº 3.... "__02"
MONEY REPORT
TO TUBES

000000..total value.... “0_04”
000000..partial value..
IN THE TUBES
000000..present value...
000000..previous value.
RECHARGED
000000..total value....
000000..partial value..
TO CASHBOX
000000..total value.... “1_04”
000000..partial value..
CHANGE DISPENSED
000000..total value.... “2_04”
000000..partial value..
DISCHARGED
000000..total value.... “3_04”
000000..partial value..
OVERPAY
000000..total value.... “4_04”
000000..partial value..
TOTAL OF SALES
000000..total value.... “5_04”
000000..partial value
SALES IN EXACT CHANGE
000000..total value.... “6_04”
000000..partial value
BILLS
000000..total value.... “8_01”
000000..partial value..
TOKENS
000000..total value.... “8_04”
000000..partial value..
SALES FROM CARDS
000000..total value.... “9_04”
000000..partial value..
PRICE 0001:0005
..code : price.. “0_20” : “__00”
0000 0000
0000 0000
PRICE 0002:0005
0000 0000
0000 0000
PRICE 0003:0005
0000 0000
0000 0000
PRICE 0004:0005
0000 0000
0000 0000
PRICE 0005:0005
0000 0000
0000 0000
PRICE 0006:0005

0000 0000
0000 0000
PRICE 0007:0005
0000 0000
0000 0000

The meaning of the four areas of accountings which go with the price is as follows:



The values of the lower line will be reset to zero whenever a ticket is obtained and a count is modified.

“__22” BILL INHIBITION (MDB)

This address only appears if one bill reader is connected.
While “__22” remains on display, we can verify the acceptance of bills. If the bill introduced in the bill reader has been recognized, its value will appear on display. On the contrary the display will show “----“.
To enter to programme bills inhibition, press button “2” and the display will show 01_0. The zero shows that coin 01 is not inhibited. If button “1” is pressed the display will show 01_1 indicating that bill 01 is inhibited.
Press button “2” to proceed to the following bill.
Press button “3” to see the value of the bill.

“x_24” TOKENS VALUE (MDB)

We can program the value of tokens which are programmed in validator of compact. The display shows 3 codes; to go from one option to another, press recovery.

1_24 : Value of token 1.
2_24 : Value of token 2.
3_24 : Value of token 3.

Pressing channel 1 or 2 the display shows the value programmed at present**.** Pressing again reset this value and successive presses of channel 1 or 2 increase it in small or large quantities.
The maximum value of token is 255 * base currency.

“x_26” PROGRAMMING DISCOUNTS IN SALES WITH CARDS (MDB)

This address only appears if one J100 card reader is connected. We can program the possibility of discounts in card sales and the value of these discounts. There are three options. To pass from one to another press recovery. If 0 is programmed in option 0, options 1 and 2 do not appear.
0_26 : Possibility of discounts. Pressing button “1” the display shows the value programmed at present.

0 - Discounts are not possible.
1 - Discounts are possible.
To change the value press button “1”.

1_26 : Discounts in % : Pressing button “1” the display shows the value programmed at present. Pressing button “1” we can change the value from 0 to 100.

2_26 : Discounts in coin units : Pressing button “1” the display shows the value programmed at present. Then pressing button “1” or “2” we change the value in small or big jumps respectively.
The maximum value we can program is the value of the most little price.
Pressing recovery we can go back to the main menu of this address.

5.2 - Programming of machine. Summary.

Address	Description
__00	Price programming.
x_01	Accountancy of sales.
x_02	Reloading and counts in change tubes.
x_03	Unloading of change tubes.
x_04	Money counts.
x_05	Setting of the clock.
__06	Checking breakdowns.
__07	Resetting of breakdowns .
x_08	Manual handling.
x_09	Joining channels.
__10	Coin inhibition.
x_11	Recovery option.
x_15	Sale option.
__16	Maximum recovery.
__17	Programming channels for bottles of water (0,5 l.).
__20	Product code & machine code.
__21	RS232C serial outlet.
__22	Bill inhibition.
x_24	Tokens value.
x_26	Programming discounts in sales with cards.

