

Zenith

Espresso

Instant

UK English



DOC. NO. H 142U 01
EDITION 2 2001 - 02

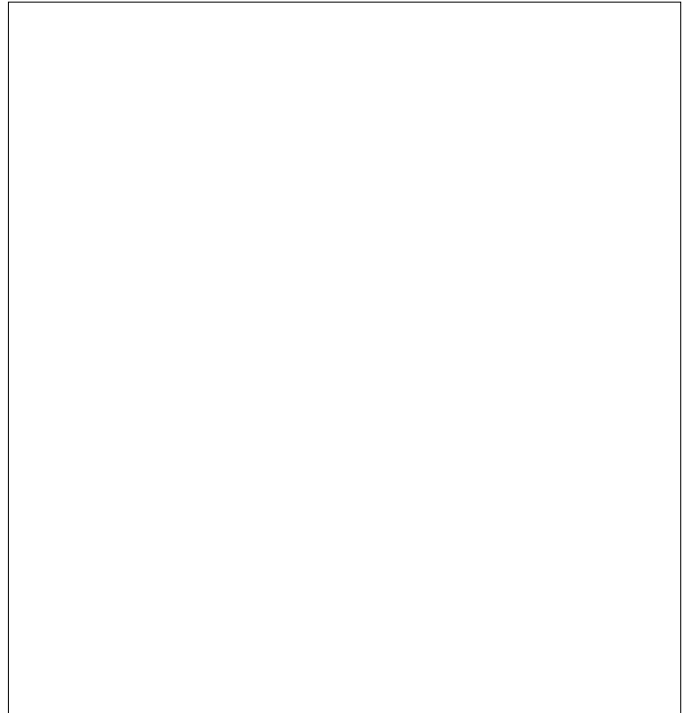


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Cap. Soc. L. 29.064.000.000 i. v.
Cod. Fisc. 12806340159
Part. IVA 02747810162
Cod. ISO IT 02747810162

DICHIARAZIONE DI CONFORMITA'
DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ
KONFORMITÄTSEKTLÄRUNG
DECLARACIÓN DE CONFORMIDAD
DECLARAÇÃO DE CONFORMIDADE
VERKLARING VAN OVEREENSTEMMING
INTYG OM ÖVERENSSTÄMMESE
OVERENSSTEMMESESEKTLÆRING

Valbrembo, 04/09/2000



Dichiara che la macchina descritta nella targhetta di identificazione, è conforme alle disposizioni legislative delle direttive: **89/392, 89/336, 73/23 CEE** e successive modifiche ed integrazioni.

Declares that the machine described in the identification plate conforms to the legislative directions of the directives: **89/392, 89/336, 73/23 EEC** and further amendments and integrations.

Déclare que l'appareil décrit dans la plaque signalétique satisfait aux prescriptions des directives: **89/392, 89/336, 73/23 CEE** et modifications/intégrations suivantes.

Erklärt, daß das im Typenschild beschriebene Gerät den **EWG** Richtlinien **89/392, 89/336, 73/23** sowie den folgenden Änderungen/Ergänzungen entspricht.

Declara que la máquina descrita en la placa de identificación, resulta conforme a las disposiciones legislativas de las directivas: **89/392, 89/336, 73/23 CEE** y modificaciones y integraciones sucesivas.

Declara que o distribuidor descrita na chapa de identificação é conforme às disposições legislativas das directivas **CEE 89/392, 89/336 e 73/23** e sucessivas modificações e integrações.

Verklaart dat de op de identificatieplaat beschreven machine overeenstemt met de bepalingen van de **EEG** richtlijnen **89/392, 89/336** en **73/23** en de daaropvolgende wijzigingen en aanvullingen.

Intyggar att maskinen som beskrivs på identifieringsskylten överensstämmer med lagstiftningsföreskrifterna i direktiven: **89/392, 89/336, 73/23 CEE** och påföljande och kompletteringar.

Det erklæres herved, at automaten angivet på typeskiltet er i overensstemmelse med ovsdirektiverne **89/392, 89/336** og **73/23 CEE** og de senere ændringer og tillæg.



ANTONIO CAVO

C.E.O



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

**IQNet and
CISQ/IMO-CSQ**

hereby certify that the organization

NECTA VENDING SOLUTIONS S.p.A.
Via Roma, 24 - I-24030 VALBREMBO (BG)

for the following field of activities
Design, manufacturing and sale of
electromechanical/electronic vending machines
has implemented and maintains a
Quality Management System
which fulfills the requirements of the following standard

ISO 9001

Issued on: 2000 - 03 - 31

Registration Number: **IT - 12979**



Catherine Neville
Catherine Neville
President of IQNet



Gianrenzo Prati
Gianrenzo Prati
President of CISQ

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CISQ is an independent
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CISQ is a multi-sector, independent,
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of responsibility.

CERTIFICAZIONE ITALIANA DEI SISTEMI QUALITÀ AZIENDALI
ITALIAN CERTIFICATION OF COMPANY QUALITY SYSTEMS

CERTIFICATO n. _____
CERTIFICATE n. **9130.ZAVE**

SI CERTIFICA CHE IL SISTEMA QUALITÀ DI
NE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

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UNITÀ OPERATIVE
OPERATIVE UNITS

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UNI EN ISO 9001

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CONCERNING THE FOLLOWING ACTIVITIES

Progettazione, produzione e commercializzazione di
apparecchiature elettromeccaniche/elettroniche per la
distribuzione automatica e la ristorazione
Design, manufacturing and sale of
electromechanical/electronic vending machines

IL PRESENTE CERTIFICATO È SOGGETTO AL RISPETTO DEL REGOLAMENTO
PER LA CERTIFICAZIONE DEI SISTEMI QUALITÀ DELLE AZIENDE
THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE REQUIREMENTS
OF THE RULES FOR THE CERTIFICATION OF COMPANY QUALITY SYSTEMS

1 Giugno 1994

Prima emissione
First issue

31 Marzo 2000

Emissione corrente
Current issue

La validità del presente certificato è subordinata a sorveglianza annuale e al riesame completo del Sistema di
Qualità con periodicità triennale secondo le procedure dell'IMO S.p.A.
The validity of the certificate is submitted to annual audits and a reassessment of the entire Quality System
within three years according to IMO S.p.A. rules

IMO - VALBREMBO (BG) - 20138/MI/IMO

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INTRODUCTION

This technical documentation is part and parcel of the vending machine and must always follow the machine in case it is moved or transfer of ownership, so as to allow consultation by different operators.

Before starting installation and using the machine, it is first necessary to carefully read and understand the instructions contained in this manual, as they offer important information on installation safety, operating instructions and maintenance.

This manual is divided into three sections.

The **first section** describes the loading and routine maintenance operations which are carried out in areas of the machine accessible with simple use of the door key, without using any other tools.

The **second section** contains the instructions for correct installation and all information necessary for optimum use of the machine.

The **third section** describes maintenance operations which involve the use of tools to access potentially dangerous areas.

The operations described in the second and third sections must be carried out only by personnel who have the specific knowledge of the machine functioning from a point of view of electrical safety and health regulations.

IDENTIFICATION OF THE VENDING MACHINE AND ITS CHARACTERISTICS

This manual describes the following machines:

- models with two units for brewing espresso coffee and reconstituting instant products;
- models with one unit for brewing espresso coffee and reconstituting instant products;
- instant models for reconstituting instant products.

Every machine is identified by its own serial number, indicated on the rating plate attached inside the cabinet on the right side.

This plate is the only one acknowledged by the manufacturer as the identification of the apparatus, and carries all the data which readily and safely give technical information supplied by the manufacturer. It also assists in the spare parts management.

IN CASE OF FAILURE

In most cases, any technical problems are corrected by small repair operations; however, before contacting the manufacturer we recommend that this manual be read carefully.

Should there be failures or malfunctions that cannot be solved, then contact:

NECTA
VENDING SOLUTIONS SpA
Via Roma 24
24030 Valbrembo
Italy - Tel. +39 035606111

TRANSPORT AND STORAGE

To prevent any damage, special care should be taken when loading or unloading the vending machine.

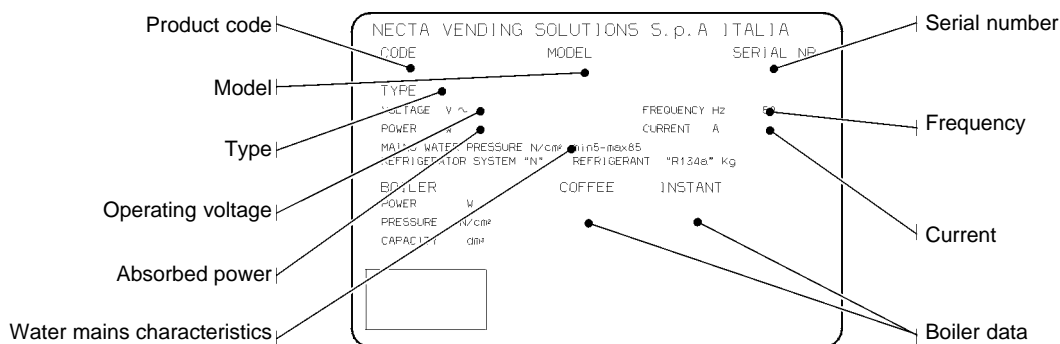
The machine can be lifted by a motor-driven or manual fork lift truck, and the forks are to be placed underneath the machine from the side clearly indicated by the symbol on the cardboard package.

Do not:

- overturn the vending machine;
- drag the vending machine with ropes or similar;
- lift the vending machine by its sides;
- lift the vending machine with slings or ropes;
- shake or jolt the vending machine and its packing.

The machine should be stored in a dry room where the temperature remains between 0°C and 40°C.

Avoid stacking machines one on top of the other and always keep it upright as indicated by the arrows on the packing.



USING THE VENDING MACHINES OF HOT DRINKS IN OPEN CONTAINERS

(Ex.: plastic cups, ceramic cups, jugs)

The vending machines of drinks in open containers should be used only to sell and dispense drinks obtained by:

- brewing products like coffee and tea;
- reconstituting instant and lyophilized products;

These products should be declared by the manufacturer as "suitable for automatic vending" in open containers.

The dispensed products should be consumed immediately. They should never be preserved and/or packed for later consumption.

Any other use is unsuitable and thus potentially dangerous.

POSITIONING THE VENDING MACHINE

The vending machine is not suitable for outdoor installation. It must be installed in a dry room where the temperature is between 2°C and 32°C, and not where water jets are used for cleaning (e.g. in large kitchens, etc.).

The machine should be placed close to a wall, so that the back panel is at a minimum distance of 4 cm from it and correct ventilation may be ensured.

The machine must never be covered with cloth or the like. The machine should be positioned with a maximum inclination of 2°.

If necessary provide proper levelling by way of the adjustable feet included (see Figure 10).

WARNING FOR INSTALLATION

The machine installation and the following maintenance operations should be carried out by qualified personnel only, who are trained in the correct use of the machine according to the standards in force.

The machine is sold without payment system, therefore the installer of such a system has sole responsibility for any damage to the machine or to things and persons caused by faulty installation.

The integrity of the vending machine and its conformity with the rules and regulations in force for its relevant systems must be checked by qualified personnel at least once a year.

All packing materials shall be disposed of in a manner which is safe for the environment.

PRECAUTIONS IN USING THE MACHINE

The following precautions will assist in protecting the environment:

- use biodegradable products only to clean the machine;
- adequately dispose of all containers of the products used for loading and cleaning the machine;
- switch the machine off during periods of inactivity, thus achieving considerable energy savings.

WARNING FOR SCRAPPING

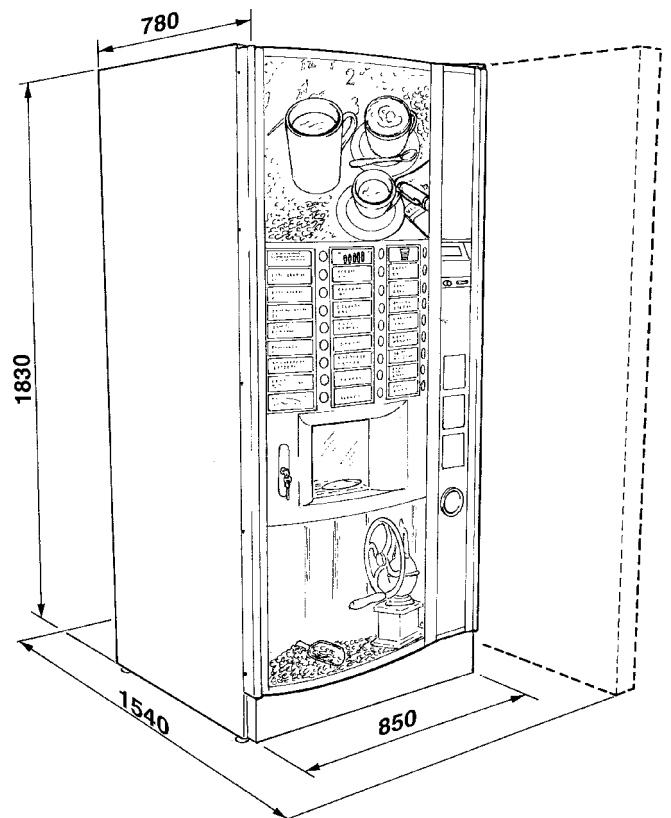
Whenever the machine is to be scrapped, the laws in force regarding environment protection should be strictly observed. More specifically:

- ferrous and plastic materials and the like are to be disposed of in authorized areas only;
- insulating materials should be recovered by qualified companies.

DIMENSIONS

Height	1830 mm
Width	850 mm
Depth	780 mm
Overall depth with door open	1540 mm
Weight:	

Zenith	2 Units	1 Unit	instant
Kg	235	230	220



TECHNICAL SPECIFICATIONS

Power supply voltage	230	V~
Frequency	50	Hz
Installed power	2400	W
Lighting lamps power		

Lamps (230 V~)	N.	W
Advertising panels	2	15
Selection menu	3	8
Internal (optional)	1	8

CUP DISPENSER

Suitable for cups with a rim diameter of **70-71** mm. with a capacity of approximately 900 cups;

PAYMENT SYSTEM

The machine is supplied with all electrical prearrangement for systems with Executive, BDV and MDB protocol, as well as for installation of 24 V validators.

Beside the coin mechanism housing, suitable space is provided for the installation (optional) of the most widely used payment systems.

SALES PRICES

A different price in 4 programmable time periods can be set for each selection; the standard setting has the same sales price for all selections without any time bands.

ENERGY SAVING.

Option of setting the automatic switch-off of lamps and/or boilers over 3 daily time bands on a weekly basis, to save electric power during the machine idle periods.

JUG FACILITIES AND FREE VEND

Using a special key, up to 9 freshly brewed drinks can be dispensed to fill a jug without releasing any cups; alternatively to get free dispensing of normal selections.

COIN BOX

Made of aluminized plate.
Cover and lock are available as accessories.

WATER SUPPLY

From the mains, with a pressure of 5 to 85 N/cm².

Espresso: volumetric adjustment for coffee, granulometry, instant products and water doses.

Instant: time adjustment for coffee, instant products and water doses.

Temperature control programmable via software.

CONTROLS

- Presence of cups
- Presence of water
- Presence of coffee
- Presence of the coffee unit
- Coffee unit in start position
- Liquid waste container full
- Operating temperature reached
- Position of mobile dispensing spouts

SAFETY DEVICES

- Door switch
- Manual-reset boiler safety thermostats
- Air-break float jamming
- Overflow solenoid valve
- Float for full liquid waste container
- Instant boiler anti-overboiling thermostat
- Boiler sensor short-circuit/failure control
- Timer protection for:
 - Pump
 - Coffee unit ratiomotor
 - Coffee dispensing
 - Coffee grinder
- Overheating protection for:
 - Doser units
 - Coffee unit ratiomotor
 - Coffee release magnets
 - Pump
 - Electric mixers
 - Coffee grinder motor
- Fuse protection for:
 - Main electrical circuit
 - Board power supply transformer
 - Coin mechanism power supply

CAPACITY OF CONTAINERS

Coffee beans	5	Kg
Sugar	4.4	Kg
Powdered milk	1.4	Kg
Decaffeinated coffee	1.3	Kg
Tea	4.7	Kg
Chocolate	3.0	Kg
Stirrers	1000	Approx.

POWER CONSUMPTION

The machine power consumption depends on many factors, such as the temperature and ventilation of the room where it is installed, the inlet water and boiler temperature, etc.

Under average conditions, and namely:

- Ambient temperature: 20° C
- Coffee boiler temperature: 96° C
- Instant boiler temperature: 90° C
- Inlet water temperature: 18° C
- Water (average) per selection: 90 cc

the following power consumption levels resulted:

Power consumption (Wh)	2 units	1 unit	Instant
To reach operating temperature	515	500	370
For each hour of stand-by	300	270	215
For each selection (average)			
For one litre of drink			

The above power consumption calculated from average data should only be taken as an indication.

VARIABLE COMBINATION LOCK

Some machine models are fitted with a variable combination lock.

The lock is supplied with two silver colour keys to be used for normal opening and closing.

The lock can be customised by using a kit, available as accessory, which permits changing of the lock combination.

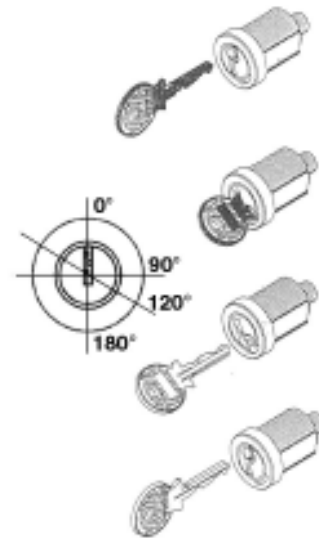
This kit includes a change key (black) for the current lock combination as well as change (gold) and use (silver) keys for the new combination.

Sets of change and use keys with other combinations can be supplied on request.

Additional sets of use keys (silver) may be requested, indicating the combination stamped on the keys.

Generally, only the use key (silver) is used, while the combination change keys (gold) can be kept as spares.

Do not use the change key for normal opening, as it may damage the lock.



TO CHANGE COMBINATION DO AS FOLLOWS:

- insert the current change key (black) and rotate to the change position (reference notch at 120°);
- remove the current change key and insert the change key (gold) with the new combination;
- rotate to the close position (0°) and remove the change key.

The lock will now have the new combination.

Keys with the old combination cannot be used for the new combination.

ACCESSORIES

A wide range of accessories can be installed on the machine to change its performance:

The various kits are supplied with their own installation instructions, which must be strictly observed to ensure the machine's safety.

Installation and the following testing operations, must be carried out only by qualified personnel who have the specific knowledge of the machine functioning from a point of view of both electrical safety and health regulations.

LOADING AND CLEANING

DOOR SWITCH

When opening the door a special switch disconnects the power from the machine electrical system to allow the operations described below, regarding loading and routine cleaning, in full safety.

All operations requiring the machine to be energized should be carried out by qualified personnel ONLY, informed about the specific risks of such situation.

The service power socket, permanently live, is sized for small tools; care should be taken not to exceed the rating indicated on the specific plate.

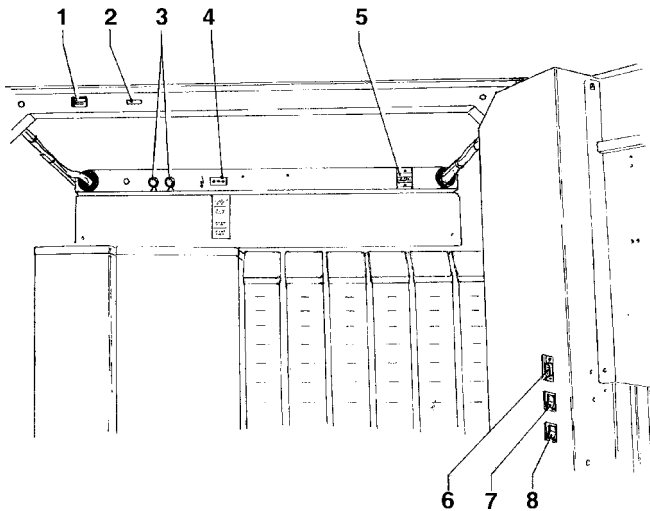
To energize the system with the open door, simply insert the special key into the slot (see Figure 1).

The door can be closed only after removing the key.

Do not leave the vending machine unattended with the door open

Fig. 1

- 1 - Door switch
- 2 - internal lamp switch (optional)
- 3 - Network fuses
- 4 - Permanently live socket (230v~ 2 A. Max)
- 5 - Mechanical counter
- 6 - RS232 serial port
- 7 - Mixer cleaning button
- 8 - Programming button



MAINTENANCE AND DISINFECTION

According to current safety and health rules and regulations, the operator of an automatic vending machine is responsible for the hygiene and the maintenance of the foodstuff circuits, to prevent formation of bacteria.

At installation the hydraulic circuits and the parts in contact with foodstuff should be fully sanitised to remove any bacteria which might have formed during storage.

It is advisable that specific sanitising agents (such as chlorine-based detergents or similar) are used for cleaning also the surfaces which are not directly in contact with foodstuff.

Some parts of the machine can be damaged by strong detergents.

The manufacturer declines all responsibility for any damage to persons resulting from failure to comply with current regulations.

Before starting any maintenance operations requiring parts of the unit to be removed, the machine must always be disconnected from the power supply.

CONTROLS AND INFORMATION

All user controls and information are conveniently located on the external side of the door (see Figure 2).

The labels with the selection menu and instructions, supplied with the machine, must be inserted at the time of installation.

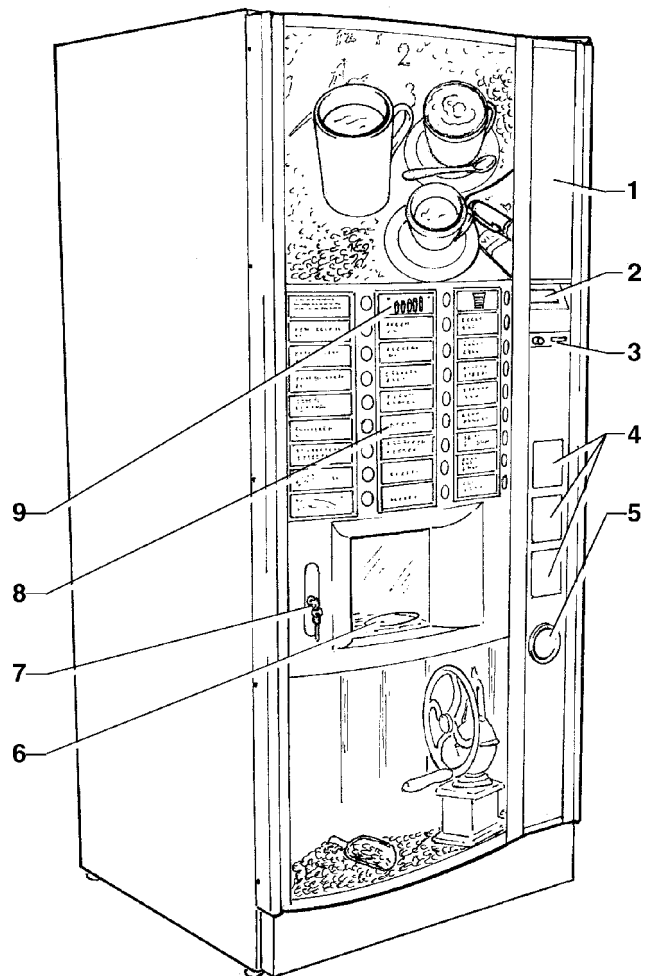


Fig. 2

- 1 - Modular elements for payment systems
- 2 - Alphameric display (4x20)
- 3 - Coin slot-return.
- 4 - Operating instructions labels
- 5 - Coin return flap
- 6 - Dispensing compartment
- 7 - Lock
- 8 - Selection menu
- 9 - Sugar dose selection

The Programming button, to access the machine functions, and the mixer cleaning button are located on the coin mechanism compartment cover.

LOADING CUPS

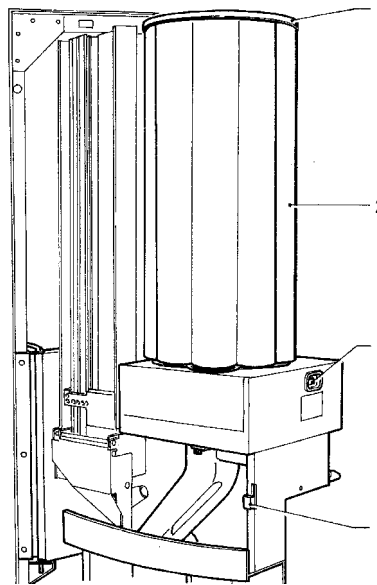
When loading cups for the first time (i.e. with the cup dispenser completely empty) do as follows:

- disconnect the electricity from the machine;
- remove the cover of the cup container;
- fill the columns with cups, except the one aligned with the dispensing opening;
- switch the machine on and the full column will be positioned automatically over the dispensing opening;

All operations requiring the machine to be energized should be carried out by qualified personnel ONLY, informed about the specific risks of such situation.

- fill the empty column;
- release one or more cups with the special button and replace the cover.

Fig. 3

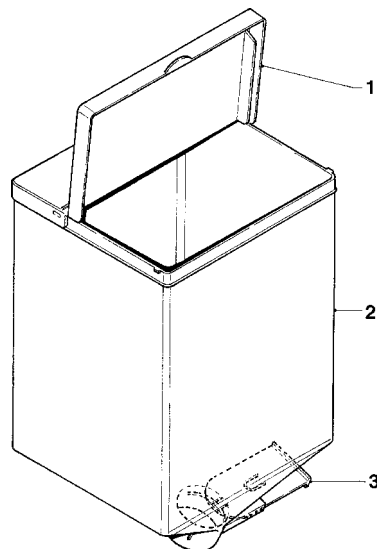


- 1 - Cover
- 2 - Cup stacker
- 3 - Cup release button
- 4 - Shelf release lever

LOADING COFFEE

Lift the cover and fill the hopper with coffee, ensuring that the shutter is fully open (see Figure 4).

Fig. 4



- 1 - Cover
- 2 - Coffee hopper
- 3 - Shutter

LOADING SUGAR AND INSTANT PRODUCTS

A self-adhesive label indicating the product is attached on each container.

After lifting their cover, fill the single containers with the appropriate products, taking care not to compress them to prevent packing. Make sure the products do not contain any clots.

LOADING STIRRERS

In order to load correctly the double stirrer stacker do as follows:

- remove the inner and outer stirrer weights, from above (see Figure 5);
- ensure that the inner column is pushed back using the special lever, so that the stirrers from the outer guide (in view) are dispensed first. By lifting the lever handle to lift the residual stirrers, the column can be pushed towards the inside until the release mechanism is reset.

With the profile positioned inside the stirrer columns, 90 or 105 mm stirrers can be dispensed;

Without the profile, 115 mm stirrers can be dispensed.

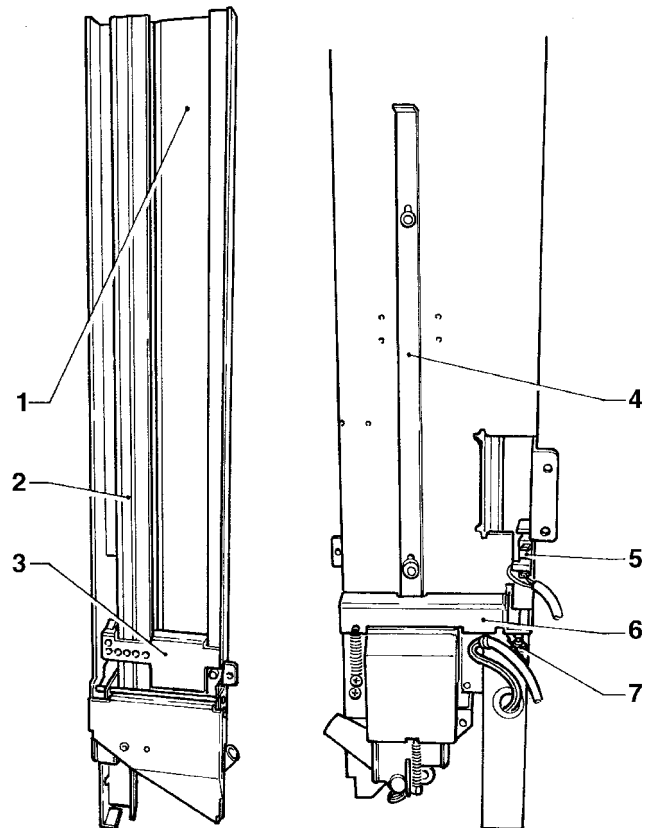


Fig. 5

- 1 - Double column
- 2 - Stirrer profile
- 3 - Removable weight
- 4 - Reset lever
- 5 - External column "empty" microswitch
- 6 - Internal column lock device
- 7 - Thermo-expander

SANITISING THE FOODSTUFF CIRCUITS AND THE MIXERS

When installing the unit, and then at least once a week or even more frequently according to the use of the machine and the quality of the inlet water, the mixers and the dispensing conduits must be thoroughly sanitised (cleaned and disinfected), to guarantee proper hygiene of the dispensed products.

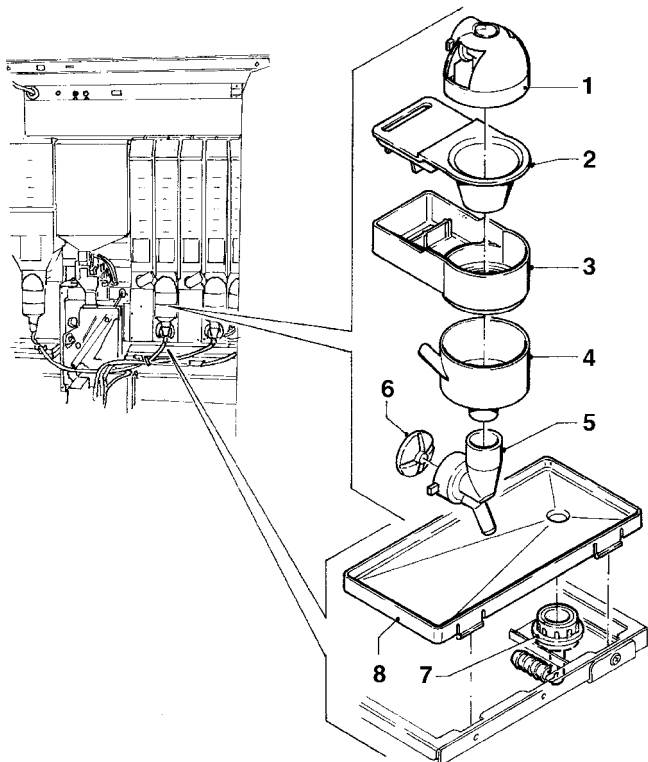


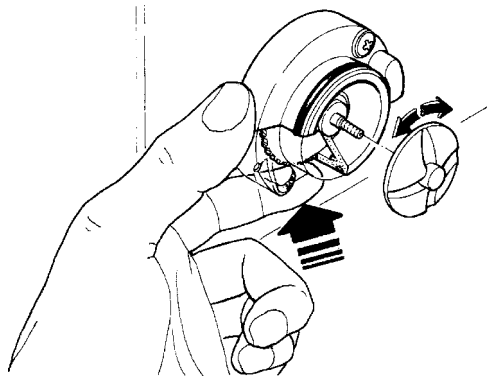
Fig. 6

- 1 - Powder feeder
- 2 - Powder funnel
- 3 - Powder deposit drawer
- 4 - Water funnel
- 5 - Feeder
- 6 - Mixer wheel
- 7 - Tray drain
- 8 - Overflow tray

The parts to be cleaned are as follows:

- powder deposit drawers, mixer and instant drink dispensing conduit;
- coffee dispensing spout;
- cup chute;
- dispensing compartment;
- remove the covers, the powder and the water funnels, the feeders, the powder deposit drawers and the mixer wheels from the mixers (see Figure 6);
- in order to remove the wheels, block the disk fitted on the mixer shaft with a finger;

Fig. 7



- wash all parts with detergent being sure that all visible residue and product layers are mechanically removed, using a brush if necessary;

Disinfection should be carried out using chlorine-based detergents;

- soak all components for approx. 20 minutes in a container filled with the previously prepared chlorine-based detergent;
- reinstall the feeders and the water funnels;
- reinstall the powder deposit drawers and the powder funnels after thoroughly drying them.

After reinstalling all parts the following is however required:

- enter into "Maintenance" mode to clean the mixers (see relevant paragraph) and add a few drops of the chlorine-based detergent in the various funnels.
- After disinfection thoroughly rinse all components to ensure that all residue of the detergent solution is removed.

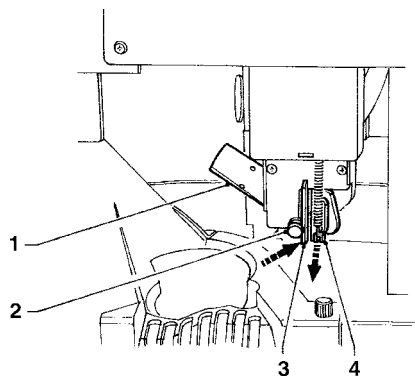
All operations requiring the machine to be energized should be carried out by qualified personnel ONLY, informed about the specific risks of such situation.

CLEANING THE SUGAR DISPENSER

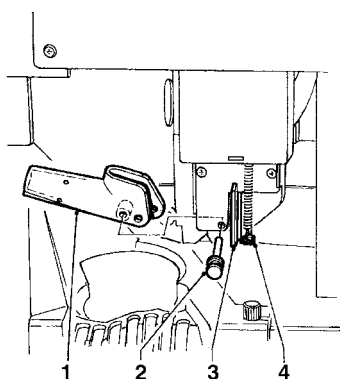
For models with sugar dispensed directly into the cup, the sugar dispensing system must be cleaned periodically using hot water (see figure) proceeding as follows:

- lift the flexible lever to free the pin;
- remove the pin and the dispensing spout;
- after cleaning, reinstall all parts in the reverse order, ensuring that all parts are thoroughly dry.

Fig. 8



- 1 - Sugar dispensing spout
- 2 - Pin
- 3 - Flexible lever
- 4 - Return spring



WEEKLY CLEANING OF THE COFFEE UNIT

Every time coffee is refilled, or at least once a week, any powder residue should be removed from the external parts of the coffee unit, particularly from the coffee funnel. All grinding residue should be removed from the coffee dose device funnel and chute extension; before reassembling them, ensure that they are dry.

REGENERATING THE SOFTENER UNIT

The ion-exchange resins, contained in the softener unit, should be regenerated at least once a week or even more frequently depending on the hardness of the water from the mains used to supply the machine (see table below).

Water hardness		N. of selections	
° F.	° G.	60 cc.	130 cc.
10	5.6	25,000	12,500
20	11.2	12,500	6,000
25	14	11,000	5,250
30	16.8	9,400	4,500
40	22.4	6,300	3,000
50	28.0	5,500	2,500

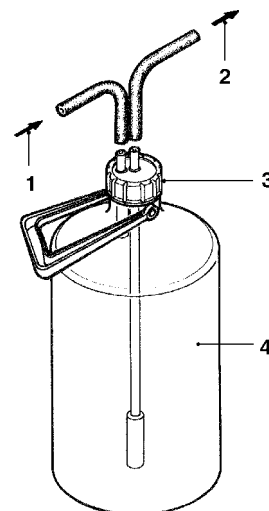
To regenerate the resins correctly do as follows:

- remove the softener unit from the cabinet and shake it vigorously to eliminate any preferential paths which may have formed;
- fill 1.5 Kg. of sodium chloride (ordinary salt);
- connect the side hose union to a tap and the middle rubber-holder to a drain point; the direction of the water flow must be

NECESSARILY

the one shown in the figure

Fig. 9



- 1 - From the tap
- 2 - To the drain
- 3 - Cap
- 4 - Softener unit

- adjust the water flow in such a way as to completely dissolve the salt in 20 litres water within 35 minutes;
- during the regeneration operation, ensure that the softener unit is always full of water, bleeding any air which may have entered;
- at the end of this operation ensure that outlet water is no longer salted; it is advisable to check the hardness of the water by means of appropriate chemical reagents: the outlet water hardness should be lower than 5° F.

SUSPENDING FROM USE

If for any reason the machine is switched off for a period exceeding the use-by date of the products, the following will be necessary:

- completely empty the containers and thoroughly wash them with the chlorine-based detergents used to clean the mixers.
- completely empty the dosing grinder by dispensing coffee until the empty condition is indicated.
- completely empty the air-break and the instant product boiler, loosening the clamp on the hose.

INSTALLATION

Installation and the following maintenance operations should be carried out with the **machine switched on** and therefore by qualified personnel only, who are trained in the correct use of the machine and informed about the specific risks of such situation.

The machine should be installed in a dry room where the temperature remains between 2° C and 32° C.

At installation the hydraulic circuits and the parts in contact with foodstuff should be fully sanitised to remove any bacteria which might have formed during storage.

UNPACKING THE VENDING MACHINE

After removing the packing, check that the machine is not damaged.

If in doubt do not use the machine.

No packing elements (i.e. plastic bags, polystyrene foam, nails, etc.) should be left within the reach of children, as they are potentially dangerous.

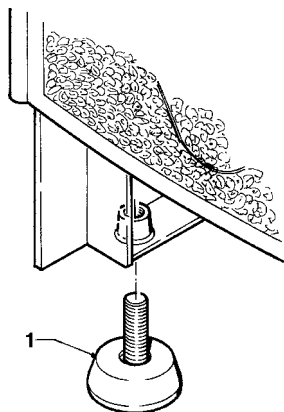
Packing materials must be disposed of in authorized areas only, and all recyclable materials must be recovered by specialised companies.

Important notice!!

The machine should be positioned with a maximum inclination of 2°.

If necessary provide proper levelling by way of the adjustable feet included (see Figure 10).

Fig. 10



1 - Adjustable foot

INSERTING THE PRODUCT LABELS

To be able to insert the product labels, the front panel must be removed. Undo the fastening screws and then press the clamping tangs (see fig. 11).

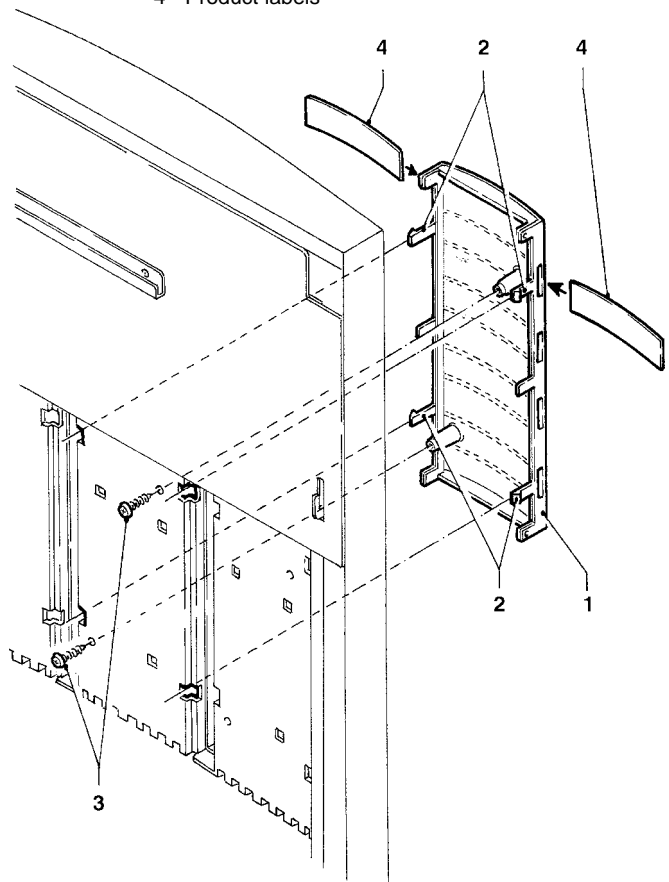
The labels must be inserted into the special slots with the opening positioned alternating on the left and right hand side.

According to the model, some buttons may not be used (refer to the selection dose table).

The machine is supplied also with the self-adhesive labels to be attached to the product containers according to the layout (refer to the selection dose table).

Fig. 11

- 1 - Label support
- 2 - Clamping tangs
- 3 - Fastening screws
- 4 - Product labels



CONNECTING THE MACHINE TO THE WATER MAINS

The machine must be connected to the drinking water mains. The water pressure must be 5 to 85 N/cm². Run some water from the mains until it is clear and without impurities.

Use a hose capable of withstanding the water mains pressure and suitable for use with foodstuff (min. inside diameter of 6 mm) to connect the water supply to the fitting (1/4" gas) of the water inlet solenoid valve (see Figure 12).

- 1 - Water inlet fitting (1/4" gas)
- 2 - Water supply hose
- 3 - Overflow hose
- 4 - Inlet hose fitting

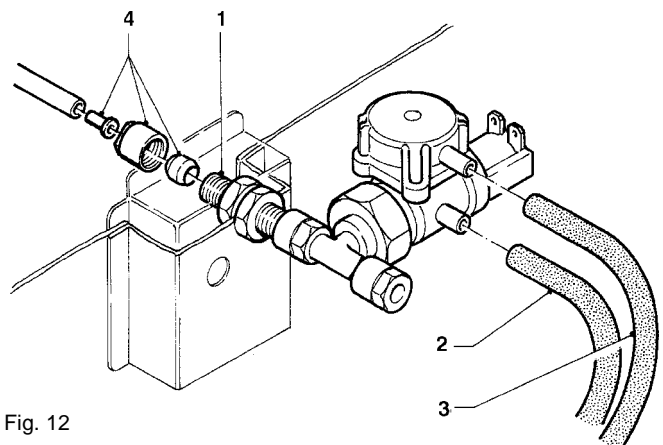


Fig. 12

It is good practice to install the water supply tap outside the machine in an easily accessible position.

OVERFLOW DEVICE

The water inlet solenoid valve (see Fig. 12) is equipped with an overflow device which mechanically stops the water inlet if there is a malfunction in the solenoid valve or in the boiler water level control device.

To restore normal operation, proceed as follows:

- drain the water contained in the overflow hose;
- shut off the water supply using the tap outside the machine;
- loosen the nut which secures the solenoid valve supply hose to relieve the water mains residual pressure and then tighten again (see Fig. 12);
- open the tap and switch the machine on.

CONNECTING THE MACHINE TO THE POWER SUPPLY

The vending machine is designed to operate under a single-phase 230 V~ voltage and is protected by 15 A fuses.

Before connecting the power supply make sure that the ratings correspond to those of the power grid, and more specifically:

- the power supply voltage rating should be within the limits recommended for the connection points;
- the main switch should be located within easy reach and be capable of withstanding the peak load required, and at the same time should ensure proper omnipolar disconnection from the power grid with the opening gap of the contacts of at least 3 mm.

The main switch, the power outlet and the plug must be in an accessible position.

The electrical safety of the machine is ensured only when it is correctly earthed according to the safety standards in force.

This fundamental safety requirement must be duly verified, and if in doubt the system must be carefully tested by qualified technicians.

The power supply cable is of the type with a fixed plug. Any replacement of the power supply cable should be made by qualified and suitably trained personnel only using only cables of the type HO5 RN - F, HO5 V V-F or H07 RN-F with a section of 3x1-1.5 mm².

Do not use adapters, multiple sockets and/or extensions.

Before switching the machine on, be sure it is correctly connected to the water mains and the cutoff valve is open.

THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR ANY DAMAGE CAUSED BY THE NON-COMPLIANCE WITH THE ABOVE MENTIONED PRECAUTIONS.

DOOR SWITCH

When opening the door a special microswitch disconnects the power from the machine electrical system.

To energize the system with the open door, simply insert the special key into the slot (see Fig. 1).

With the door open, there is no access to energised parts. The only energised parts inside the machine are the ones protected with covers carrying a plate with the wording "disconnect power supply before removing the cover".

Before removing such covers disconnect the machine from the power grid.

The door can be closed only after removing the key from the door switch.

INSTALLING THE PAYMENT SYSTEM

The machine is sold without payment system, therefore the installer of such a system is responsible for any damage to the machine or to things and persons caused by faulty installation.

- Install the desired coin mechanism according to the appropriate instructions and make sure that the relevant parameters are programmed correctly.
- adjust the selector opening lever bracket to allow complete opening of the selector;
- adjust the coin chute according to the type of coin mechanism installed.

CLEANING THE SOFTENER RESINS (MODELS C ONLY)

Before filling the machine water system the resins contained in the softener unit must be cleaned, operating as follows:

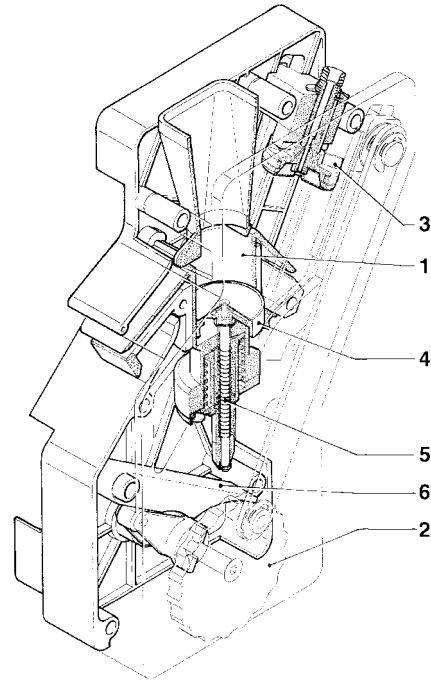
- remove the hose connected to the air-break from the softener unit fitting (see Fig. 13);

OPERATION OF THE COFFEE UNIT

COFFEE DISPENSING CYCLE

When selecting coffee, the grinder is started and will continue until the coffee doser chamber is full (see Fig. 17).

Fig. 14



- 1 - Brewing chamber
- 2 - External disk
- 3 - Upper piston
- 4 - Lower piston
- 5 - Pre-brewing spring
- 6 - Swinging lever

When the doser unit is full, the ground coffee dose is released into the coffee unit.

The coffee falls into the vertical brewing chamber (1) (see Fig. 14).

The ratiomotor handle engaged with the disk (2) located outside of the unit rotates by 180°, making the brewing chamber swing and lowering the upper piston (3) (see Fig. 15).

Due to the water pressure, the pre-brewing spring (5) sinks and the lower piston (4) goes down 4 mm, thus forming a water cushion which allows an even use of the coffee dose.

At the end of the dispensing cycle and during a pause of 3 seconds, the pre-brewing spring (5) will discharge the water through the third way of the dispensing solenoid valve, lightly pressing the used coffee dose.

By completing its rotation, the ratiomotor makes the swinging lever (6) lift the pistons and the coffee dose. At the same time, when the brewing chamber returns to its vertical position, the scraper on the coffee hopper stops the used coffee dose and drops it. The lower piston now returns to the bottom dead centre.

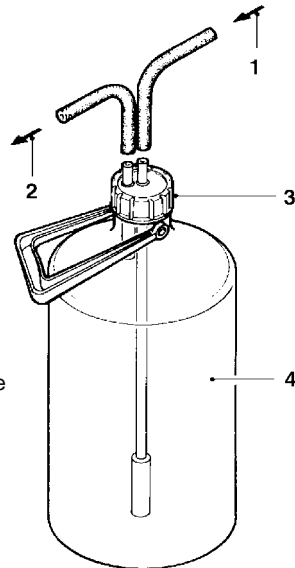


Fig. 13

- 1 - From the water inlet solenoid valve
- 2 - To the air-break
- 3 - Plug
- 4 - Softener unit

- insert a new hose, provided with the machine, onto the now free hose fitting and direct it towards a drain;
- switch the machine on;
- bleed air out of the softener unit by loosening the plug, wait until it is full of water and tighten the plug, let a few litres of water flow out until it is clear;
- re-insert the hose connected to the air-break.

FILLING THE WATER SYSTEM

If the air-break device indicates the no-water condition for more than 10 seconds after the machine has been switched on, an installation cycle will automatically be started, and namely:

- the display will show

"OUT OF SERVICE"

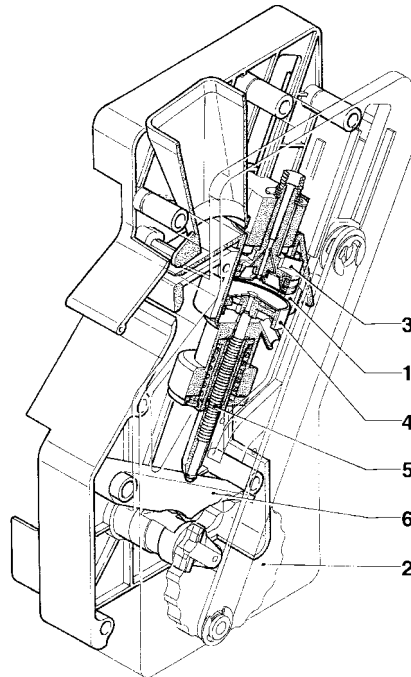
for the entire duration of the cycle;

- the air-break and the instant product boiler are filled;
- (for espresso models only) the coffee solenoid valve is opened so that air may be bled from the boiler and 800 cc. of water filled. During this phase, since there is no ground coffee inside the brewing chamber, some water may leak outside the coffee unit. Such small leak is normal and does not compromise the coffee unit operation.

N.B.: If there is no water flow from the mains during the installation cycle, the machine will be blocked until the water is resumed or the machine is switched off.

This operation must be carried out by hand after any maintenance requiring the boiler to be emptied but not the air-break.

Fig. 15



- 1 - Brewing chamber
- 2 - External disk
- 3 - Upper piston
- 4 - Lower piston
- 5 - Pre-brewing spring
- 6 - Swinging lever

CHECKING AND ADJUSTING THE MACHINE SETTINGS

To get the best results from the product used, the following should be checked:

For coffee

That the used coffee dose is lightly compressed and damp.

The grade of grinding of coffee.

The weight of ground coffee.

The dispensing temperature.

The water dose.

For instant products

The weight of instant products.

The drink temperature.

The water dose.

Should the standard settings be varied, proceed as indicated in the next sections of this manual.

The weight of instant products, the water dose and temperature are directly controlled by the microprocessor.

To adjust them it is therefore necessary to follow the programming procedures.

STANDARD SETTINGS

The vending machine is supplied with the following settings:

- coffee temperature (at the spout) approx. 85-89°C;
- instant product temperature (at the spout) approx. 75°C;

The machine standard settings assign the same price, expressed in number of basic coins, to all selections.

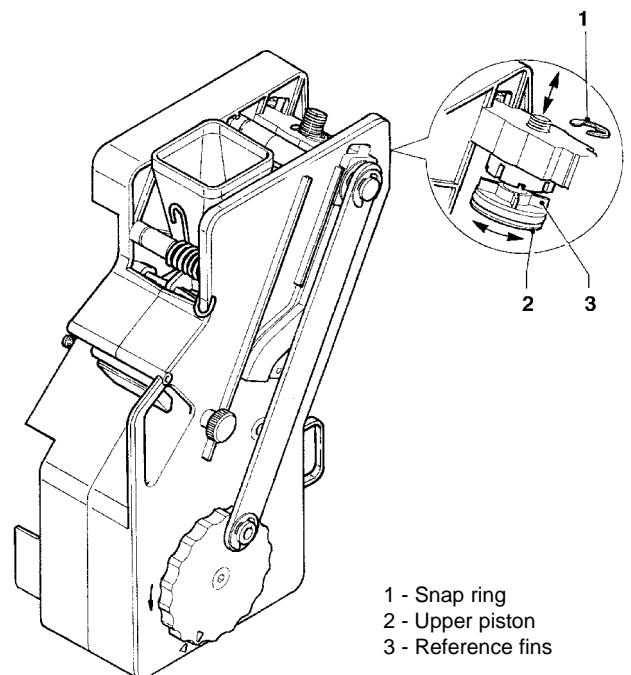
ADJUSTING THE BREWING CHAMBER VOLUME

When the upper piston is correctly positioned, the coffee unit can operate with coffee doses of 5.5 to 8.5 g.

To change the piston position (see Fig. 16):

- remove the snap ring from its seat;
- place the piston in the proper adjusting notches:
 - .less deep notches for 5.5 to 7.5 g doses;
 - .deeper notches for 6.5 to 8.5 g doses.

Fig. 16



- 1 - Snap ring
- 2 - Upper piston
- 3 - Reference fins

ADJUSTING THE GRADE OF GRINDING

In order to adjust the grade of grinding, turn the relevant adjusting knob on the grinder (see Fig. 14) and, more specifically, do as follows:

- turn the knob anticlockwise for coarser grinding;
- turn the knob clockwise for finer grinding.

For optimum results, it is good practice to vary the grade of grinding with the coffee grinder motor running.

N.B.: After adjustment of the grade of grinding, at least 2 test selections must be performed in order to check the new granulometry of the ground coffee:

the finer the grade of grinding the longer the time necessary for dispensing the coffee and vice versa.

ADJUSTING THE COFFEE DOSE

The dose adjusting lever can be positioned in one of the 6 reference notches bearing in mind that:

- the dose is increased by lifting the lever:
- the dose is reduced by lowering the lever:
- every notch changes the dose by approx. 0.25 g.

In addition, when the lever is fully rotated upwards, the ratchet can be released from the groove in the dose regulator (see Fig. 17) and replaced into a different groove to change the average dose setting to:

- low 6 g. \pm 0.5
- medium 7 g. \pm 0.5
- high 8 g. \pm 0.5

To take the dose just remove the coffee unit and press key "2" from the "maintenance" menu (see relevant section).

Warning!!!

To refit the coffee unit, pay special attention to the piston position. Reference notches on the external disk and on the unit case should match (see Fig. 20).

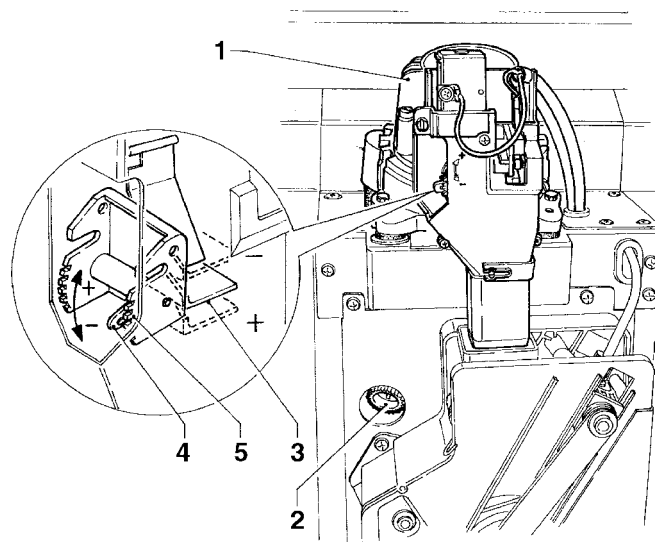


Fig. 17

- 1 - Coffee grinder
- 2 - Grinding adjusting knob
- 3 - Dose regulator
- 4 - Dose adjusting lever
- 5 - Reference notches

OPERATING MODES

Three different operating modes are provided for the machine; the buttons will have different functions according to the machine operating mode.