6. - TROUBLE SHOOTING.

The following description attempts to help to rectify the most common breakdowns in machine. It describes a series of operating anomalies of the J-2000 and machine, the possible causes and the steps to follow to correct or to determine the cause of the same prior to contacting our technical service.

Problem	Possible causes	Steps to follow
It does not accept coins, both displays are extinguished. The programming mode cannot be accessed.	The J-2000 does not have power or the voltage is not correct.	Check the voltage is within 15% of the nominal voltage of the compact.

		Check the continuity of the cables between the machine and the J-2000.
The program mode can be accessed, but compact doesn't communicate.	Error in the connection between compact and machine.	Check the lines connection.
The compact communicates correctly, program mode can be accessed, but compact doesn't accept coins, showing a 2 on the interior display when a coin is rejected.	The validator is rejecting the coins.	Go to address 51 and verify coin acceptance.
	Coin acceptance channel of the machine is pressing the anti fishing protection system of the validator.	Move the switch number 8 of the validator to the on position. And test again the coin acceptance.
The compact rejects all coins.J-2000 display shows "0".	Incorrect inhibitions programmed. Machine without product, changers damaged.	Check general inhibitions (Address "__10"). Enter address "__02". Introduce coins that go to the change tubes. If they are accepted it means that the vending machine has no product. If the vending machine has product check that the channels are not marked as having breakdowns. (Address "__06"). If it does not accept coins at address "__02", check if the coin counts are less than the coin maximums in the tubes. (See address "__02"). Unload coins from the change tubes (Address "__03") If it is not possible this means that the changers are damaged. Reset them (see adjunct manual).
The J-2000 send all coins to deposit.	Change type incorrectly programmed.	Test the values programmed on the

		address 22. Verify the route of the coins in the address 51.
	Change tubes are broken.	Check address 27 and reset breakdowns.
	The tube coin maximum programmed has been exceeded.	Check addresses 26 and 29 to see if they have reached the maximums.
The coins jams at the top of the tubes.	Change type incorrectly programmed.	Check the values of the address 22.
	The separators are jammed.	Send the J-2000 to technical service.
	Tube size is incorrectly selected.	Replace the tubes with others with the correct size.
The out of change led does not light up.	Led burn out or a fault in the connection.	Check the continuity of the connection and the condition of the led.
The J-2000 rejects a high percentage of coins. In sale mode the display shows a “2” whenever a coin is introduced.	Dirt in the measuring channel.	Clean the selector with a rag impregnated with alcohol. If it continues to reject send the selector to a technical service center.
	The gate of the selector is not completely closed.	Check the operating of the recovery lever. Eliminate any other obstruction.
The J-2000 does not accept any coin. When a coin is introduced the display shows nothing.	The flat cable between the J-2000 and the selector is broken or it isn’t connected.	Check the flat cable.
The J-2000 does not accept coins and there is one “1” permanently on the display.	Communication with the machine’s control board cannot be established.	Check the continuity of the serial connection between the J-2000 and the machine.
The programmed data has been lost.	Electrical noise.	Make sure that there is a good connection of the device to ground.
In address 25 the compact rejects coin routed to tubes 1 and 5.	The first load has not been done in a correct way.	Check J-2000 manual first load.
Does not sell from a channel with product.	Channel marked as damaged, selector button damaged, insufficient	Check that the product sold-out lights and the price of the product is

change in the vending machine.	displayed when its button is pressed while the vending machine is without credit. If the price is not displayed it means that the button is faulty. If sold-out lights, check the breakdown at address "__06". In this case, reset at address "__07" If sold-out does not light, the vending machine does not have enough change to make the sale, try with exact price.

investigation on the present model, without previous warning.