The available operating modes are as follows:

	FUNCTIONS
Normal operating mode	coins accepted products dispensed
Maintenance mode	test dispensing machine maintenance
Programming mode	programming the different parameters

USER INTERFACE

The following components are used as interface between the system and the user:

- Liquid Crystal Display (LCD), 4 lines x 20 characters.
- External push-button panel, with keys which have the following functions when in maintenance and programming mode (see Fig. 18):

Scrolling keys “↑” and “↓” :

to move to the previous or next menu option.

Confirm key “→”:

to move from one menu to a sub-menu or to confirm the data on the display.

Exit key “←”:

to return from a sub-menu to the higher level menu, or to clear the data on the display.

It is also used to go from "programming" mode to "maintenance" mode and vice versa.

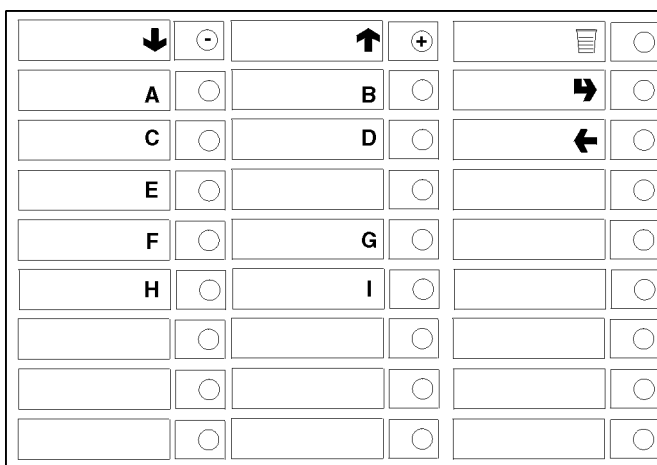


Fig. 18

NORMAL OPERATING MODE

When switching the machine on, the message "Starting" is displayed for a few seconds, after which the machine goes into normal operating mode.

The displayed messages indicating the operation being carried out are fixed, while the instructions requiring an action from the user are blinking; the messages include the following:

DISPLAY	FUNCTION
Select drink Press key	Machine ready
Vending machine out of service	Machine out of service
Selected drink processed Wait please	Processing the drink
Drink ready Take drink	Dispensing ended correctly

If enabled, button "☰" is used to stop dispensing of espresso coffee based drinks.

In any case at least 60% of the programmed dose will be dispensed.

MAINTENANCE OPERATING MODE

When pressing once the programming button located on the coin mechanism compartment, the machine goes into "Maintenance" mode.

The first option of the "maintenance" menu is displayed, allowing the following functions:

"Compl. selec."	Dispensing test including cup, sugar and stirrer
"Water only"	Dispensing water only
"Powd. only"	Dispensing powder only
"No Accessories"	Dispensing test without cup, sugar and stirrer
"Accessories only"	Dispensing cup, sugar and stirrer only (if dispensed into cup).
"Boiler temperature"	Displaying the boiler temperature in degree C.
"Unit Control"	Temporarily enabling and operating buttons A÷I.

"Autotest"	Actuation in sequence of power users: . doser devices . mixers . cup dispenser . stirrer dispenser . neon lamps . door LED . push-button panel keys . mobile spouts . coffee dose dispenser . unit rotation . waste container switch
"BDV tube control"	manual refill and release of change tubes (BDV only)

TEST DISPENSING

For complete or partial dispensing tests each button is assigned a selection (see the dose selection table).

N.B. For espresso coffee based selections, only the additions are dispensed with the partial dispensing of powder and water; if a selection requires no addition the message "Sel. disabled", indicating a disabled selection, will be displayed.

UNIT CONTROL

After accessing the "Unit Control" function, button "A" is used to operate the first coffee unit if this is connected to the electrical system, and to release a dose of coffee if disconnected;

Button "B" has the same function if the second coffee unit is installed; button "C" is used to operate the first "Fresh Brew" unit if this is connected to the electrical system; button "D" is used to operate the second "Fresh Brew" unit if this is connected to the electrical system;

button "E" is used to operate a solenoid valve in the espresso coffee boiler continuously, to empty the boiler through the special cap.

Buttons "F" and "G" are used to operate the syrup dispensing devices (for models fitted with a cold unit).

Button "H" is used to carry out a filling cycle of the espresso boiler by opening the solenoid valve of unit 1; button "I" is used to carry out the cycle with the solenoid valve of unit 2.

AUTOTEST

This function allows testing of the main machine components.

Press button "➡" to display the message "AUTOTEST" blinking.

Press button "⬅" to cancel the operation, confirm with button "➡" to start the autotest routine.

In a sequence:

- the doser devices are activated for 2 seconds
- the mixers are activated for 2 seconds
- a cup is released
- a stirrer is released
- the neon lamps are lit
- the door LEDs are lit
- the push-button panel is tested; the machine will display the number of the button which must be pressed and awaits the actuation before going to the next button
- the dispensing spouts are operated/repositioned
- (for espresso models only) the coffee unit is rotated, coffee is ground and then released when a full dose is reached.
- waste container switch; the machine awaits until the waste container microswitch is manually operated

CHANGE TUBE CONTROL

By accessing the "Tube control" function the change tubes can be filled or released manually.

Confirm refilling, the display will indicate

"Credit : —" which is the value of money available in change the tubes; insert the desired coin into the selector and the display will indicate the value of money available in the change tubes.

When confirming releasing, it will be possible to decide which tube to release. Each time the confirm button "➡" is pressed, a coin is ejected from the active tube.

PROGRAMMING

When pressing button "←" from "Maintenance" mode the machine is set to "Programming" mode. The first option of the programming menu is displayed, enabling the following functions:

Prices	sales price setting
Statistics	data reading
Selections	selection parameter setting
General data	general data setting
Coin mechanisms	setting the payment system protocol
Initialising	RAM data initialising
Failure control	list of current failures
Miscellaneous	list of sub-menus
	Time bands internal clock, 4 time bands for different prices
	Pre-selections enable/disable
	FB unit data setting brewing times
	Temperature setting boiler temperature
	Display counter enable/disable display of counter at machine start
	Machine codes machine identification codes
	Operator code operator identification code
	Password setting the password
	Install. date storing the current date

En. password	enable/disable password
Custom/Button	push-button panel custom selections
Jug facilities	setting number of selections
Euro	enable display of prices in Euro / local currency
Progr. level	displaying complete or simple menu
Custom Select.	selection composition

SELECTION PRICES

Four different prices can be set for each selection according to the programmed time bands for when the time table option is enabled.

For each of the 4 time bands prices (0 to 65,535) can be programmed globally (same price for all selections) or for the single selections.

If the majority of products had the same price, it would be easier to program the prices globally and then change the value of the selections with a different price.

STATISTICS

Data on the machine operations is stored in both general counters and partial counters, which can be reset without losing total data.

DISPLAY

When pressing the confirm button "→" the stored data is sequentially displayed at 1 second intervals, and namely:

general

- 1 - single selection counter;
- 2 - time band counter;
- 3 - discount counter;
- 4 - failure counter;
- 5 - coin mechanism data.

partial

- 1 - single selection counter;
- 2 - time band counter;
- 3 - discount counter;
- 4 - failure counter;
- 5 - coin mechanism data.

PRINT

Connect an RS232 serial printer having a Baud rate of 9600, 8 data bit, no parity, 1 stop bit (the CITIZEN I-DP 3110-24RF 230A p/n 9210219 printer is recommended) to the serial port located on the push button board to print all of the statistics described in the paragraph "statistics display". The printout will also contain the machine code, the date and the software version.

Statistics can be printed partially or totally.

To connect the printer do as follows:

- Press the confirm print button "↵", displaying the message "Confirm?";
- Connect the printer before confirming;
- Press the confirm button "↵" again to start printing.

RESET

Statistics can be reset either globally (all types of data) or partially for:

global

- selections
- discounts/overprice
- failures
- coin mechanism data

partial

- selections
- discounts/overprice
- failures
- coin mechanism data

Press confirm button "↵", displaying the blinking message "Confirm?".

Press confirm button "↵", the message "Running" is displayed for a few seconds and all statistics are reset.

SELECTION MENU

The selection menu is composed of various sub-menus which allow setting of the different parameters.

WATER DOSE

The water dose, expressed in cc, can be set for each selection button and therefore each product assigned to it; the display indicates the name of the product being selected.

It is also possible to set the water flow rate of the single solenoid valves expressed in cc/s (the default value setting in cc/s is indicated in the selection dose table) to calculate the amount of water to be dispensed.

POWDER DOSE

The powder dose, expressed in grams, can be set for each selection button and therefore each product assigned to it; the display indicates the name of the product being selected.

For correct conversion of product dose values, the flow rate of the single dosing units, expressed in g/s, can be set to calculate the amount of powder to be dispensed.

It also possible to program the doses of a product "Globally", i.e. setting all selections with a single operation.

ACCESSORIES

Dispensing of sugar, stirrer and cup can be enabled or disabled for each single selection button.

SELECTION STATUS

Each single selection button can either be enabled or disabled.

BUTTON/SELECTION ASSOCIATION

This function is used to change the order of the selections associated to the push-button panel.

GENERAL DATA

The general data menu is composed of various sub-menus which allow setting of the different parameters.

LANGUAGE

There is the option of language, selected among the ones included in the EPROM, to be used for the messages on the display.

DECIMAL POINT

Press the confirm button "↵" to display the position of the decimal point, i.e.:

0	decimal point disabled
1	XXX.X
2	XX.XX
3	X.XXX

Press the confirm button "↵", these values will start blinking and can then be modified as necessary.

AUTOMATIC CLEANING

It is possible to determine whether or not to enable the automatic cleaning function for the mixers and for the brewing units, and the time when this will occur.

ENABLING THE PROMOTIONAL MESSAGE

When in this menu, press the confirm button "↵" to display the status of the message (enabled or disabled). The status can then be changed using the "↑" and "↓" buttons.

SETTING THE PROMOTIONAL MESSAGE

The 4-line message can be written using the "↑" and "↓" buttons to scroll through the available characters.

Press the confirm button "↵", the first character will start blinking and can then be modified.

The message is stored by pressing button "←".

CUSTOMISING THE MESSAGES

The machine uses standard messages to give information to the user during normal operation (e.g. "Ready", "Take" etc.). When this function is enabled, the message can be changed in the same manner as setting the promotional message. Changes are stored as copies of the standard messages.

Therefore, if this function is disabled, the standard messages will be displayed again, but the changed messages are still stored.

STOP COFFEE

This function is used to enable/disable the button "☰", stopping coffee selections during normal operation.

SETTING THE WHIPPING TIME

In some models there is the option of setting the whipping time for instant coffee, thus obtaining the best possible drink quality. For models where it is not necessary, this function is in the menu but does not operate.

SETTING THE REGENERATION COUNTER

Upon accessing "maintenance" mode the message "Regenerate the water softener" can be displayed after a set number of drinks dispensed.

EXTERNAL LIGHTING

There is the option of deciding whether or not the panel lighting lamps are switched on when the machine is out of service or during the "Energy saving" time band.

ENERGY SAVING

In order to save electric energy when the machine is not in use, this function is used to switch off boiler heating and/or external lighting.

2 switch-off time bands can be programmed on a weekly basis; the week days are identified by a progressive number (1=Monday, 2=Tuesday etc.).

The same time band cannot include days from different weeks.

If time bands are set overlapping, the machine will remain switched on for the shorter period.

For example, in order to set energy saving time bands to run the vending machine from 07.00 to 22.00 during the week and leave it switched off on the weekend, the time bands should be set, using the special menu, as indicated in the table below.

Day		1	2	3	4	5	6	7
band 1	start	00.00	00.00	00.00	00.00	00.00	00.00	00.00
	end	07.00	07.00	07.00	07.00	07.00	23.59	23.59
band 2	start	22.00	22.00	22.00	22.00	22.00	00.00	00.00
	end	23.59	23.59	23.59	23.59	23.59	00.00	00.00

AUTOMATIC CLEANING TIME

Option of setting the time when automatically cleaning the mixers and rotating brewing units installed. When setting the time to 24.00 the function is disabled (default).

COIN MECHANISMS

It is possible to decide which of the payment system protocols available are to be enabled for the functions.

The available payment systems are:

- Executive
- Validators
- BDV
- MDB

By selecting one of the systems it is possible to control its functions.

EXECUTIVE

The following payments systems are available for the Executive system:

- Standard
- Price Holding
- Coges
- U-Key
- Sida

VALIDATORS

When the "Validator Lines" function of the "programming" menu is displayed, the value of the 6 validator coin lines, A to F, can be changed.

BDV / MDB

The BDV and MDB protocol menus are similar to each other; the following structure shows the differences:

Type of vending

Setting the operating mode for multiple or single dispensing. With multiple dispensing, the change is not automatically returned after a successful selection, however the credit is available for further selections. When pressing the coin return button, the available credit is returned if its value is lower than the maximum change value.

Credit control

This function enables/disables the return of credit if no selections are made.

If enabled, this function will hold the credit until the first selection has been made. If however a selection fails for any reason, the change will be returned if requested.

Maximum credit

This function is used to define the maximum accepted credit.

Maximum change

It is possible to set a limit to the total amount of change returned by the coin mechanism when pressing the coin return button or after a single dispensing serving.

The value can be 0 to 250 basic coins. Any credit exceeding the amount programmed with this function will be cashed.

Accepted coins

It is possible to define which, among the coins recognised by the validator, are to be accepted.

Check the label on the coin mechanism for the correct coin to value matching, indicating the position of the coins.

Rejected coins (BDV only)

This function programs the rejection of coins when in "exact amount" mode.

Check the label on the coin mechanism for the correct coin to value matching, indicating the position of the coins.

Disabled coin return (MDB only)

This function disables the return of a specific coin.

Dispensing buttons (BDV only)

This function enables or not the buttons on the coin mechanism used to release the coins in the change return tubes.

Value of "exact amount" (BDV only)

This value defines the combination of empty coin tubes, setting the coin mechanism in "exact amount" mode. The possible combinations of empty coin tubes are indicated below. For greater simplicity, the combination is described with reference to tubes A, B and C, where tube A receives the lower value coins and tube C the greater value coins.

0	=	A or (B and C)
1	=	A and B and C
2	=	A and B only
3	=	A and (B or C)
4	=	A only
5	=	A or B only (default)
6	=	A or B or C
7	=	A or B only
8	=	A or C only
9	=	B and C only
10	=	B only
11	=	B or C only
12	=	C only

C.P.C. devices (BDV only)

It dialogues with the coin mechanism if devices are installed or removed from the serial interface (C.P.C.-type devices - the monitoring unit is always enabled by default).

Minimum level of tubes

It brings forward the "Insert exact amount" message for the user, by adding a number of coins between 0 and 15 to the programmed number of coins, to set the "full change tubes" status.

Free Vend (BDV only)

Most payment systems with the BDV protocol control the free vend function.

However, there are some payment systems without such function.

In this case, if free selections are to be dispensed, free vending must be enabled with VMC (vending machine control, disabled by default) and the price of the selections must be set to zero.

Immediate change (BDV only)

According to the BDV protocol the amount of credit inserted for a selection is cashed after the machine sends the message "Selection successful".

When this function is enabled, disabled by default, the cash message is sent at the beginning of dispensing.

INITIALISING

When the "Initialising" function is displayed the vending machine can be initialized restoring all default data.

This function should be used if there is a memory data error or when the EPROM is replaced.

All statistics information will be reset.

Press confirm button "↵" to display the message "Confirm?". Press confirm button "↵" a second time and the message "Running" is displayed for a few seconds.

CURRENT FAILURES

READING

When the "Failure" function is displayed, press the confirm button "↵" to display the current failures.

If no failures are currently present, after pressing the confirm button "↵" the message "End failures" will be displayed.

The possible failures are indicated in the following cases:

Water failure

If the air-break microswitch is closed for more than one minute, the water inlet solenoid valve will remain energized until the water flow is restored.

Instant boiler

The machine is locked if after 20 minutes of heating time from machine start or from the last selection, the instant boiler fails to reach the operating temperature.

Espresso boiler

The machine is locked if after 10 minutes of heating time from machine start or from the last selection, the coffee boiler fails to reach the operating temperature.

Mobile spouts

If the spouts do not reach the dispensing position, the machine is disabled.

Cup failure

When the empty cup column microswitch opens, the column shift motor is activated. If after one full turn of the cup dispenser the microswitch is not closed the machine locks.

Espresso unit 1

This failure is due to a mechanical lock of the unit or when the unit is not present. The machine is not locked, but all coffee-based selections are disabled.

Coffee failure 1

If after a period of 15 seconds of grinding coffee, a dose is not obtained, all coffee-based selections are disabled.

Coffee release

If after releasing the ground coffee dose the microswitch of the coffee doser unit indicates the presence of coffee in the dosing chamber, all coffee-based selections are disabled.

Volumetric counter

Failed computation of the volumetric counter within a max. given time.

Liquid waste container full

This occurs after the liquid waste container float is triggered.

Air-break failure

The machine is locked if after 7 selections the microswitch has never signalled the lack of water.

Coin mechanism

The machine is locked if it receives a pulse longer than 2 seconds on a validator line or the communication with the serial coin mechanism does not take place for more than 30 seconds (Executive protocol) or 75 seconds (BDV protocol).

RAM data

One or more areas of the RAM contain wrong data which was corrected with the default values.

The machine will continue to function, but it would be advisable to initialise as soon as possible.

Machine control board

Failed dialogue between C.P.U. board and machine control board.

Fresh-brew unit 1

Due to wrong positioning of the unit (piston opening time > 8 seconds). The machine is not locked, but all fresh product based selections are disabled.

Fresh-brew scraper 1

Wrong positioning of the waste ejection scraper (movement time > 6 seconds).

The machine is not locked, but all fresh product based selections are disabled.

Fresh-brew unit 2 / Fresh-brew scraper 2

As unit and scraper 1 if the second brewing unit is installed.

RESET

By confirming this function all current failures will be reset

MISCELLANEOUS MENU

This menu contains some sub-menus, used less frequently, which permit control of the functions described below.

TIME BANDS

Four programmable time bands are provided for selling products at different prices.

The time bands can be programmed as hour (00 to 23) and minutes (00 a 59) for start and end.

If the values for start and end of the time band are set to 00.00 the time period is disabled.

The reference time is kept by an internal clock, programmable as:

day/month/year week day 1-7

and then

hour/minutes/seconds.

If the values for start and end of the time band are set to 00.00 the time period is disabled.

PRE-SELECTIONS

There is the option of enabling some selection buttons to have dispensing:

- without cup;
- with extra sugar, i.e. a greater amount of sugar (programmable) on all selections where it is dispensed;
- unsweetened, i.e. without sugar on all selections where it is dispensed;
- moka, i.e. with a reduced amount of water (programmable) for coffee.

The "-" and "+" buttons can be used to vary the amount of sugar or, alternatively of coffee.

The LEDs will indicate the average dose change.

- strong/light, i.e. varying the amount of product (programmable) for coffee.
- espresso, i.e. varying the amount of water (adjustable) for coffee selections.
- coffee powder, i.e. varying the amount of product (adjustable) for instant and fresh-brew coffee.

For each pre-selection it is possible to decide whether or not it is to be enabled, which button will be assigned to, the selection price change and the percentage change in product dose.

FRESH-BREW UNIT DATA

For each of the two Fresh-brew units installed in the machine, it is possible to set the brewing time, the drying time for the used dose and whether or not to enable product whipping and automatic cleaning of the brewing unit.

TEMPERATURE

This function is used to set the operating temperature, expressed in °C, of the boilers installed in the machine. After selecting the boiler, press the confirm button "➡" to display the temperature value blinking to be modified as necessary.

SELECTION COUNTER DISPLAY

This function is used to enable/disable the display of the total number of sales since the last statistic reset, during the start-up phase of the machine.

PROGRAMMING THE MACHINE CODE

When the "Machine code" function is displayed the eight-digit numeric code identifying the machine can be changed (from the default 0).

PROGRAMMING THE OPERATOR CODE

When the "Operator code" function is displayed the six-digit numeric code identifying groups of machines can be changed (from the default 0).

PASSWORD

It is a 5-digit numeric code which is required to access programming.

The default value of this code is set to 00000.

ENABLING THE PASSWORD

This function is used to enable the option of requesting the password to access programming; the password request is disabled by default.

CUSTOM SELECTION BUTTONS

The machine has the option of customising up to four selections as alternative to the 24 standard ones. With this function it is possible to decide to which button assign them (replacing the standard selection)

JUG FACILITIES

Some models, supplied with a special button, permit dispensing of a number of selections (programmable between 1 to 9; 5 as default) without cup to fill a jug.

EURO

It is possible to decide whether the selection prices are to be displayed in Euros, the local currency or both.

PROGRAMMING LEVEL

Considering the number of functions provided for programming, it is possible to decide whether displaying only the more frequently used menus or all of the available ones.

When this function is enabled, the following menus are displayed:

- from "Maintenance" mode, excluding the autotest function;

- 1 Price setting;

- 2 Statistics management;

- 7 Failure control;

- 8 Miscellaneous, limited to option 8.d which is used to enable/disable the programming level.

N.B. The numbers that identify the menus do not change in the two modes:

In the menu summary, the ones which are available with the function enabled are identified by the symbol



CUSTOMISING THE SELECTION COMPOSITION

The main parameters can be defined for each of the 28 available selections, regarding both doses and enabling the power users.

This way the composition of each single selection can be customised.

The definition and use of the various parameters is indicated below; the menu and the buttons to be used are indicated in the summary tables of the programming menus.

SELECTION STRUCTURE

This function identifies the parameters, among the available ones (0÷15; 9 are managed on these machines), which can be enabled according to specific needs.

0 Cup

cup dispensing.

1 Sugar

sugar dispensing.

2 Stirrer

stirrer dispensing.

3 Selection

blocking dispensing of a selection even if assigned to a button on the bush-button panel.

4 Sequential water dispensing

For the composite selections, this function defines whether the different water doses must be dispensed sequentially or at the same time.

5 Sugar into the cup

enabling the sugar dispensing device.

6 Pre-mixed sugar

dispensing sugar into the mixer.

7 Spout return delay

delayed return of the mobile spouts after the selection, allowing dispensing of the drink to be completed (e.g., tea brewing coil).

8 "Stop" button

enabling the button that stops strong coffee selections.

9 Spout movement

When disabled, this function blocks the spout movement for selections where it is not required (e.g. cold drinks).

WATER DOSES

Each selection can be composed of 1 to 4 different water doses.

For each of the water doses, the parameters that allow correct dispensing must be defined.

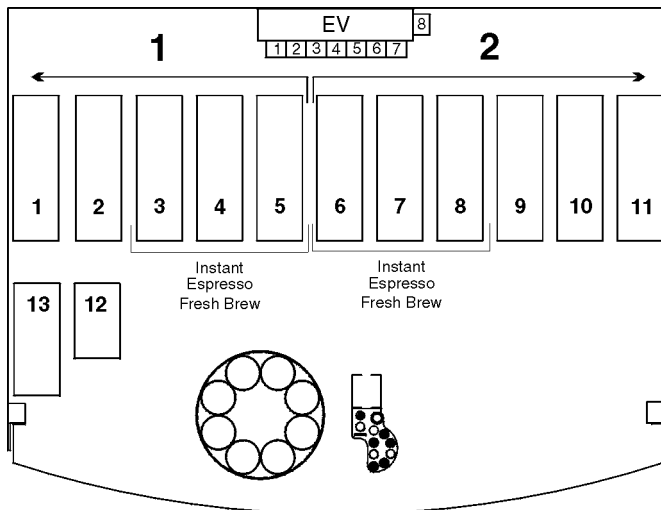
They are:

Unit

The machines in the Zenith range are conceived to ensure top modularity.

They are able to manage many combinations of functional units.

Fig. 16



The following can be fitted as alternatives on two interchangeable shelves:

Three instant product containers.

One espresso unit.

One fresh-brew unit and one instant product container.

For the other positions, a tea brewer can be fitted as alternative to the instant product container.

Then, a unit dispensing cold drinks can be fitted.

The dispensing system for the water dose will change according to the type of unit defined.

The functional units that can be defined are identified by a number:

N.	Unit
1	Instant 1 (LH)
2	Instant 2 (RH)
3	Espresso 1 (LH)
4	Espresso 2 (RH)
5	Fresh brew 1 (LH)
6	Fresh brew 2 (RH)
7	Tea brewer
8	Cold unit

Name

The available names (0÷15; 13 are managed on these machines) identify the products which will be displayed during the programming operations.

The product to number combination indicated in the following table is the same for both water and product doses.

N.	Name
0	Coffee
1	Sugar
2	Milk
3	Chocolate
4	Tea
5	Soup
6	Decaffeinated
7	Syrup
8	Instant coffee
9	Fresh-Brew
10	Lemon
11	Instant
12	Cold
13	
14	
15	

Solenoid valves

Also the solenoid valves (EV1÷9; 8 can be fitted on these machines) are identified by a number.

According to the type of functional unit defined for a given selection, the number will control the solenoid valve:

	Functional unit		
EV	Instant Fresh-brew Tea brewer	Espresso	Cold unit
1	instant boiler	dispensing coffee 1	water powder 1
2	instant boiler	dispensing coffee 2	plain water
3	instant boiler		water powder 2
4	instant boiler		soda
5÷8	instant boiler		
9	not applicable for these models		

Whipper

Assigning the whipper to the selection, identified by a number, 1÷13 (see figure 16).

Water dose

it is the water dose value (4 digits). This value can be changed also from the "Selection menu".

POWDER DOSES

1 to 4 powder (or syrup) doses can be assigned to each water dose composing a selection, For each of the powder doses, the parameters that allow correct dispensing must be defined.

They are:

Dispensing mode

According to the dose and type, there are 4 product dispensing modes, identified by a number, and namely:

- 1 - Continuous. Product dispensing starts with a programmable delay after the water dose and continues until the programmed dose is reached. However, product dispensing is stopped at the end of water dispensing.
- 2 - Stepped. The product is dispensed in 5 steps to cover the entire water dispensing time.
- 3 - Instant coffee. The product is dispensed before the water.
- 4 - "Sugar". The pre-selection buttons to vary the dispensed dose apply for the so defined powder.

Name

The available names (0÷15; 12 are managed on these machines) identify the products which will be displayed during the programming operations.

The product to number combination indicated in the table is the same used for water doses.

Doser device

Assigning the doser device to the powder dose, identified by a number, 1÷13 (see figure 16).

If the powder name is defined as "7-syrup", the syrup dispensing devices will be defined as doser 1 and doser 2.

Delay

Defining the product dispensing delay, in tenths of a second, after the water dose dispensing start.

Product dose

it is the water dose value (4 digits) expressed in grams (tenths of a second for syrup).

This value can be changed also from the "Selection menu".

PROGRAMMER (OPTIONAL)

AUTOMATIC SETUP TRANSFER

Using the programmer device makes it possible to read out the programming routines set and transferred to other machines from a reference vending machine.

This data is preserved also when the programmer is disconnected thanks to two Duracell batteries LR03 Format AAA 1.5 V (to be replaced every 12 months).

The programmer allows up to twenty different programs (setups) to be stored.

To differentiate among the 20 setups available those containing data, a special character is displayed, and namely:

< - > = Setup free

< □ > = Setup with data.

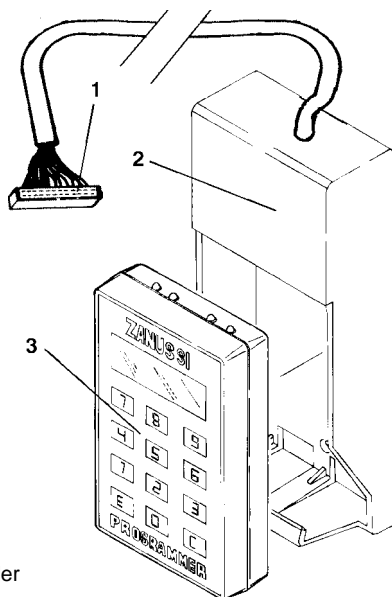
When creating the setup only those programs containing data are available; if no setup contains data, the message "no data available" will appear on the programmer display. To connect the programmer to the machine, the special holder is to be used (see Fig. 17) connecting the cable to the special connector of the push-button board (see Fig. 18).

Then enter the "programming" mode by pressing twice the relevant key on the coin mechanism compartment.

Now, inserting the programmer in its holder, an automatic connection will take place, and the setup menu will be shown on the programmer display:

- Press key "E" to access the displayed function;
- Press key "O" to display the following function;
- Press key "C" to display the previous function.

Fig. 17



- 1 - Connector
- 2 - Programmer holder
- 3 - Programmer

PROGRAMMER SETUP READING	SETUP READING SETUP 01 <X>	SETUP 01 <X> Confirm?
	SETUP READING SETUP 20 <X>	
PROGRAMMER CREATE SETUP	CREATE SETUP SETUP 01 <X>	SETUP 01 <X> Confirm?
	CREATE SETUP SETUP 20 <X>	

TRANSFERRED DATA

The following data is transferred with the setup:

- . Water and powder doses
- . Price table
- . Prices and selections status
- . Basic coin
- . Decimal point position
- . Value of the validator lines
- . BDV / MDB data
- . N. of "Jug Facilities" selections

CONFIGURING THE LANGUAGE

It is possible to change the programmer configuration regarding the language in which the messages are to be displayed as well as to reset all of the data therein contained. To activate the "Programmer configuration" operate as follows:

- insert the programmer in its holder and start the machine.
- wait about 10 seconds and then press programmer keys "C" and "O"; the first function will be thus displayed:

LANGUAGE CONFIGURATION	CONFIGURATION ITALIAN	CONFIGURATION Confirm?
	CONFIGURATION FRENCH	
	CONFIGURATION GERMAN	
	CONFIGURATION ENGLISH	
	CONFIGURATION SPANISH	
CONFIGURATION	INITIALISE INITIALISE	Confirm?
CONFIGURATION CONFIG. END	Exit from the configuration menu The software starts again from address 0000 (as when the machine is started)	

MAINTENANCE

The integrity of the machine and compliance with the standards of the relevant systems must be checked at least once a year by qualified personnel.

Before starting any maintenance operations requiring parts of the unit to be removed, the machine must always be switched off.

The operations described below must be carried out only by personnel who have the specific knowledge of the machine functioning from a point of view of electrical safety and health regulations.

INTRODUCTION

To ensure correct operation for a long period, the machine must be subjected to regular maintenance.

The following sections contain the procedures and the maintenance schedule, which are only a general indication, as they greatly depend on the operating conditions (e.g. water hardness, environmental humidity and temperature, type of product used, etc.).

The procedures described in this chapter are not exhaustive of all maintenance operations to be carried out. More complex operations (e.g. boiler descaling) should be carried out by qualified technicians only having specific knowledge of the machine.

To prevent oxidation or the action of chemical agents, the stainless steel and varnished surfaces should be kept clean by using mild detergents (solvents must not be used).

Never use water jets to clean the machine.

MAINTENANCE OF THE BREWING UNIT

Every 10,000 selections or every 6 months some maintenance of the coffee unit must be carried out.

Maintenance is carried out as follows:

- remove the boiler teflon hose connection from the upper piston, paying attention not to lose the seal (see Fig. 20);
- undo the knob securing the unit to the bracket;
- remove the coffee unit.

Removing the upper filter

- Take the snap ring out of its seat;
- remove the piston from the crosspiece;
- remove the filter and the piston sealing.

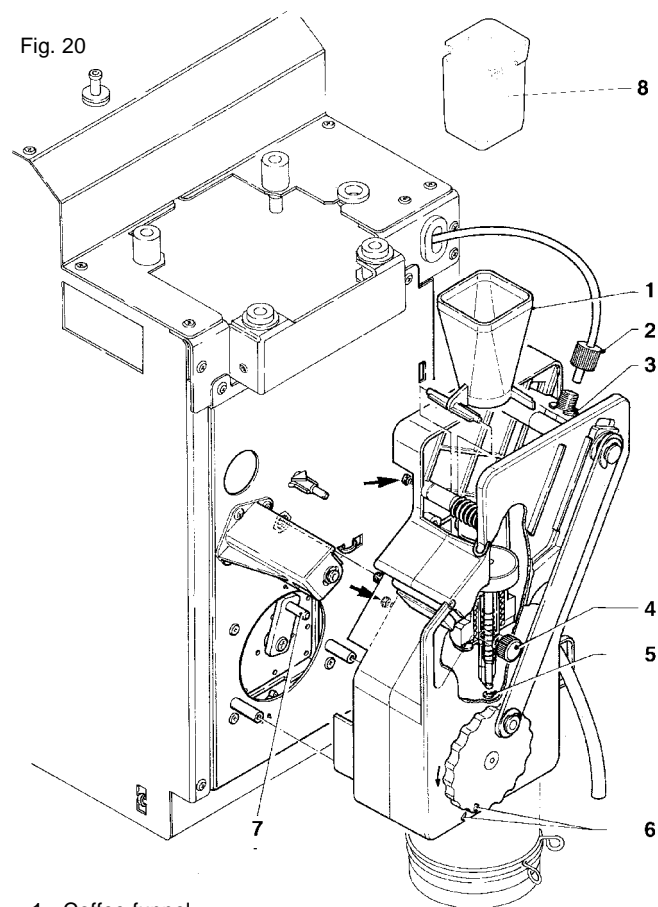
Removing the lower filter

- Loosen screws A and B enough to release the coffee funnel (see fig. 20);
- remove the lower piston snap ring;
- take the piston from out of brew chamber and remove the filter.

Soak all components removed from the unit in a solution of boiling hot water and coffee machine detergent for approx. 20 minutes.

Thoroughly rinse and dry all parts, then reinstall them in the reverse order of disassembly, taking particular care that:

- the piston is positioned in the correct notch for the coffee dose used (see relevant section);
- the two reference notches match and that the coffee unit is inserted.



- 1 - Coffee funnel
- 2 - Boiler connecting hose
- 3 - Upper piston snap ring
- 4 - Unit securing knob
- 5 - Lower piston snap ring
- 6 - Reference notches
- 7 - Ratiomotor handle pin
- 8 - Coffee doser extension

Important notice!!!

Check that the handle pin of the ratiomotor is correctly engaged in its seat.

ANNUAL SANITISING

At least once a year, or more frequently according to the use of the machine and the quality of the inlet water, the entire foodstuff circuit system must be cleaned and sanitized in the following way:

- all parts of the hydraulic system in contact with food, including the hoses, must be removed from the unit and fully disassembled;
- all visible residue and product films are mechanically removed using brushes or similar tools, if necessary;
- all components must be soaked in a sanitising solution for at least 20 minutes;
- the unit internal surfaces are to be cleaned with the same sanitising solution;
- Thoroughly rinse and then reinstall the parts.

Before restarting the unit, the same sanitising procedure described in section "Sanitising the foodstuff circuits and the mixers" should be repeated.

PRINTED BOARD FUNCTIONS AND INDICATOR LIGHTS

CPU BOARD

The C.P.U. (Central Processing Unit) board is housed in the coin mechanism compartment; this board controls the communication with the control board and processes the input signals from the Key-pad, the payment system and controls the display.

The board houses the EPROM (the chip containing the program) and a series of minidips (see Fig. 21) which allow configuration of the board according to use of the machine (see relevant chapter).

The board also houses some LEDs which, during the machine operation, give the following indications:

- green LED (2) blinking during the normal operation of the C.P.U. board.
- yellow LED (3) lit to indicate the presence of 5 Vdc;
- red LED (4) lit if there is a program error;
- red LED (5) lit during the board reset.

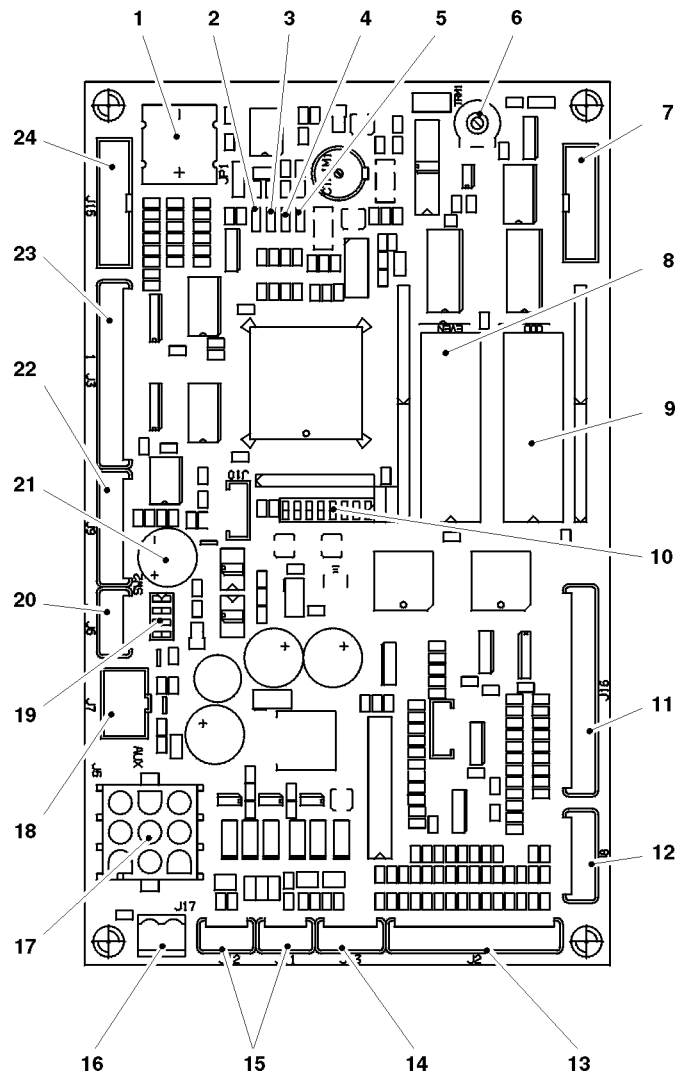
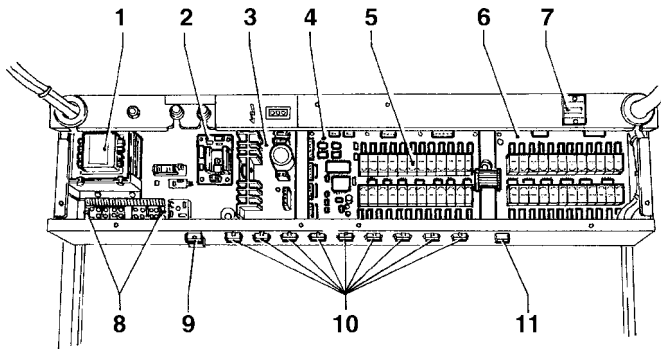


Fig. 21

- | | |
|----|--|
| 1 | - Battery |
| 2 | - Green LED: RUN |
| 3 | - Yellow LED: 5 Vdc |
| 4 | - Red LED: program error |
| 5 | - Red LED: board reset |
| 6 | - LCD contrast control trimmer |
| 7 | - LCD connector |
| 8 | - EPROM: EVEN |
| 9 | - EPROM: ODD |
| 10 | - Configuration Minidips |
| 11 | - Service keys connector |
| 12 | - Connector not used |
| 13 | - Key-pad connector |
| 14 | - Cold unit connector |
| 15 | - Connectors for control board communication |
| 16 | - 24 Vdc power supply to board |
| 17 | - BDV connector |
| 18 | - MDB connector |
| 19 | - Coin mechanism setting Minidip |
| 20 | - Connector not used |
| 21 | - Buzzer |
| 22 | - RS232 connector to programmer |
| 23 | - Connector of cup and sugar control board |
| 24 | - Validator connector |

Fig. 22



- 1 - Transformer
- 2 - Boiler control board
- 3 - Power supply board
- 4 - Actuation board
- 5 - Relay
- 6 - Expansion board
- 7 - Mechanical counter
- 8 - Transformer primary/secondary winding fuses
- 9 - Instant boiler connector
- 10 - Solenoid valve connector
- 11 - Sanitising kit connector (optional)

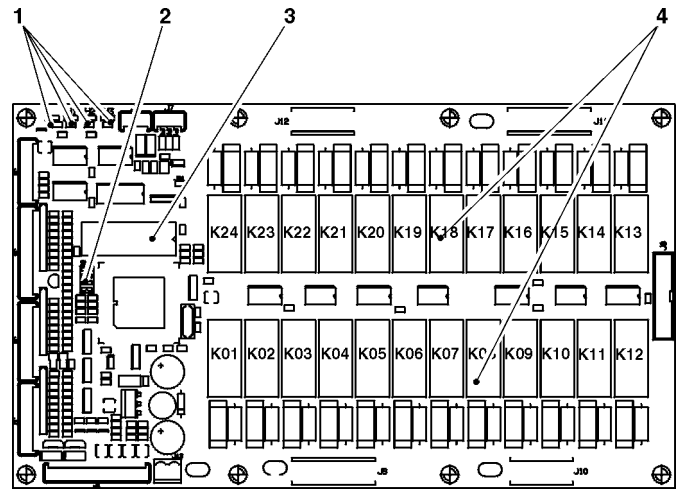


Fig. 23

- 1 - LED indicators
- 2 - EPROM
- 3 - Configuration Minidip
 - 1 = OFF
 - 2 = ON
 - 3 = ON
 - 4 = OFF
- 4 - Relay

RELAY FUNCTION (see Wiring diagram)

BOILER CONTROL BOARD

This board controls the instant boiler heating element.

ACTUATION BOARD

This board (see fig. 23) activates, by means of relays, some of the 230V~ components of the machine.

This board is supplied with 24 Vdc.

The control board EPROM is fitted on this board:

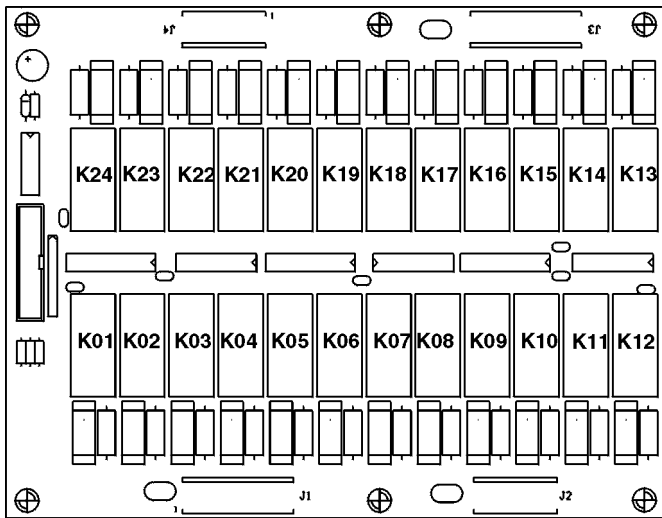
- green LED, blinking at intervals of approximately one second, indicates that the microprocessor is working correctly; if switched on fixed, it indicates that there is communication with the CPU board.
- red LED "H1", indicates the operating status of heating element on the first espresso boiler.
- red LED "H2", indicates the operating status of heating element on the second espresso boiler (if installed).
- red LED "H3", indicates the operating status of heating element on the instant boiler.

K01 =	PM	MF3	
K02 =	MFB	MD5	ESC
K03 =	ER1	MPF	MF5
K04 =	M	MDFB	MD3
K05 =	ER2	MF	MF4
K06 =	MAC	MD	MD4
K07 =	E8		
K08 =	MD1		
K09 =	MF1		
K10 =	MD2		
K11 =	MF2		
K12 =	VENT		
K13 =	E1		
K14 =	E2		
K15 =	E3		
K16 =	E4		
K17 =	E5		
K18 =	E6		
K19 =	E7		
K20 =	E9		
K21 =	MSB		
K22 =	MSU		
K23 =	MSCB		
K24 =	MSP		

EXPANSION BOARD

This board (see Fig. 24) activates, by means of relays, the other 230V~ components of the machine.

Fig. 24



RELAY FUNCTION (see Wiring diagram)

K01	=	PM (C2)	MF6	
K02	=	MPF	MF8	
K03	=	M (C2)	MDFB	MD6
K04	=	MF	MF7	
K05	=	MAC (C2)	MD	MD7
K06	=	ESC (C2)	MFB	MD8
K07	=	not used		
K08	=	MVP		
K09	=	not used		
K10	=	not used		
K11	=	MDZ		
K12	=	MD12		
K13	=	MD9		
K14	=	MF9		
K15	=	MD10		
K16	=	MF10		
K17	=	MD11		
K18	=	MF11		
K19	=	PM sanit.		
K20	=	LF		
K21	=	EV sanit.		
K22	=	EEA		
K23	=	not used		
K24	=	not used		

CONFIGURING THE ELECTRONIC BOARDS

The electronic boards are designed to be used in many machine models.

When the boards are replaced, or when wishing to change the unit performance, ensure that the board configuration is correct.

Two series of minidip are fitted at the centre of the CPU board (see Fig. 21) and of the actuation board (see Fig. 22) allowing the board to be configured for use on the various versions.

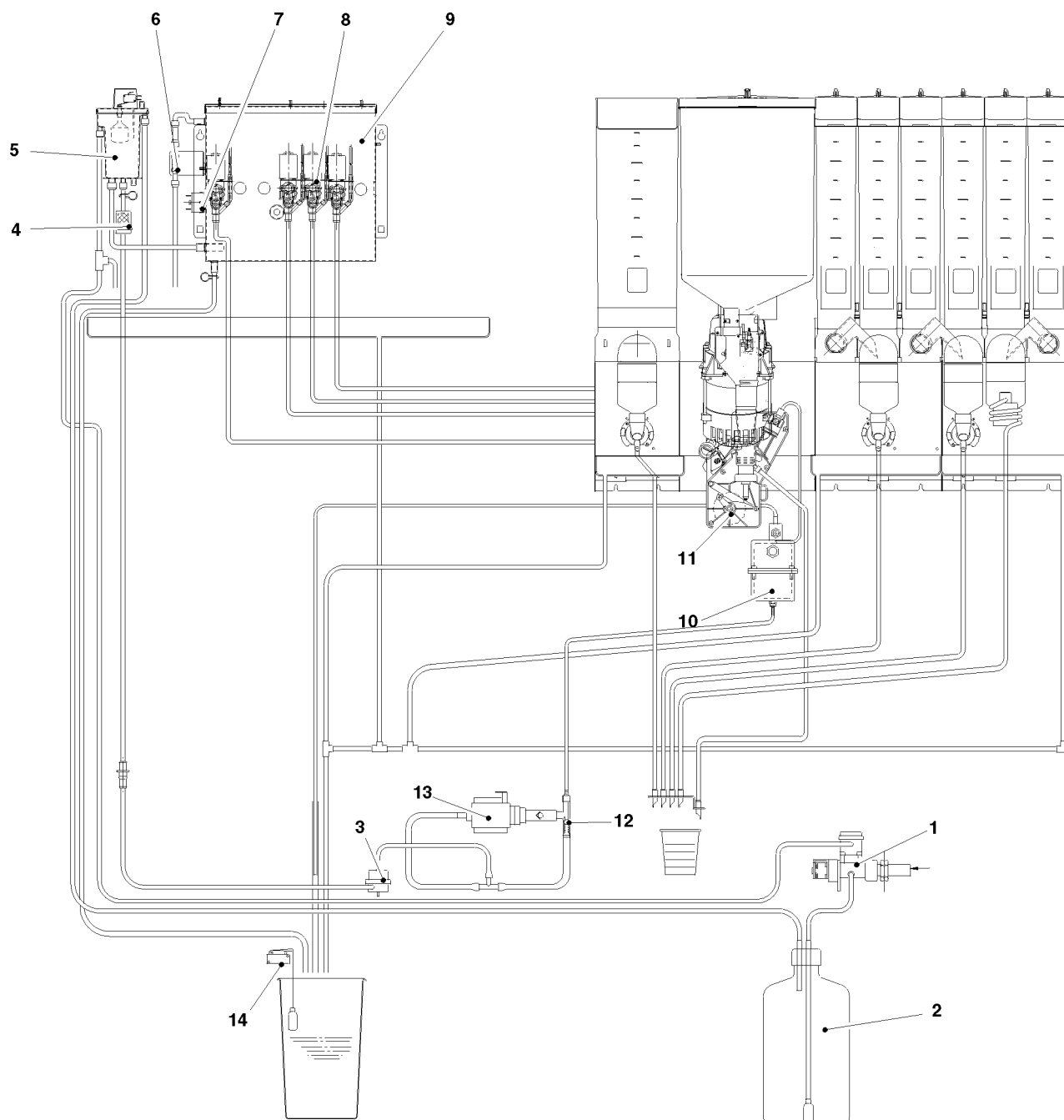
To correctly configure the boards, refer to the selection dose table.

SOFTWARE UPDATE

The machine is fitted with Flash EPROMs which can be electronically updated.

By means of a special program and suitable system (Personal Computer or similar) the machine management software can be updated without replacing the EPROMs.

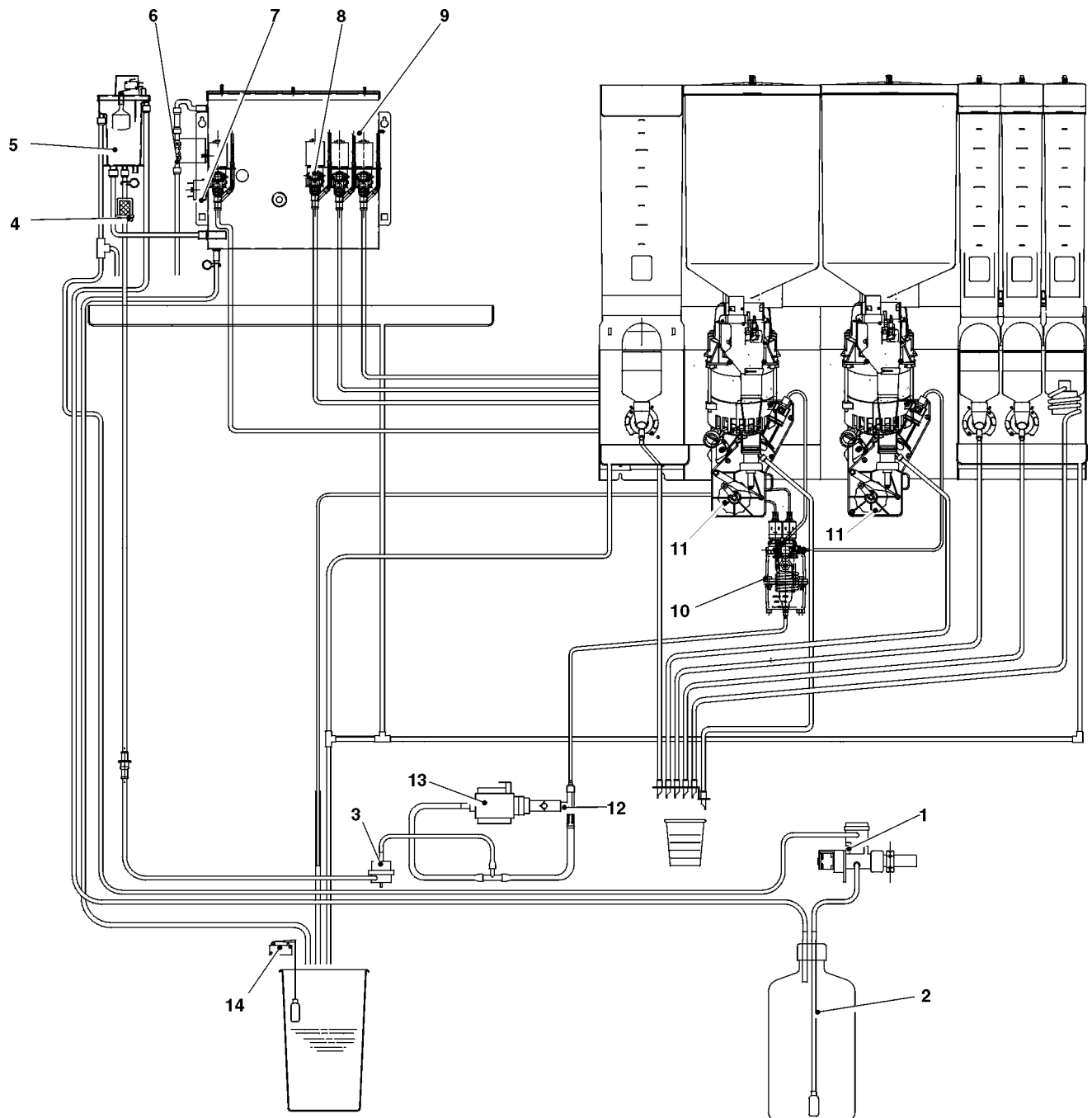
HYDRAULIC SYSTEM FOR ESPRESSO



- 1 - Water inlet solenoid valve
- 2 - Water softener
- 3 - Volumetric counter
- 4 - Mechanical filter
- 5 - Air-break
- 6 - Anti-boiling thermostat
- 7 - Safety thermostat

- 8 - Instant prod. solenoid valves
- 9 - Instant prod. boiler
- 10- Coffee boiler
- 11- Coffee unit
- 12- Bypass
- 13- Vibration pump
- 14- Liquid waste container float

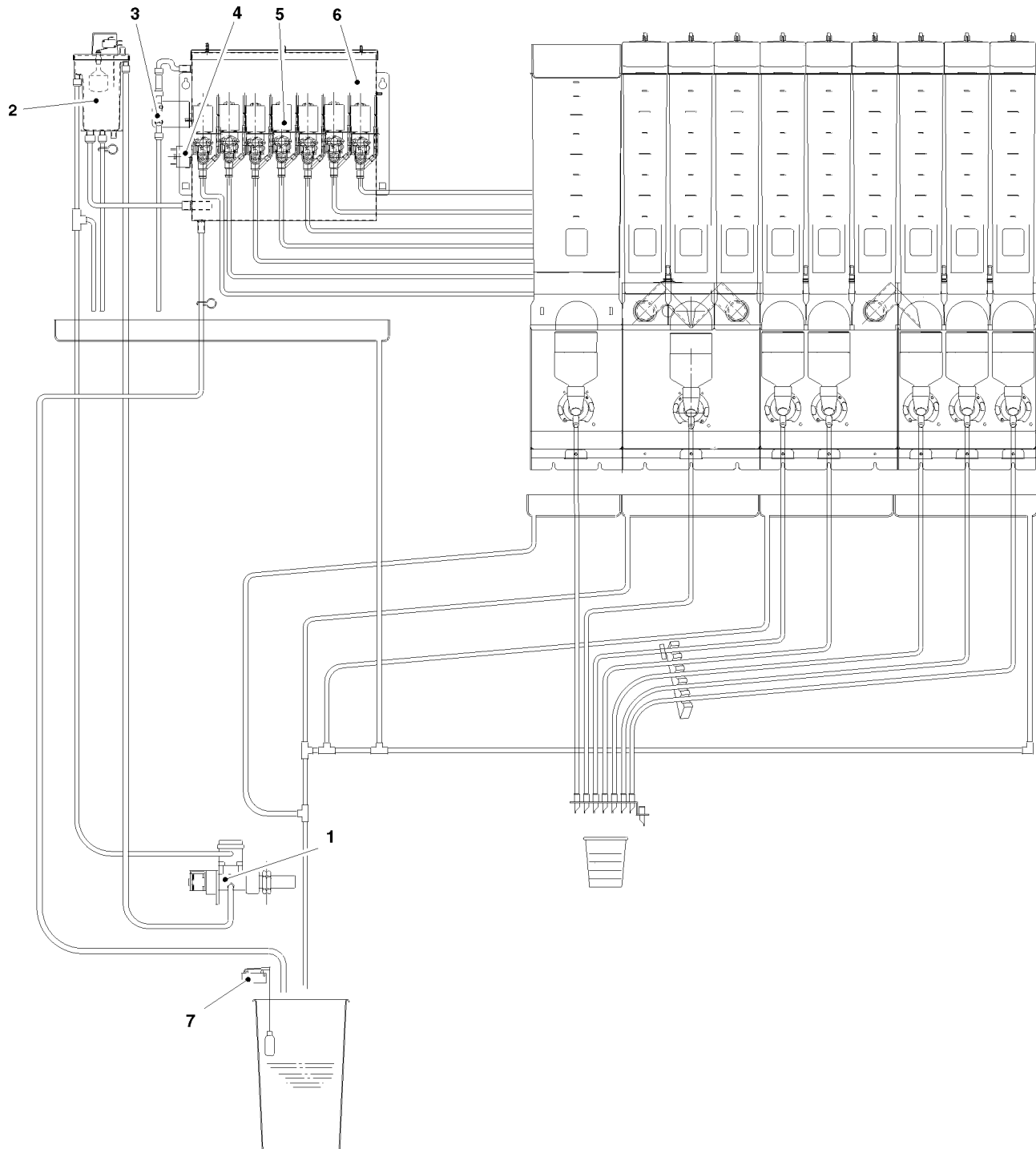
HYDRAULIC SYSTEM FOR TWO ESPRESSO UNITS



- 1 - Water inlet solenoid valve
- 2 - Water softener
- 3 - Volumetric counter
- 4 - Mechanical filter
- 5 - Air-break
- 6 - Anti-boiling thermostat
- 7 - Safety thermostat

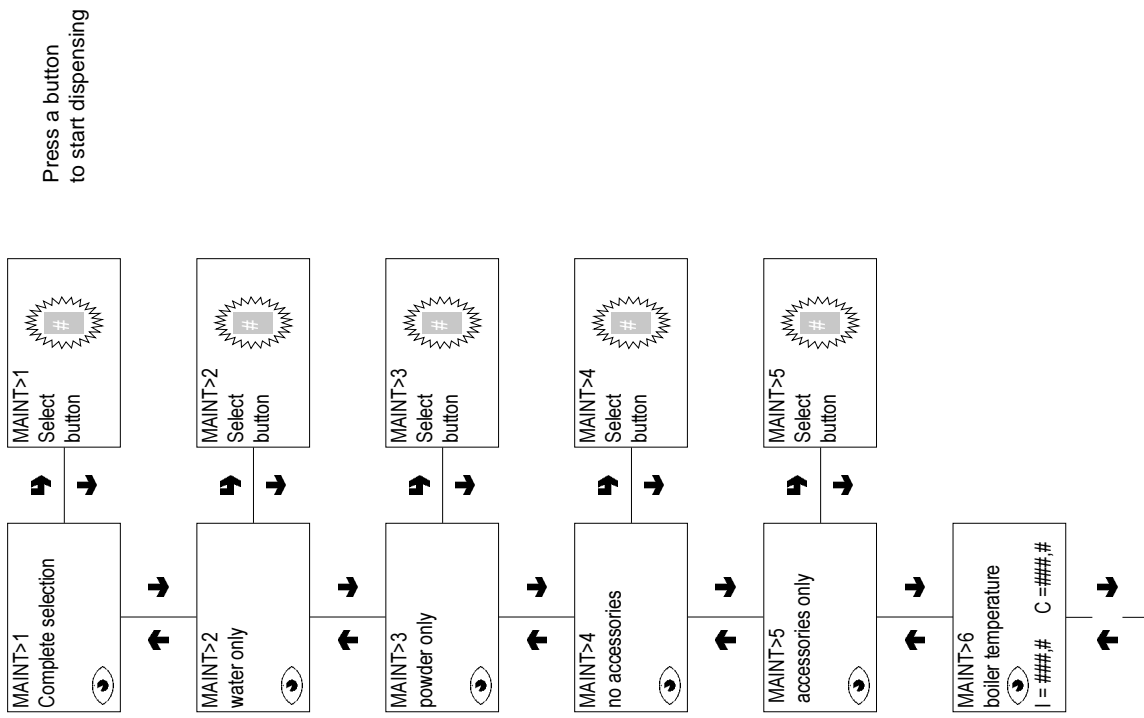
- 8 - Instant prod. solenoid valves
- 9 - Instant prod. boiler
- 10- Coffee boiler
- 11- Coffee unit
- 12- Bypass
- 13- Vibration pump
- 14- Liquid waste container float

HYDRAULIC SYSTEM FOR INSTANT



- 1 - Water inlet solenoid valve
- 2 - Air-break
- 3 - Anti-boiling thermostat
- 4 - Safety thermostat
- 5 - Instant prod. solenoid valves
- 6 - Instant prod. boiler
- 7 - Liquid waste container float

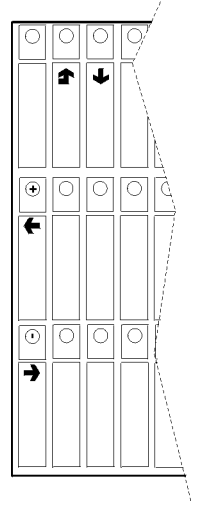
Maintenance Menu - Summary



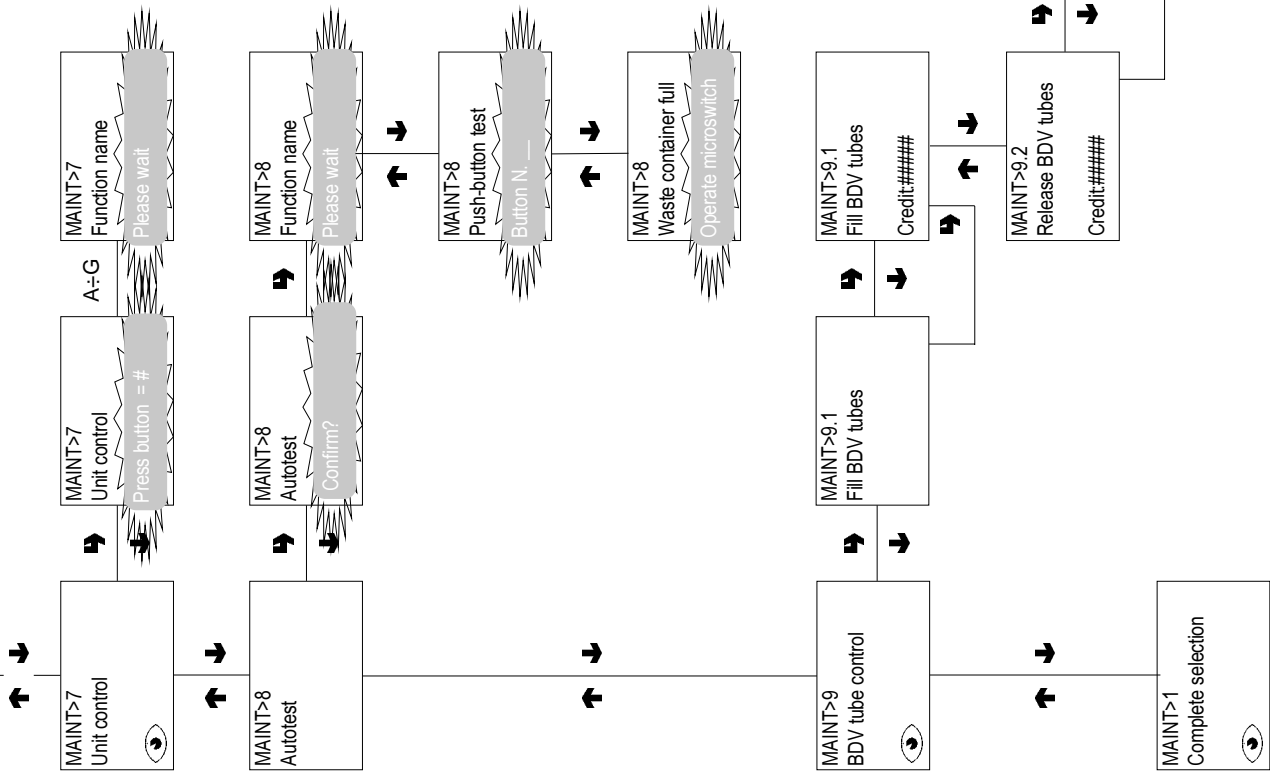
Press the programming button once

Menu displayed at all times

I = Instant boiler
C = Coffee boiler



Maintenance Menu - Summary

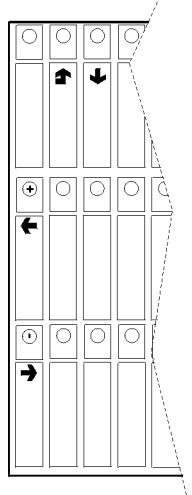


Actuation in sequence of:
 .doser devices
 .mixers
 .cup dispenser
 .stirrer dispenser
 .neon lamps
 .door LED
 .bush-buttons*
 .mobile spouts
 .coffee dose
 .unit rotation
 .waste container full*

* these functions require the assistance of the user to actuate the switches.

BDV only
 Manual change tube refill

Manual tube releasing

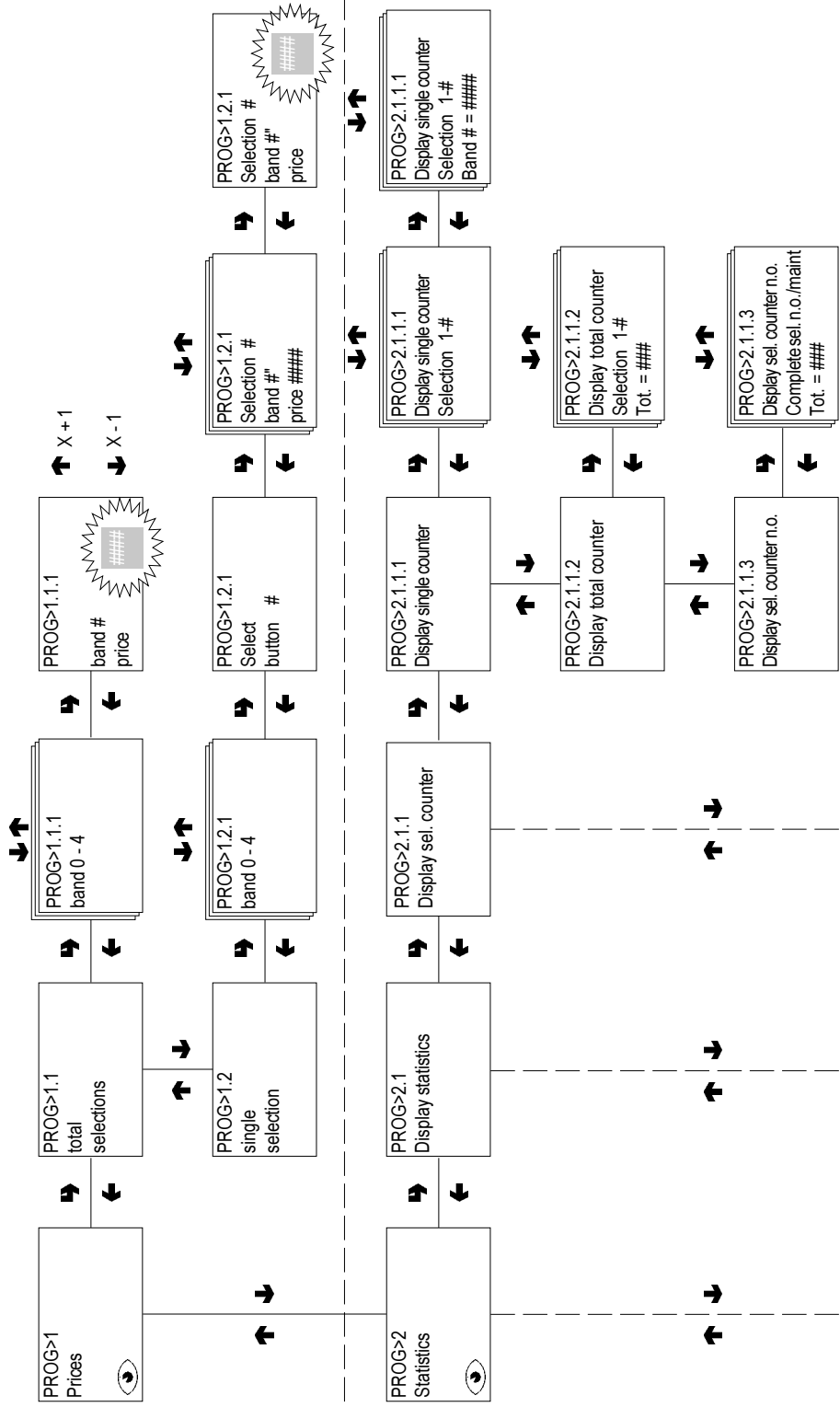


Programming menu - Summary

Press button **←** from "maintenance" mode

Menu displayed at all times

4 time bands plus band 0 (no time band set) available with different prices for each selection



TOTAL STATISTICS

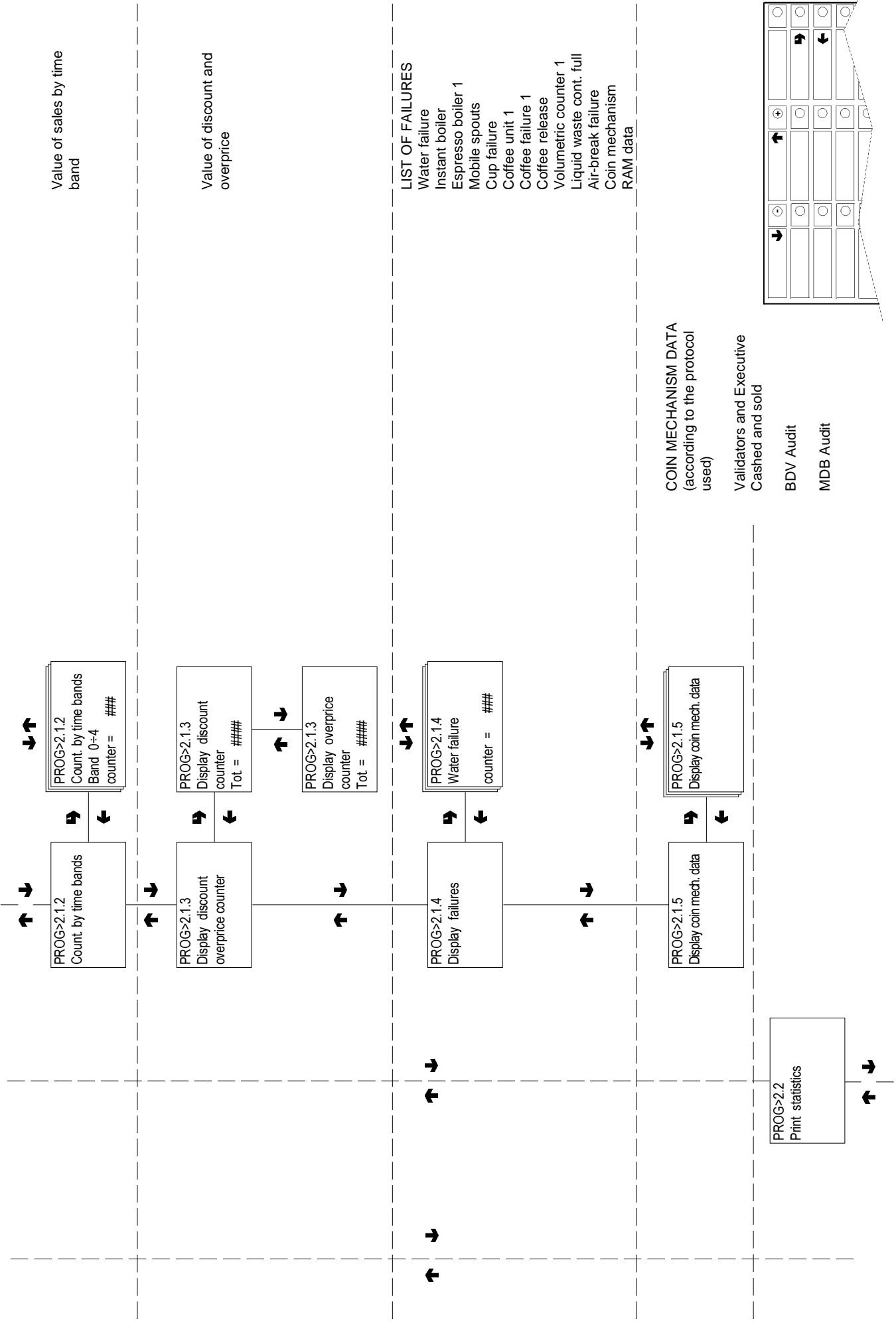
Display sales by single selection for each time band and total

Display total sales by single selection

Display total complete sales during normal operation and maintenance mode

→	←	+	→	←	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○

Programming menu - Summary



Value of sales by time band

Value of discount and overprice

LIST OF FAILURES

- Water failure
- Instant boiler
- Espresso boiler 1
- Mobile spouts
- Cup failure
- Coffee unit 1
- Coffee failure 1
- Coffee release
- Volumetric counter 1
- Liquid waste cont. full
- Air-break failure
- Coin mechanism
- RAM data

COIN MECHANISM DATA (according to the protocol used)

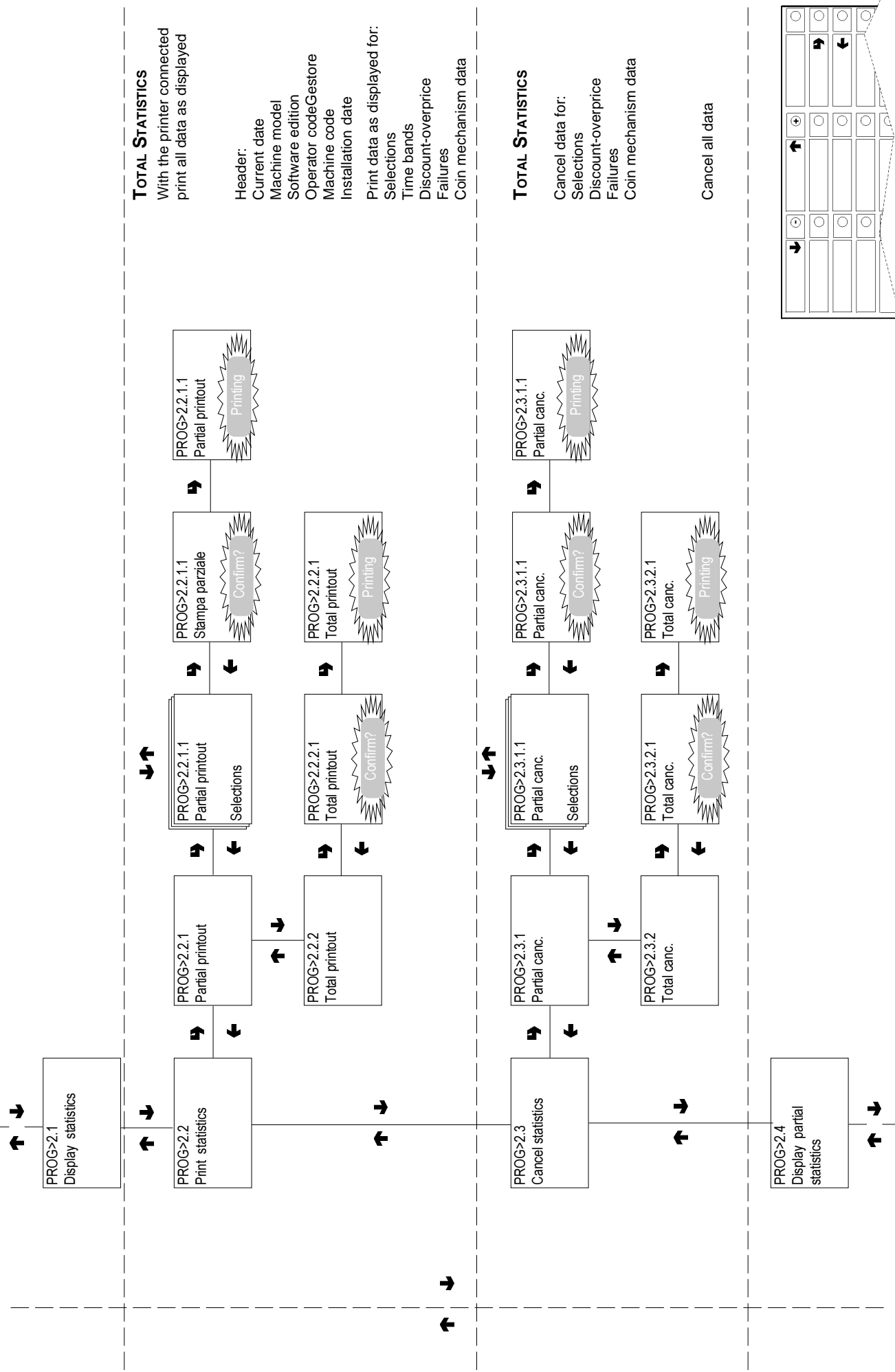
Validators and Executive
Cashed and sold

BDV Audit

MDB Audit

→	←	+	←	→	←
→	←	+	←	→	←
→	←	+	←	→	←
→	←	+	←	→	←
→	←	+	←	→	←

Programming menu - Summary



TOTAL STATISTICS

With the printer connected print all data as displayed

Header:

- Current date
- Machine model
- Software edition
- Operator code
- Machine code
- Installation date
- Print data as displayed for:
- Selections
- Time bands
- Discount-overprice
- Failures
- Coin mechanism data

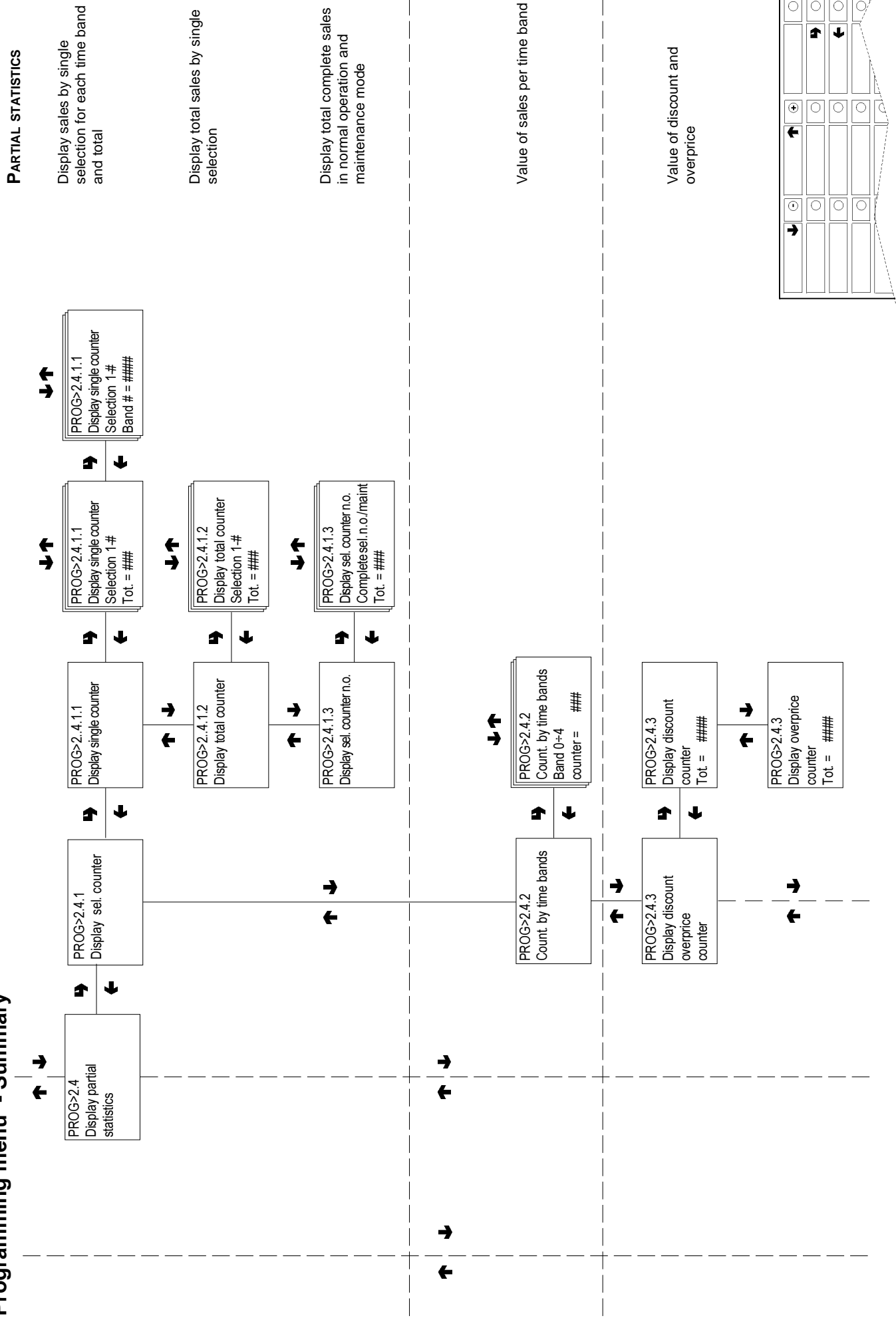
TOTAL STATISTICS

- Cancel data for:
- Selections
- Discount-overprice
- Failures
- Coin mechanism data

Cancel all data

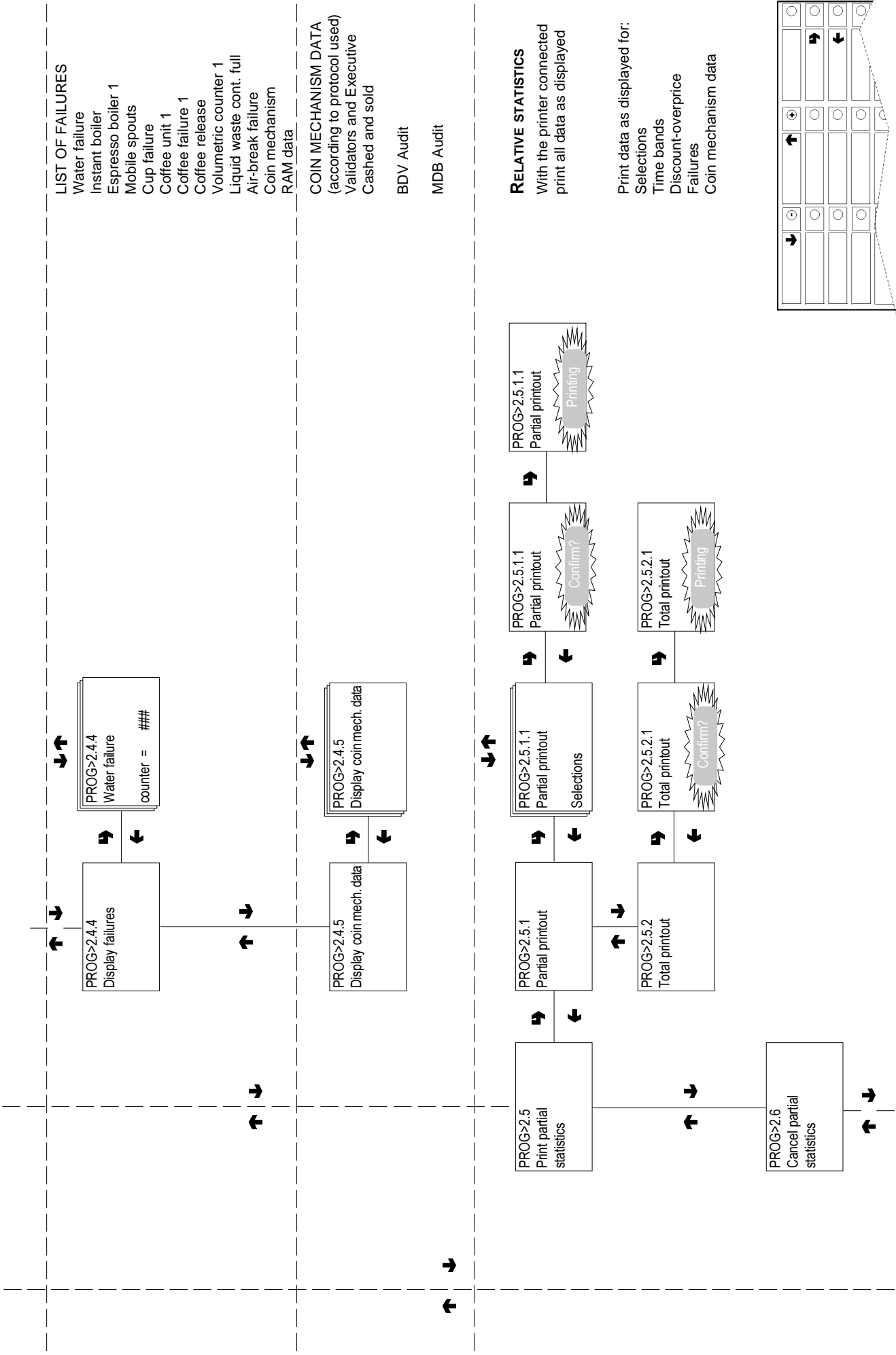
→	←	+	↑						

Programming menu - Summary



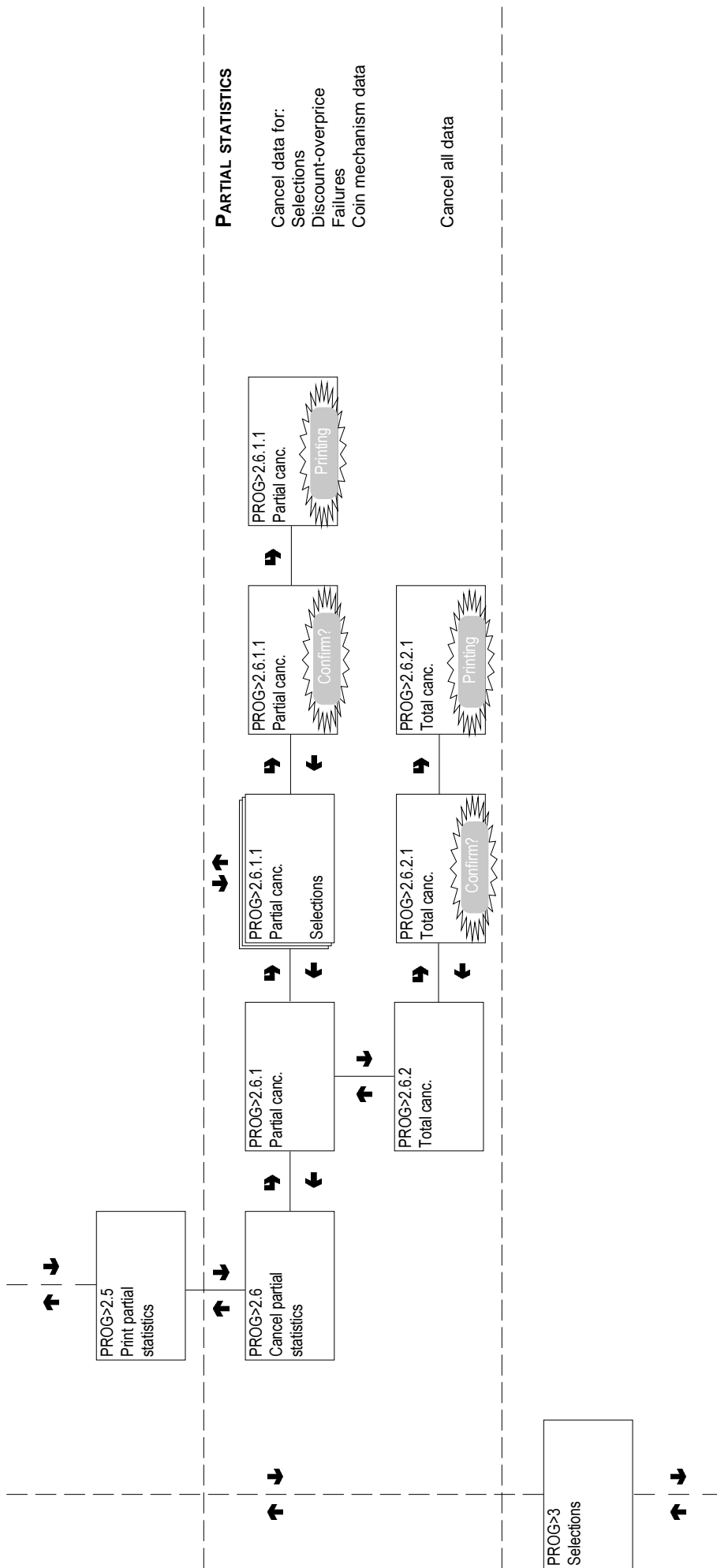
→	←	+	↑	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○

Programming menu - Summary



→	←	+	→	←	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○

Programming menu - Summary



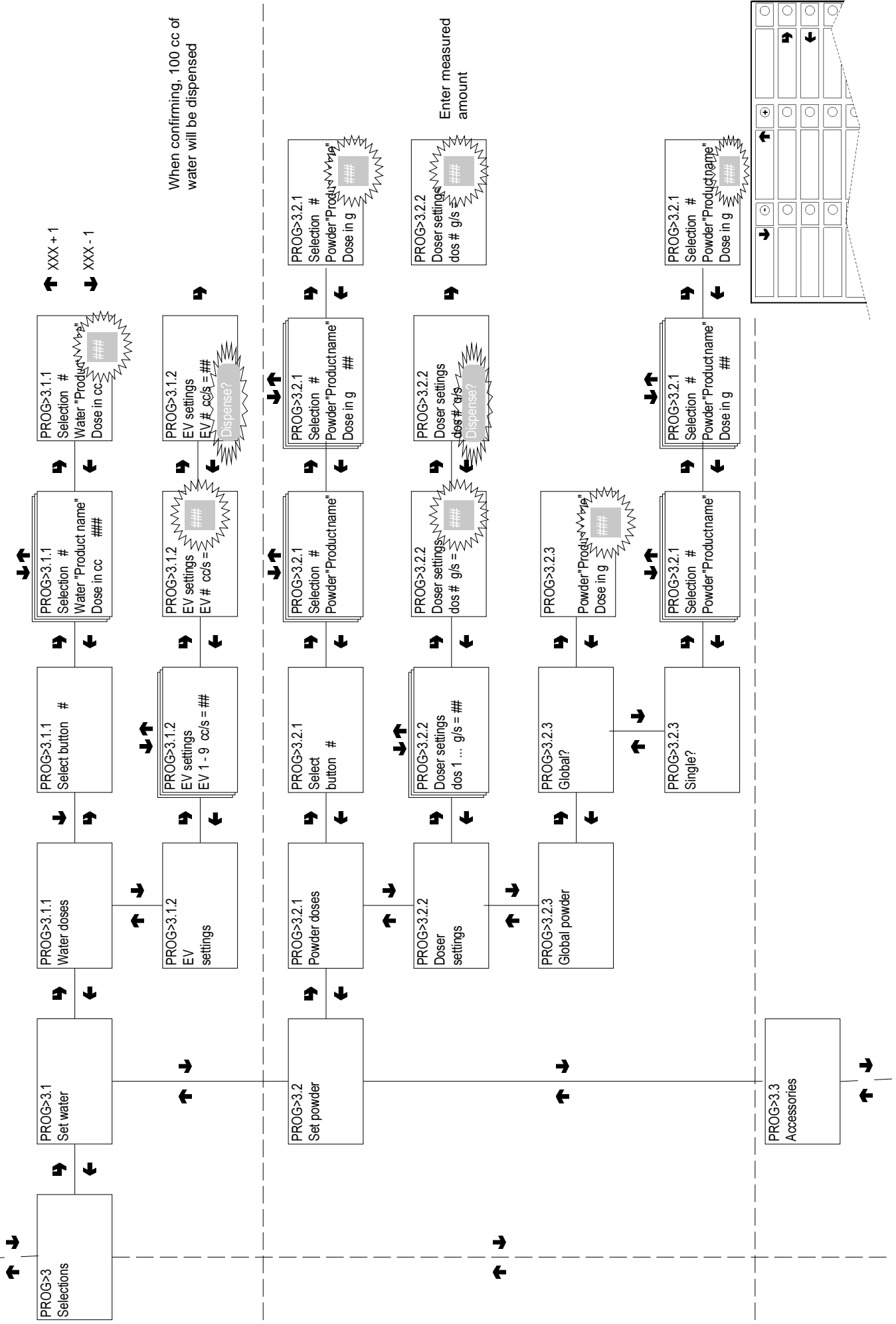
PARTIAL STATISTICS

Cancel data for:
 Selections
 Discount-overprice
 Failures
 Coin mechanism data

Cancel all data

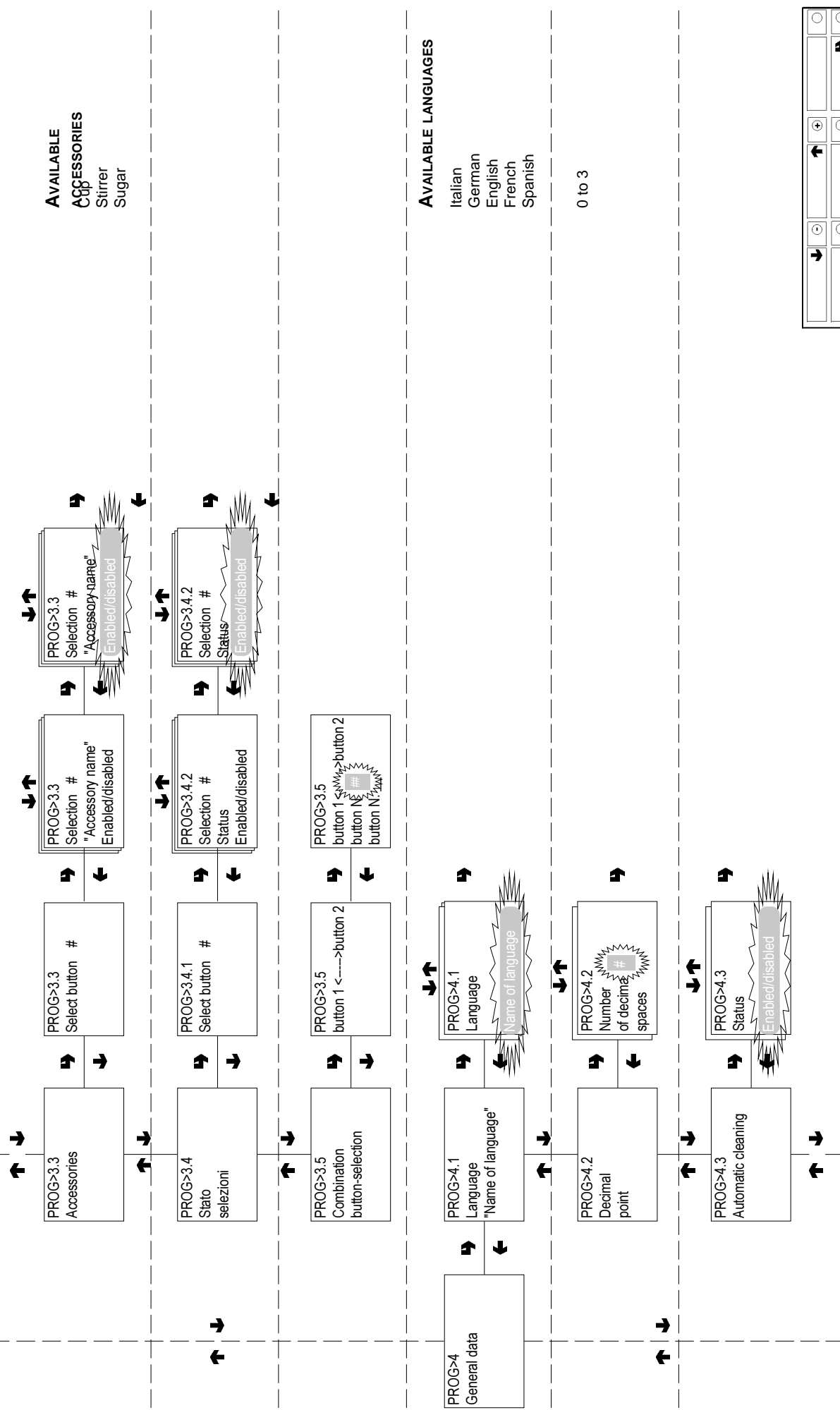
→	←	+	→	←
→	←	+	→	←
→	←	+	→	←
→	←	+	→	←

Programming menu - Summary



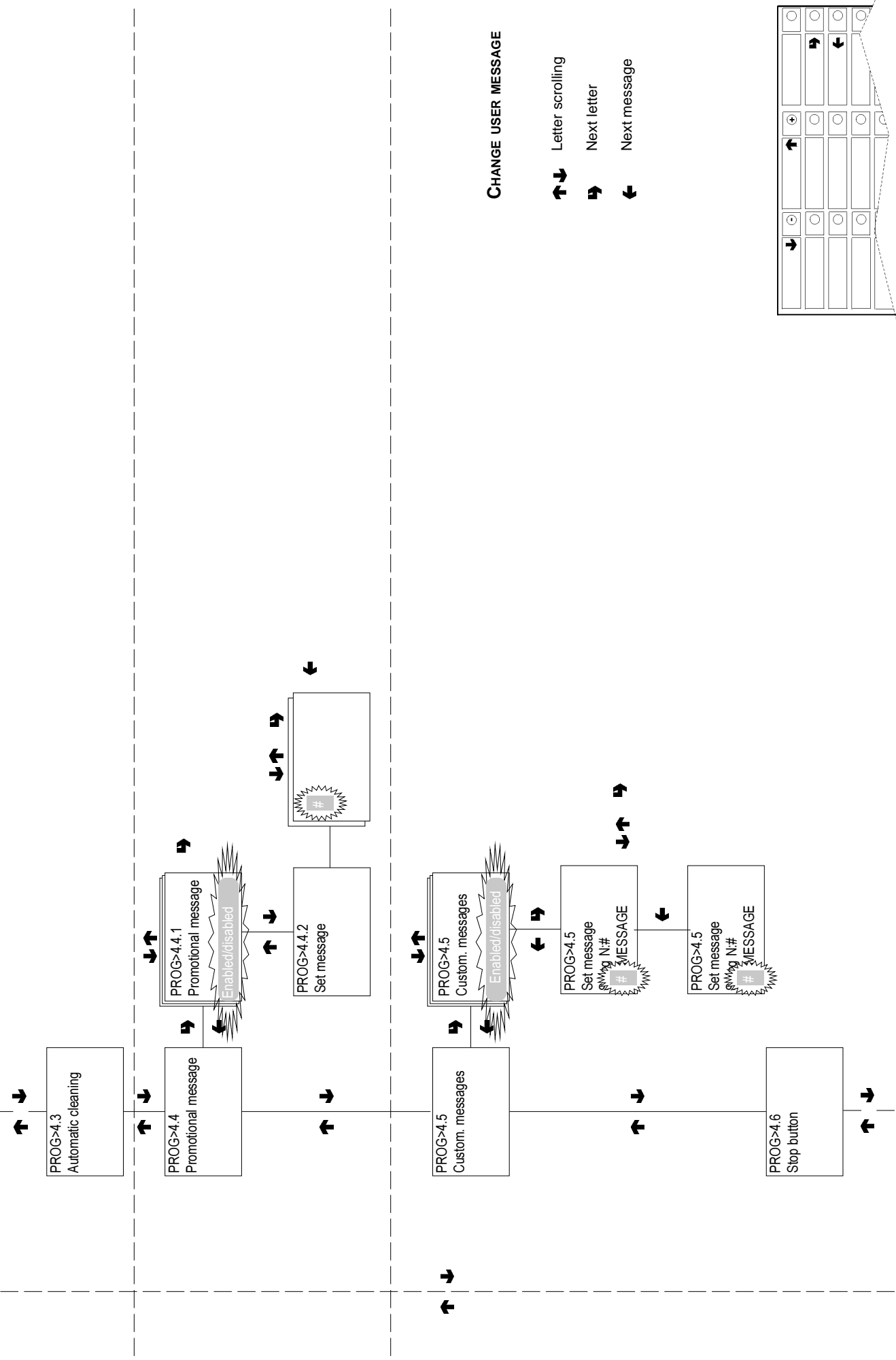
←	→	+	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Programming menu - Summary



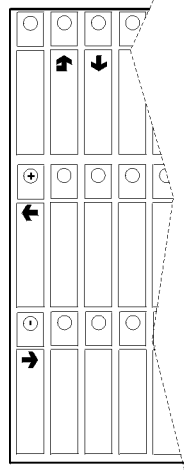
→	←	+	←	→	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○

Programming menu - Summary

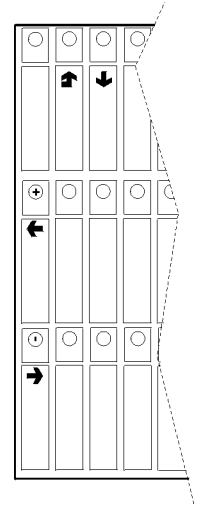
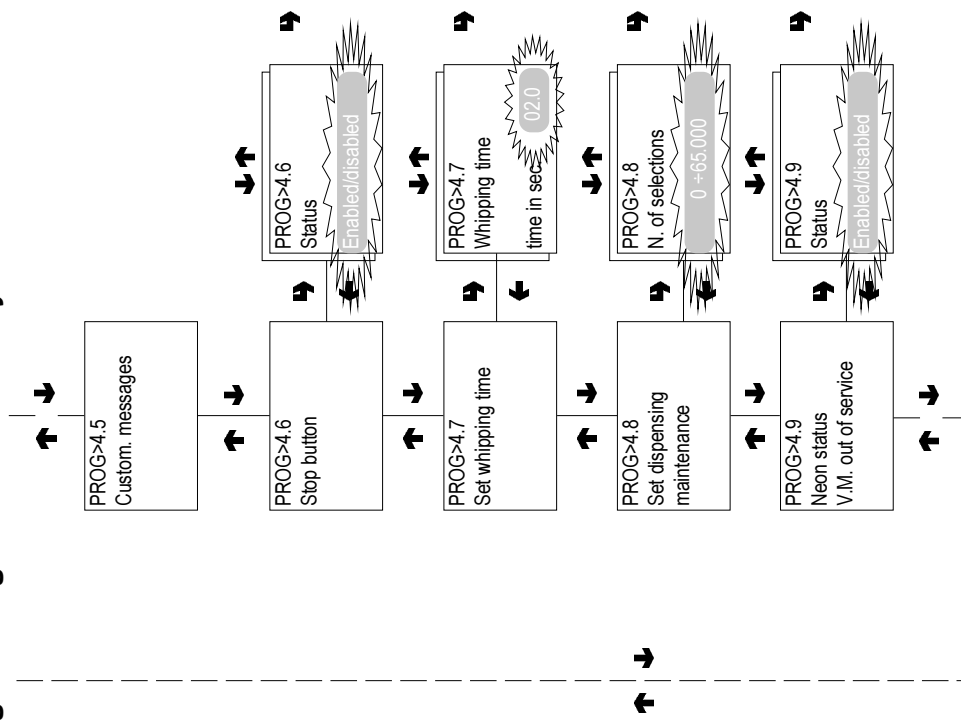


CHANGE USER MESSAGE

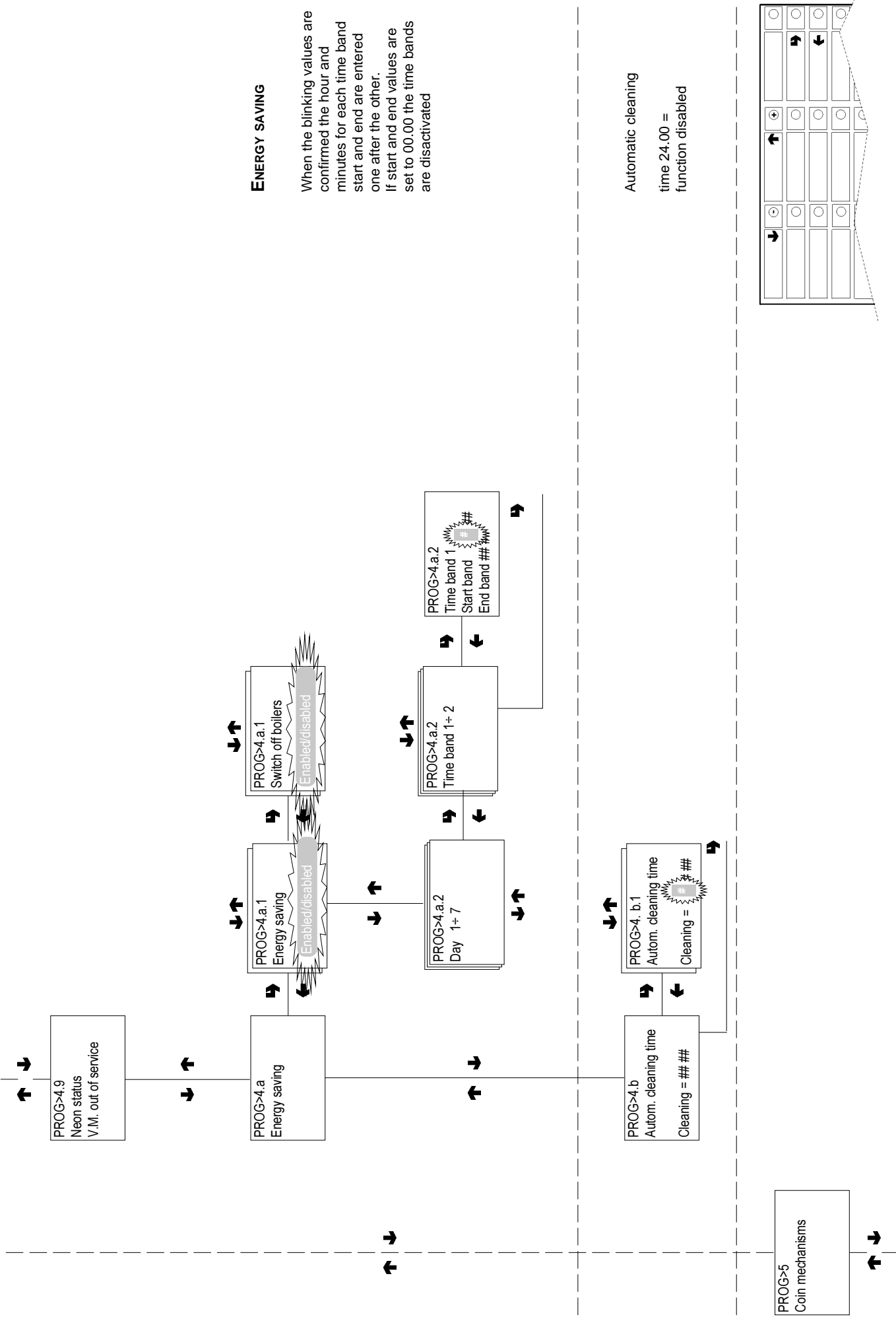
- ↕ Letter scrolling
- ➡ Next letter
- ⬅ Next message



Programming menu - Summary



Programming menu - Summary



ENERGY SAVING

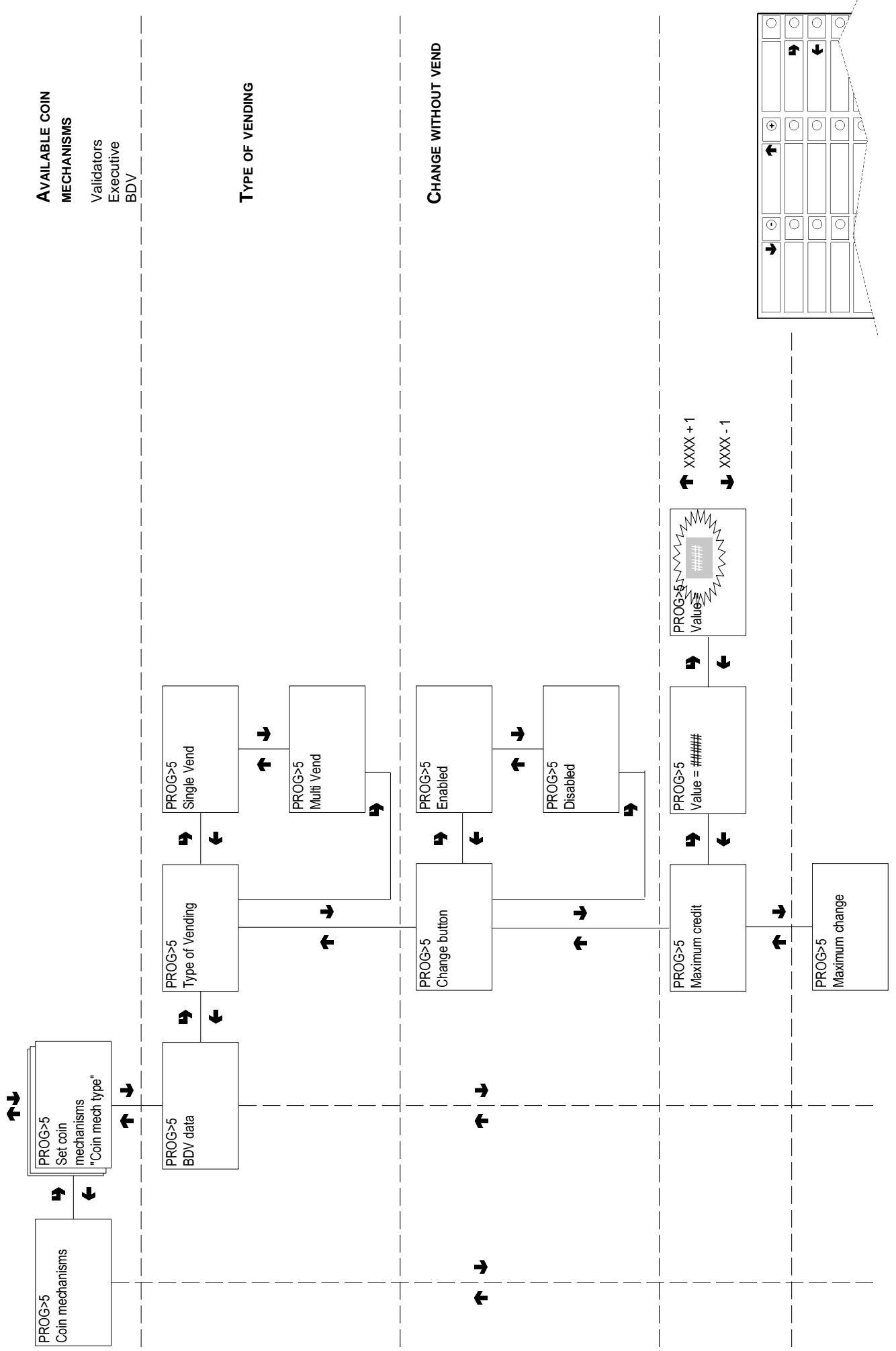
When the blinking values are confirmed the hour and minutes for each time band start and end are entered one after the other. If start and end values are set to 00.00 the time bands are deactivated

Automatic cleaning

time 24.00 =
function disabled

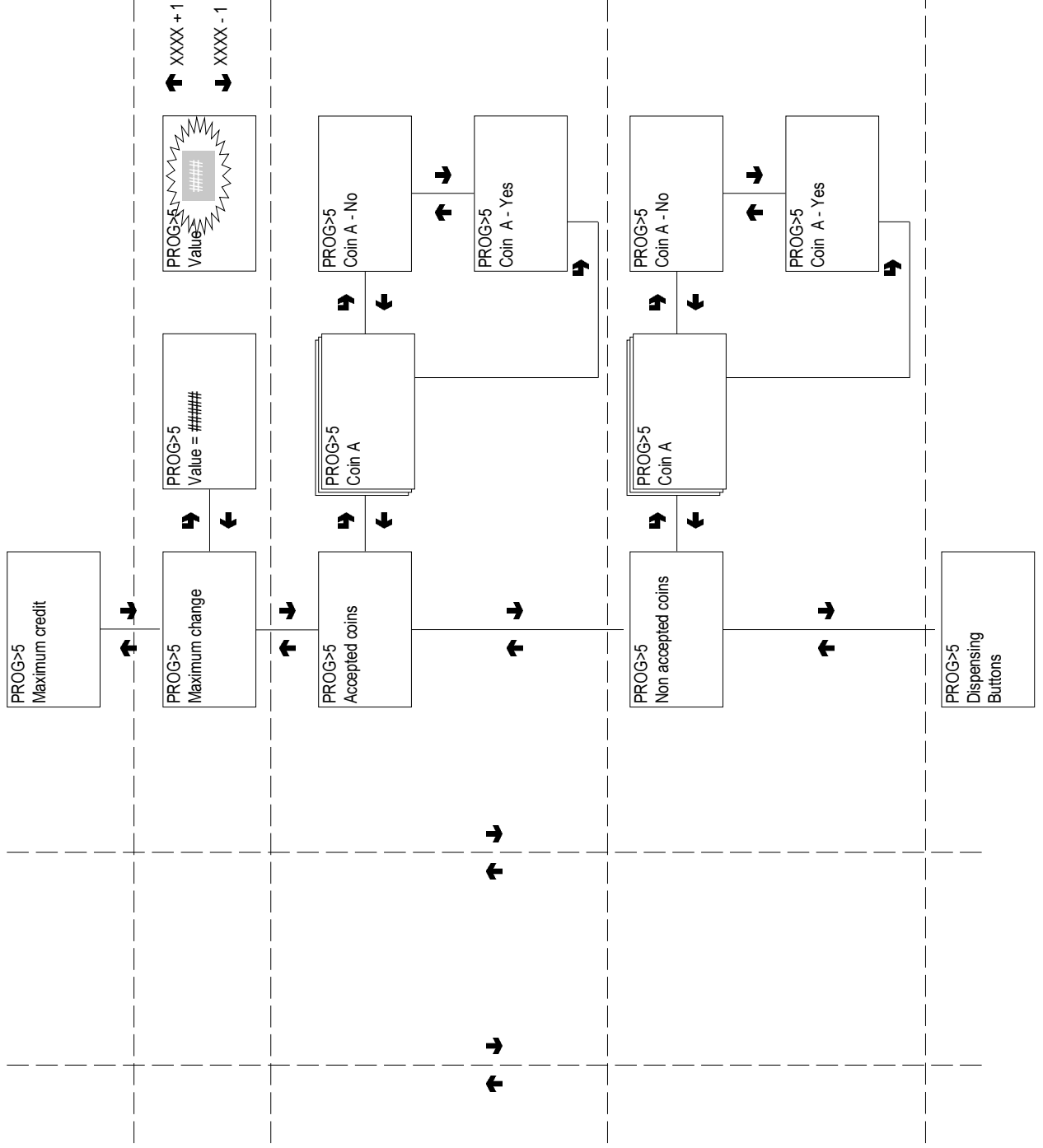
➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔
➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔
➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔
➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔	➔

Programming menu - Summary

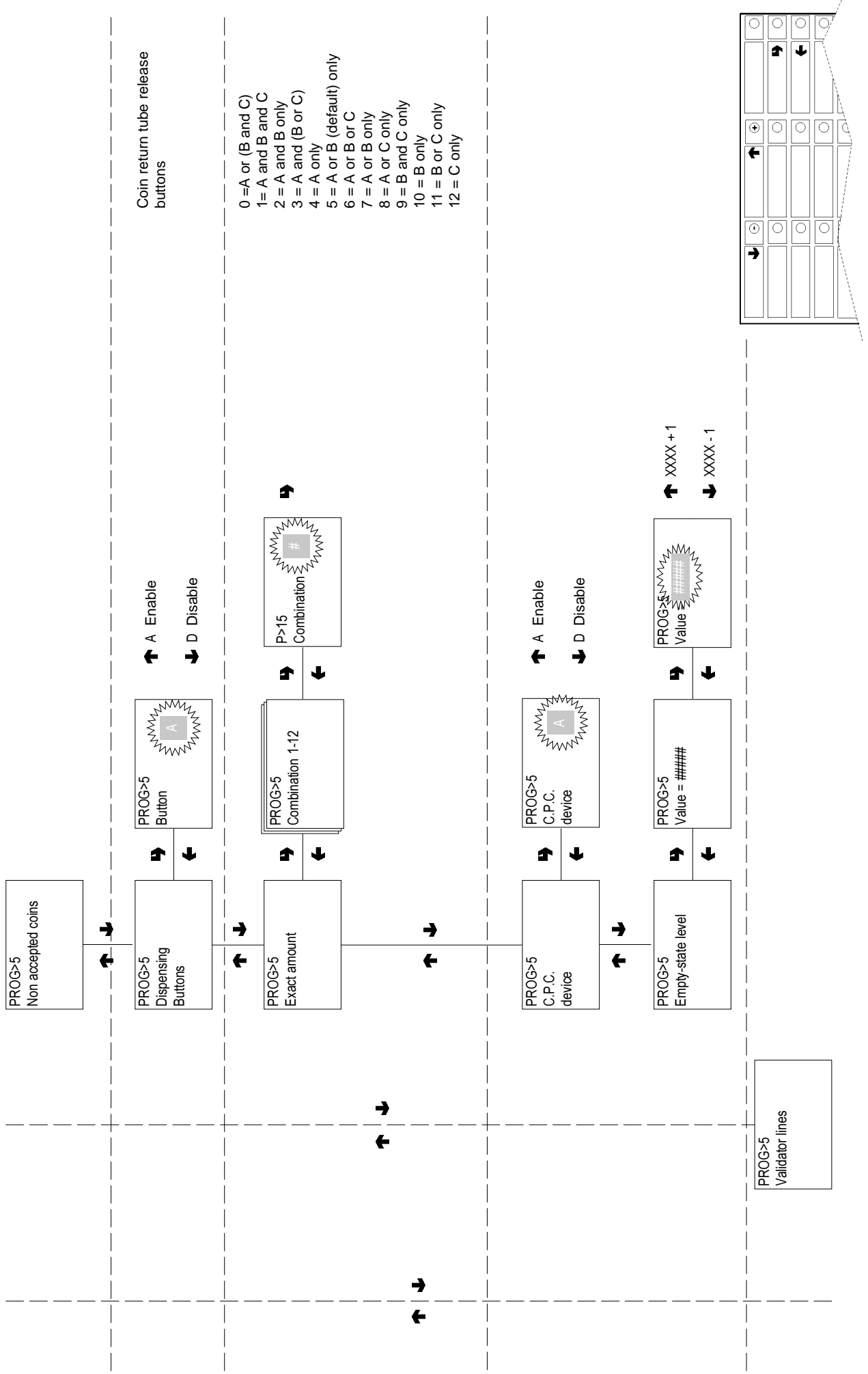


→	←	+	→	←	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○

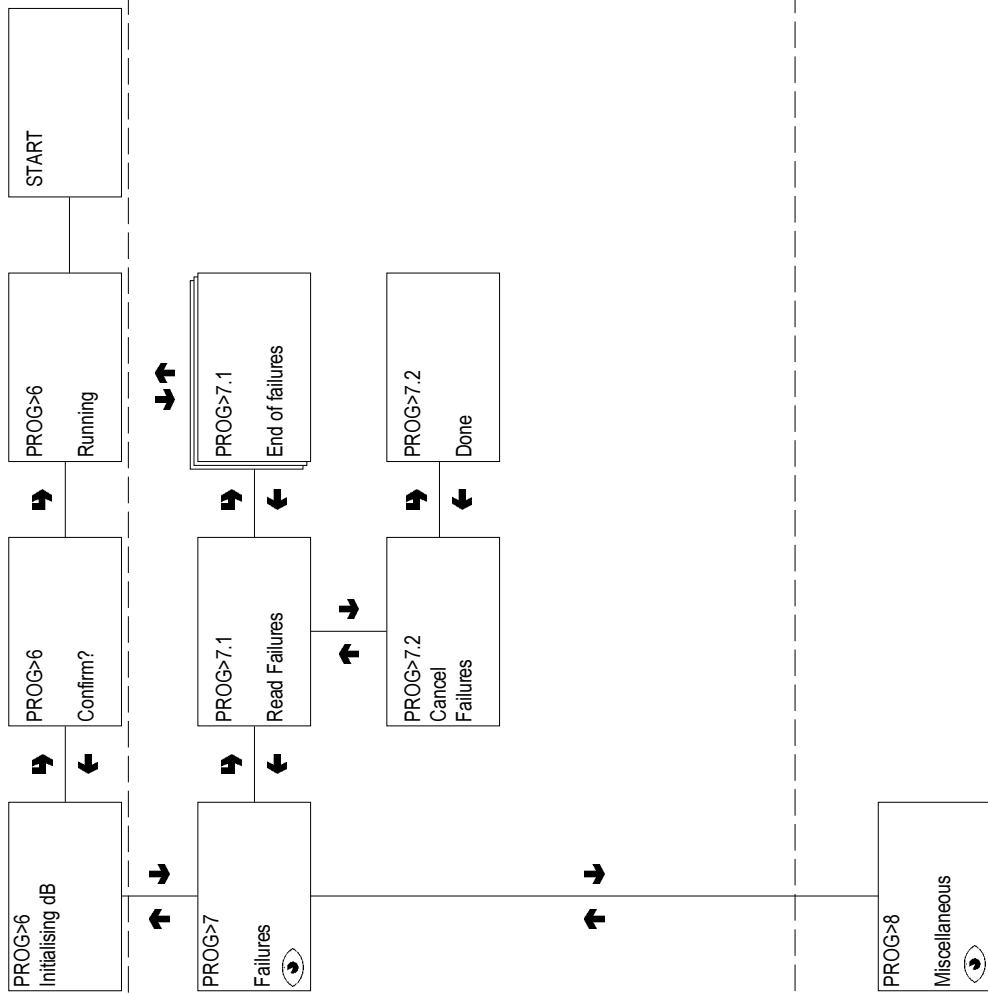
Programming menu - Summary



Programming menu - Summary



Programming menu - Summary



INITIALISING DATABASES

Menu displayed at all times

DISPLAY FAILURES

If there are no failures, when pressing button the message "End of failures" is displayed

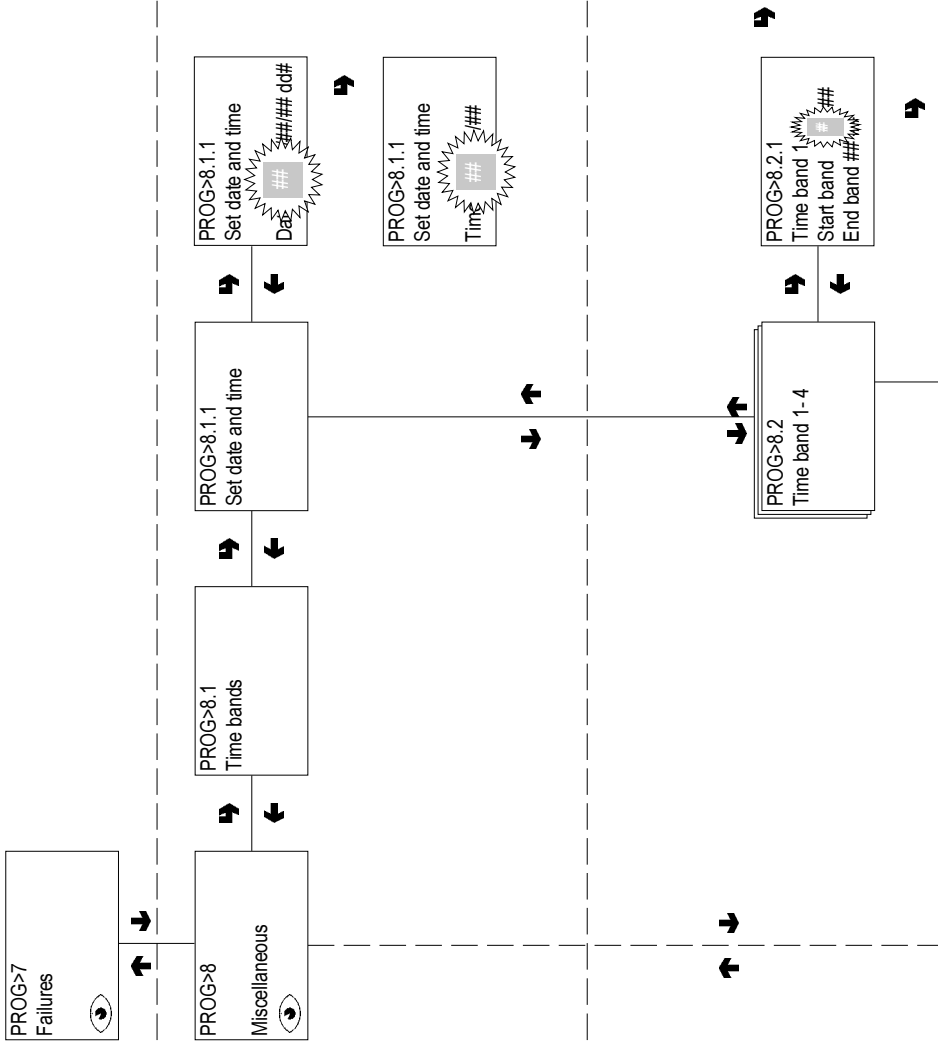
LIST OF FAILURES

- Water failure
- Instant boiler
- Espresso boiler 1
- Mobile spouts
- Cup failure
- Coffee unit 1
- Coffee failure 1
- Coffee release
- Volumetric counter 1
- Liquid waste cont. full
- Air-break failure
- Coin mechanism
- RAM data

Menu displayed at all times, for 8.d only

--	--	--	--	--	--	--	--	--	--	--

Programming menu - Summary



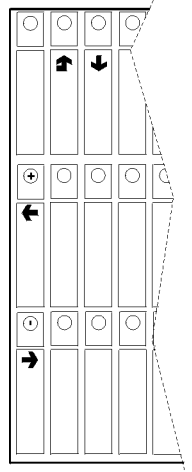
Menu displayed at all times, for 8.e only

CLOCK

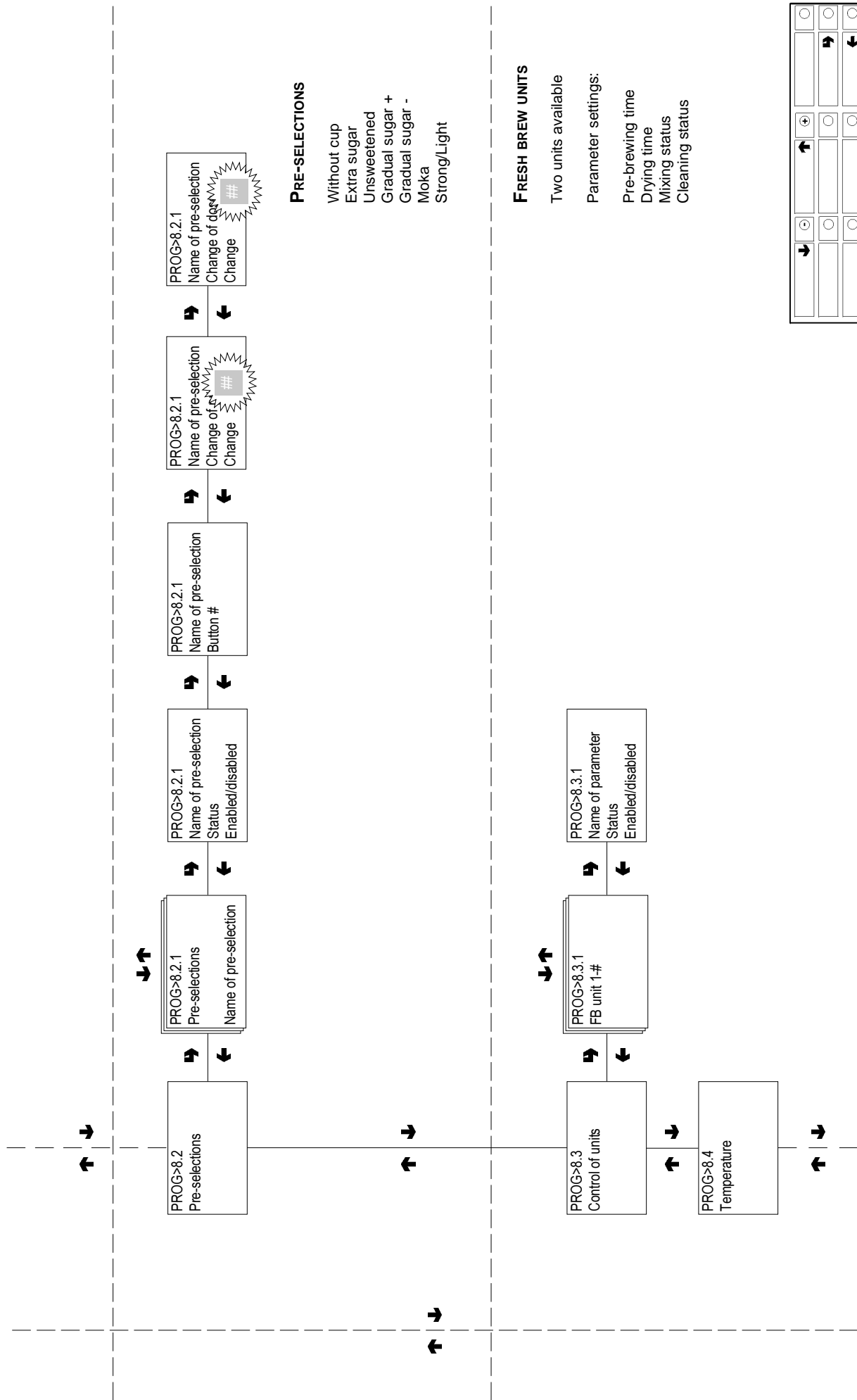
When confirming the blinking values, day, month, year and week day are entered one after the other: When confirming the week day hour and minutes are displayed, which can then be changed and confirmed.

TIME BANDS

When confirming the blinking values, hour and minute for start and end of time band are entered one after the other. When start and end of time band are set to 24.00 the bands are not activated



Programming menu - Summary

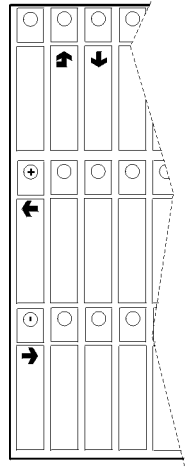


PRE-SELECTIONS

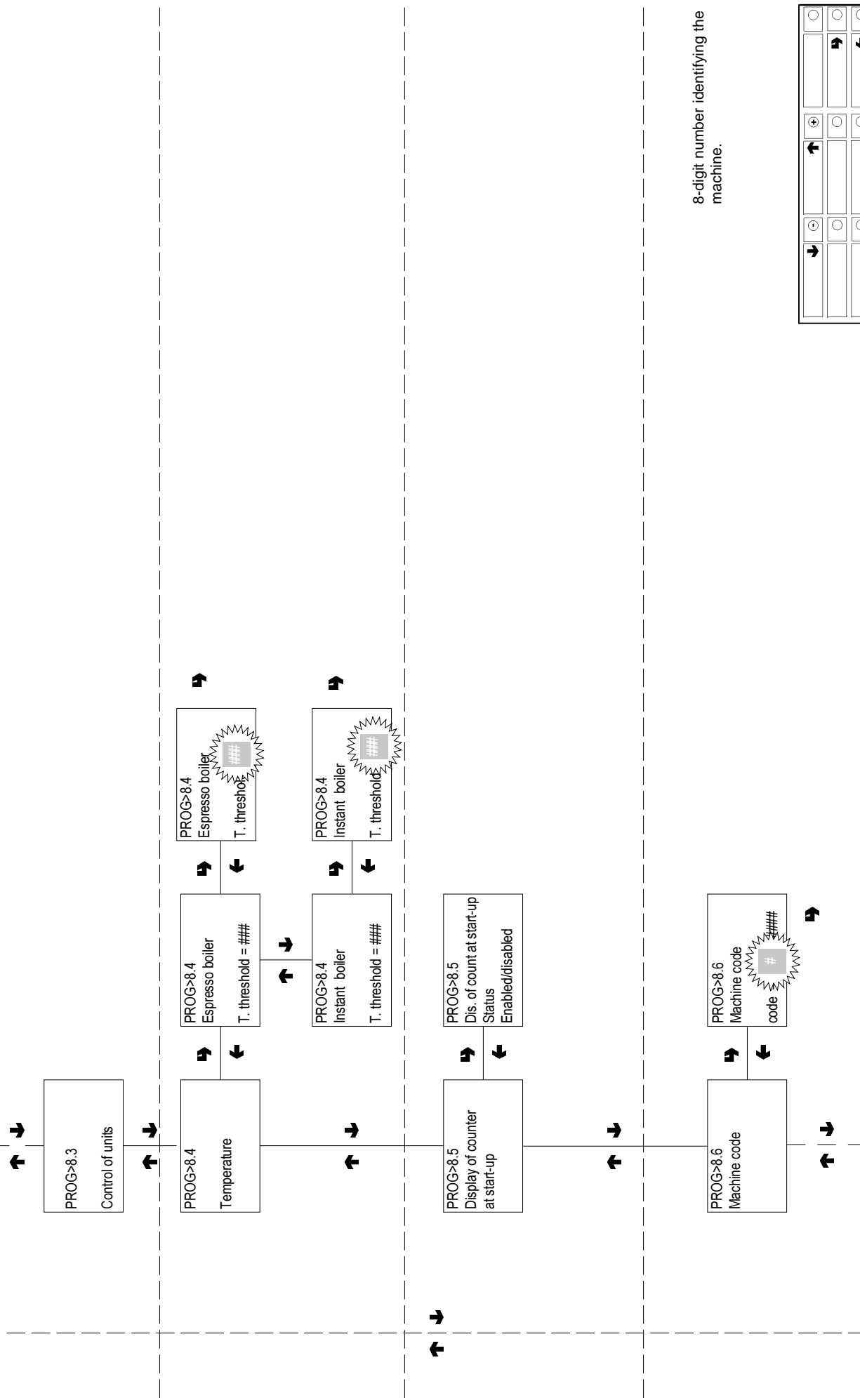
- Without cup
- Extra sugar
- Unsweetened
- Gradual sugar +
- Gradual sugar -
- Moka
- Strong/Light

FRESH BREW UNITS

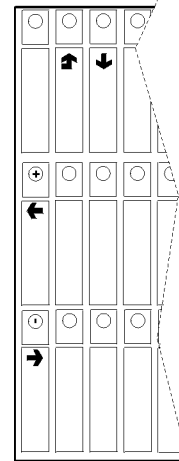
- Two units available
- Parameter settings:
- Pre-brewing time
- Drying time
- Mixing status
- Cleaning status



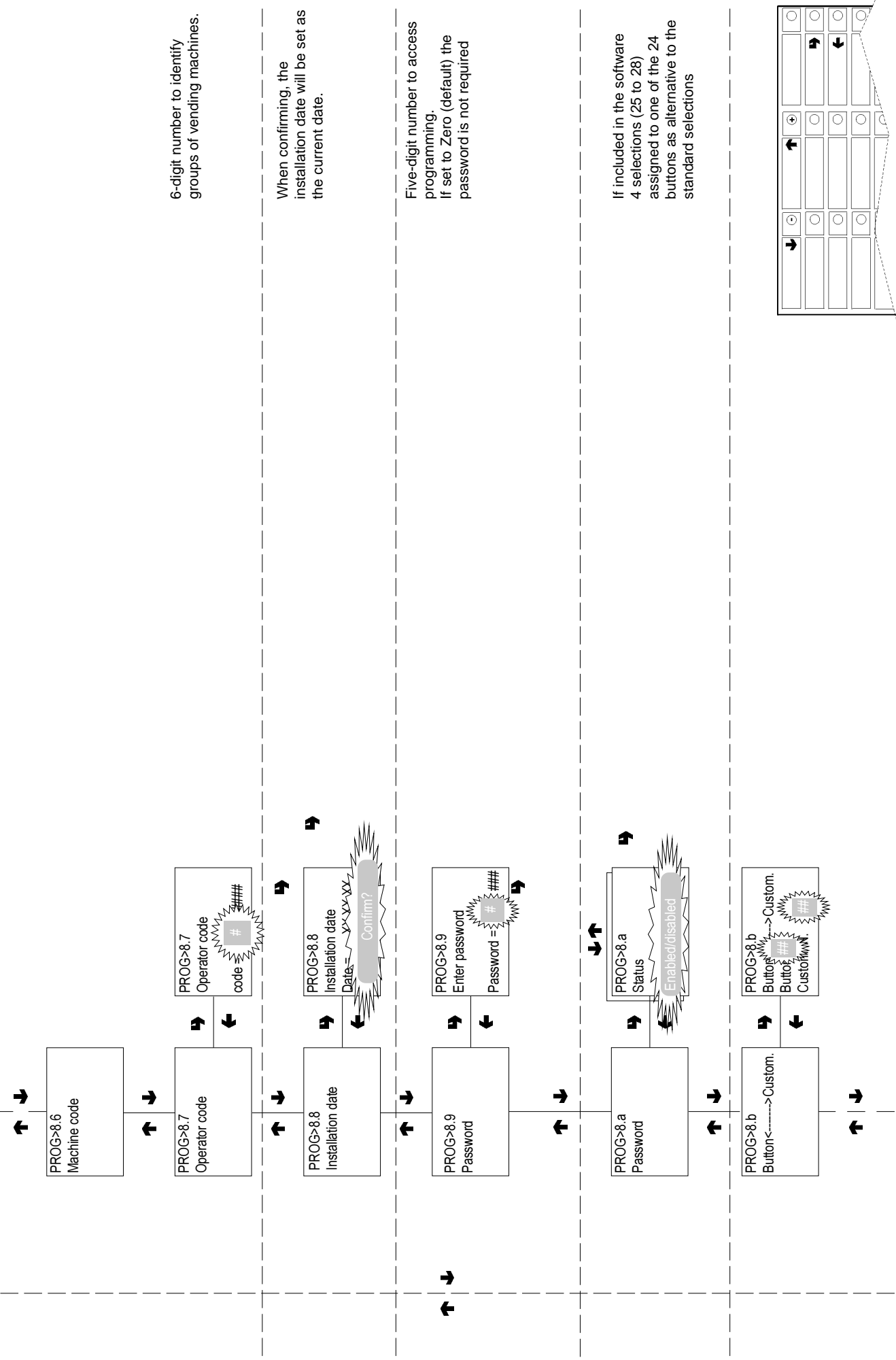
Programming menu - Summary



8-digit number identifying the machine.



Programming menu - Summary

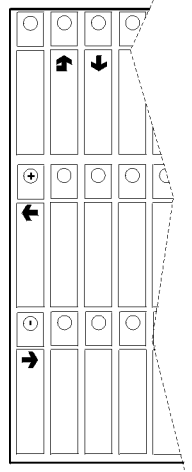


6-digit number to identify groups of vending machines.

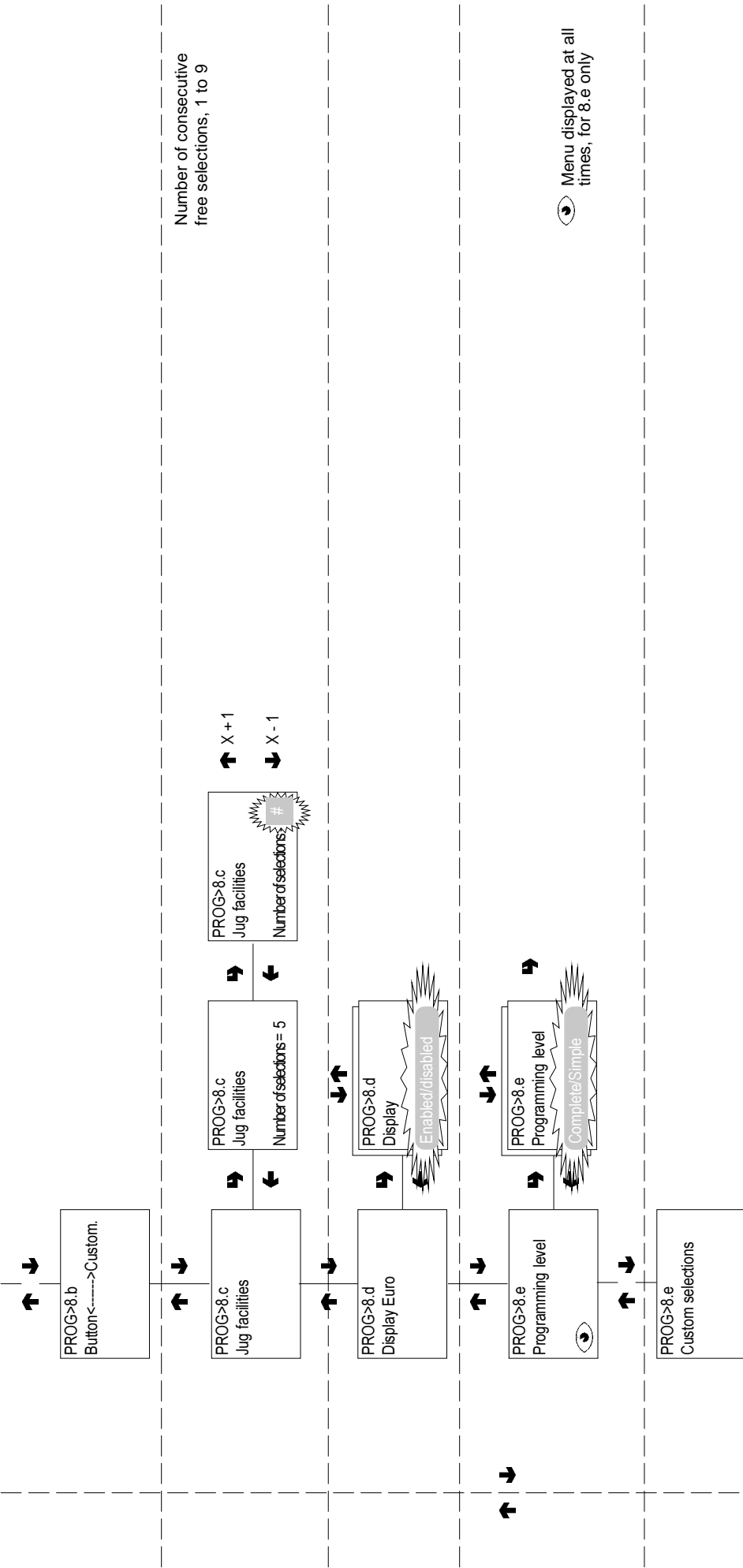
When confirming, the installation date will be set as the current date.

Five-digit number to access programming.
If set to Zero (default) the password is not required

If included in the software 4 selections (25 to 28) assigned to one of the 24 buttons as alternative to the standard selections

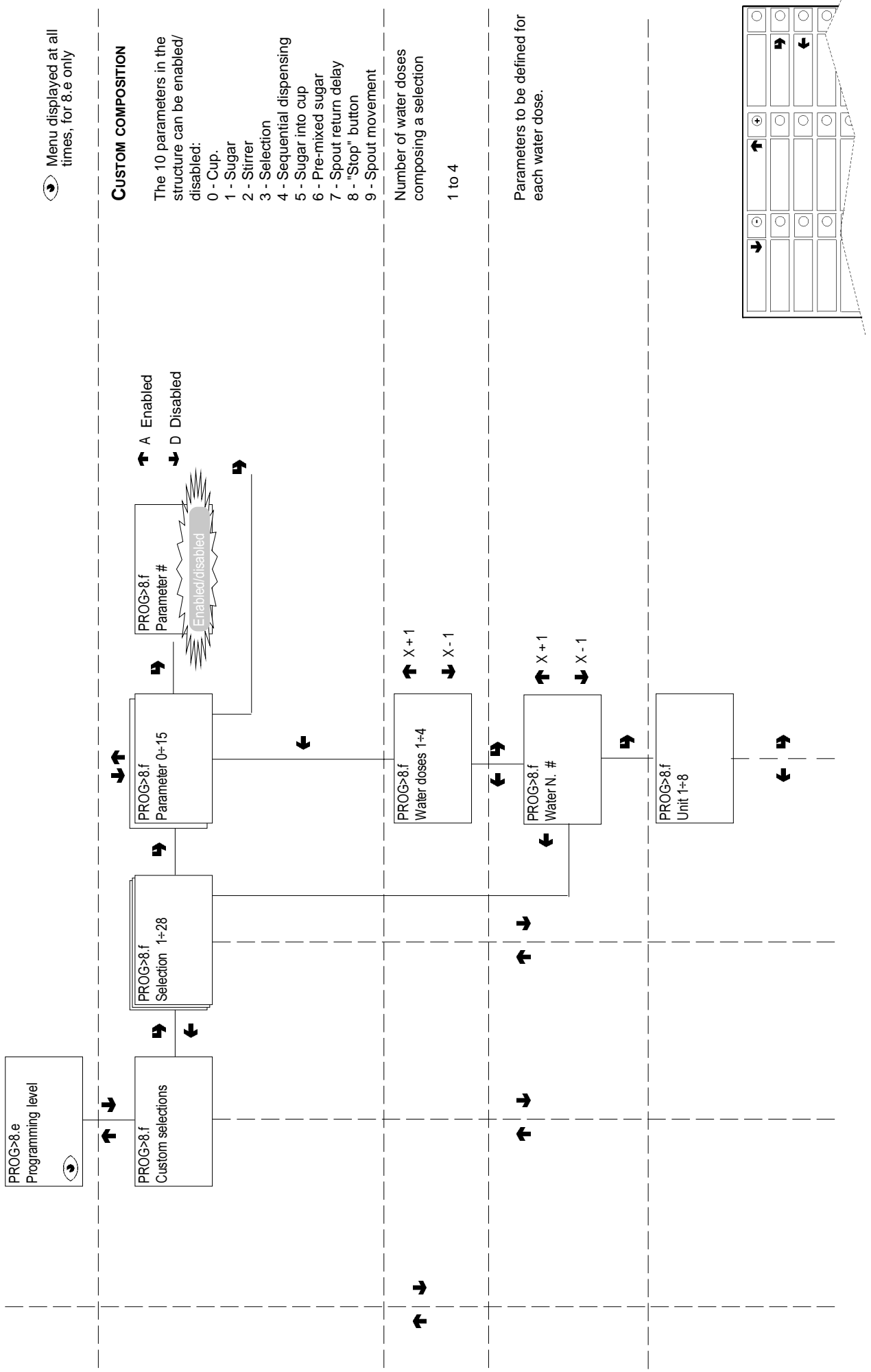


Programming menu - Summary

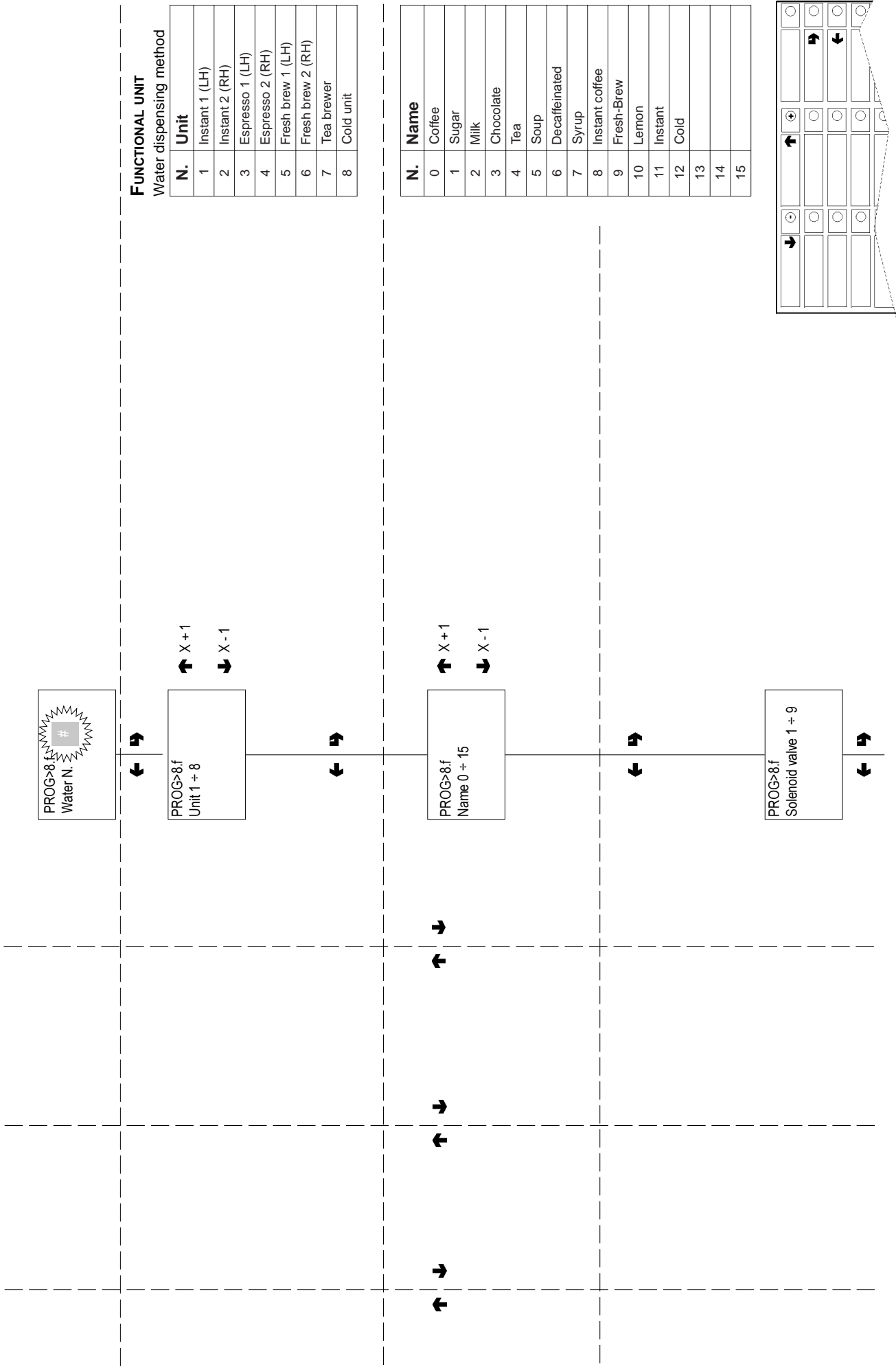


➔	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕
➔	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕
➔	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕
➔	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕	⬅️	➡️	⊖	⊕

Programming menu - Summary



Programming menu - Summary

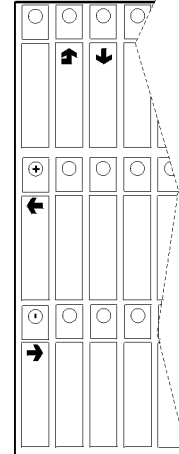


FUNCTIONAL UNIT

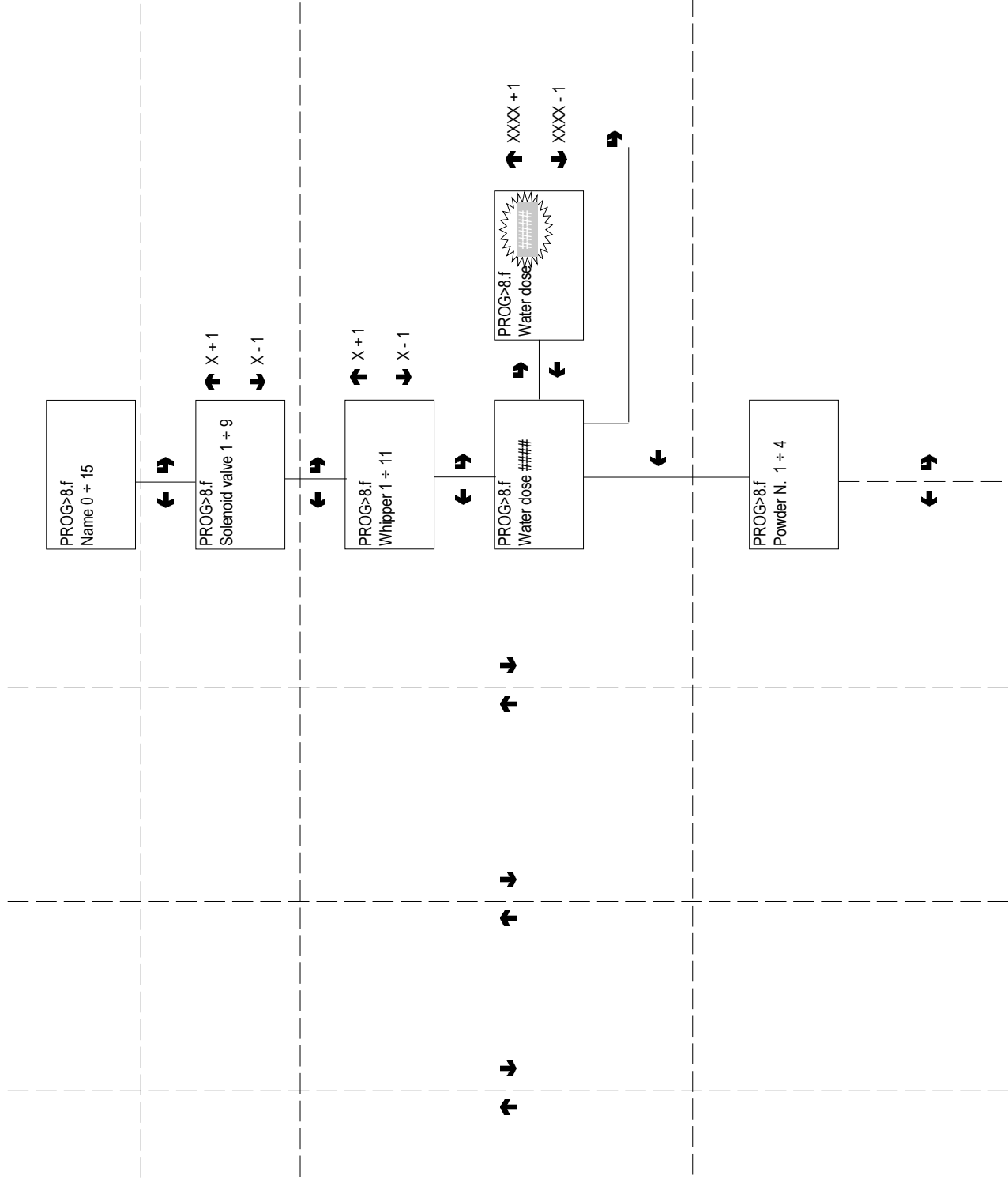
Water dispensing method

N.	Unit
1	Instant 1 (LH)
2	Instant 2 (RH)
3	Espresso 1 (LH)
4	Espresso 2 (RH)
5	Fresh brew 1 (LH)
6	Fresh brew 2 (RH)
7	Tea brewer
8	Cold unit

N.	Name
0	Coffee
1	Sugar
2	Milk
3	Chocolate
4	Tea
5	Soup
6	Decaffeinated
7	Syrup
8	Instant coffee
9	Fresh-Brew
10	Lemon
11	Instant
12	Cold
13	
14	
15	

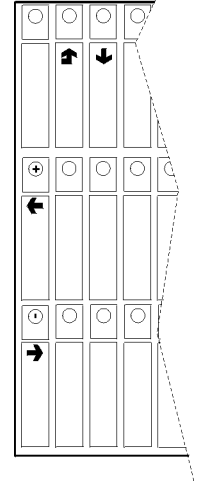
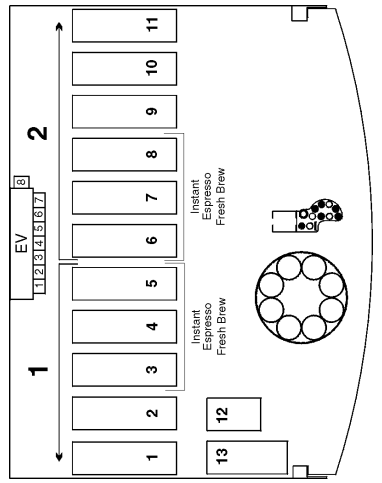


Programming menu - Summary

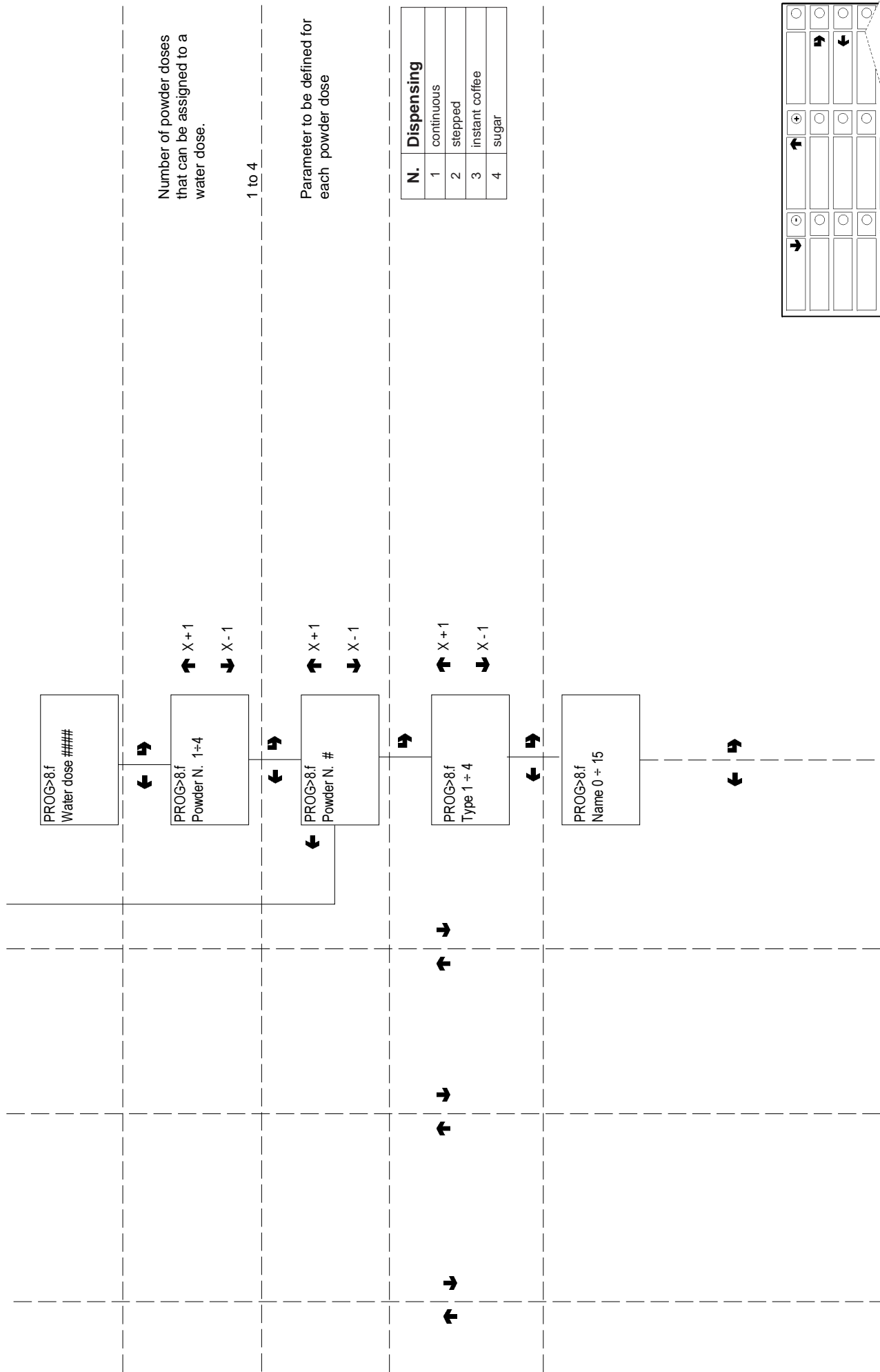


DEFINITION OF USERS LAYOUT

Functional unit	
EV	Instant Fresh-brew Tea brewer
1	instant boiler
2	instant boiler
3	instant boiler
4	instant boiler
5-8	instant boiler
9	not applicable for these models
	Espresso
	dispensing coffee 1
	dispensing coffee 2
	water powder 1
	plain water
	water powder 2
	soda
	Cold unit

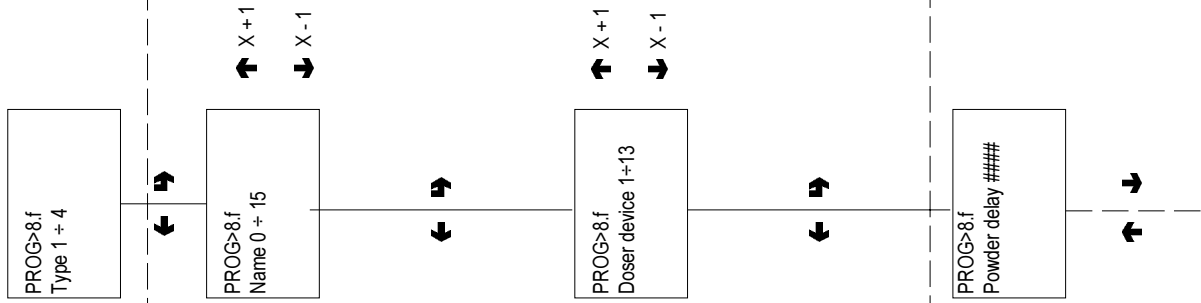


Programming menu - Summary



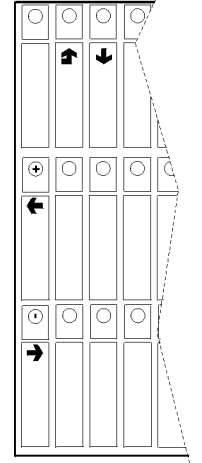
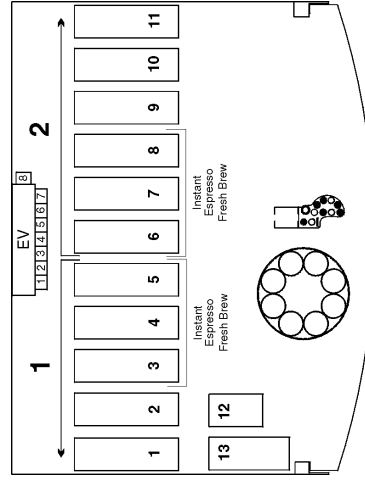
Programming menu - Summary

N.	Name
0	Coffee
1	Sugar
2	Milk
3	Chocolate
4	Tea
5	Soup
6	Decaffeinated
7	Syrup
8	Instant coffee
9	Fresh-Brew
10	Lemon
11	Instant
12	Cold
13	
14	
15	

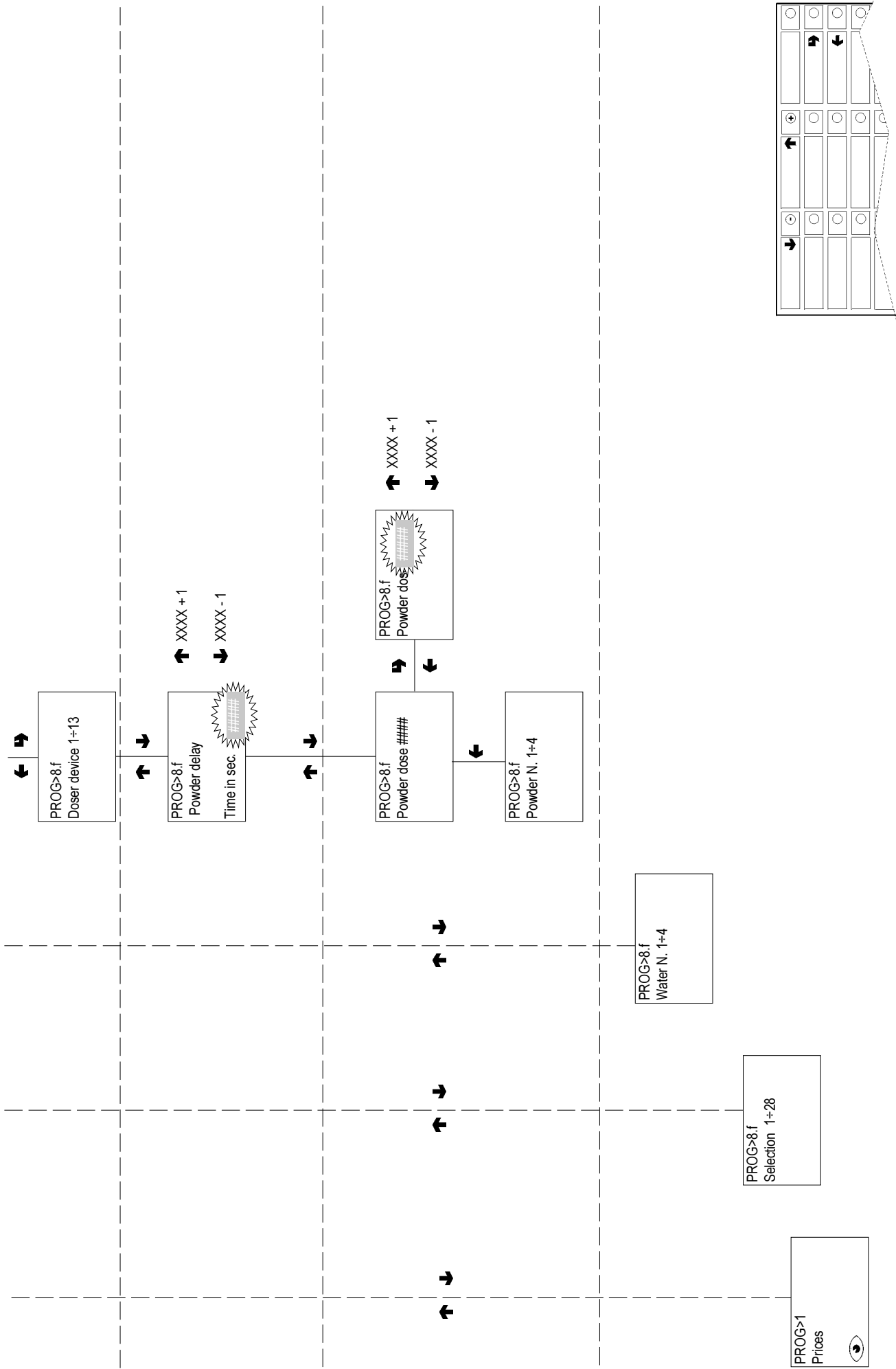


WARNING!

If the powder name is defined as "Syrup", doser devices 1 and 2 will be assigned to the syrup dispensers.

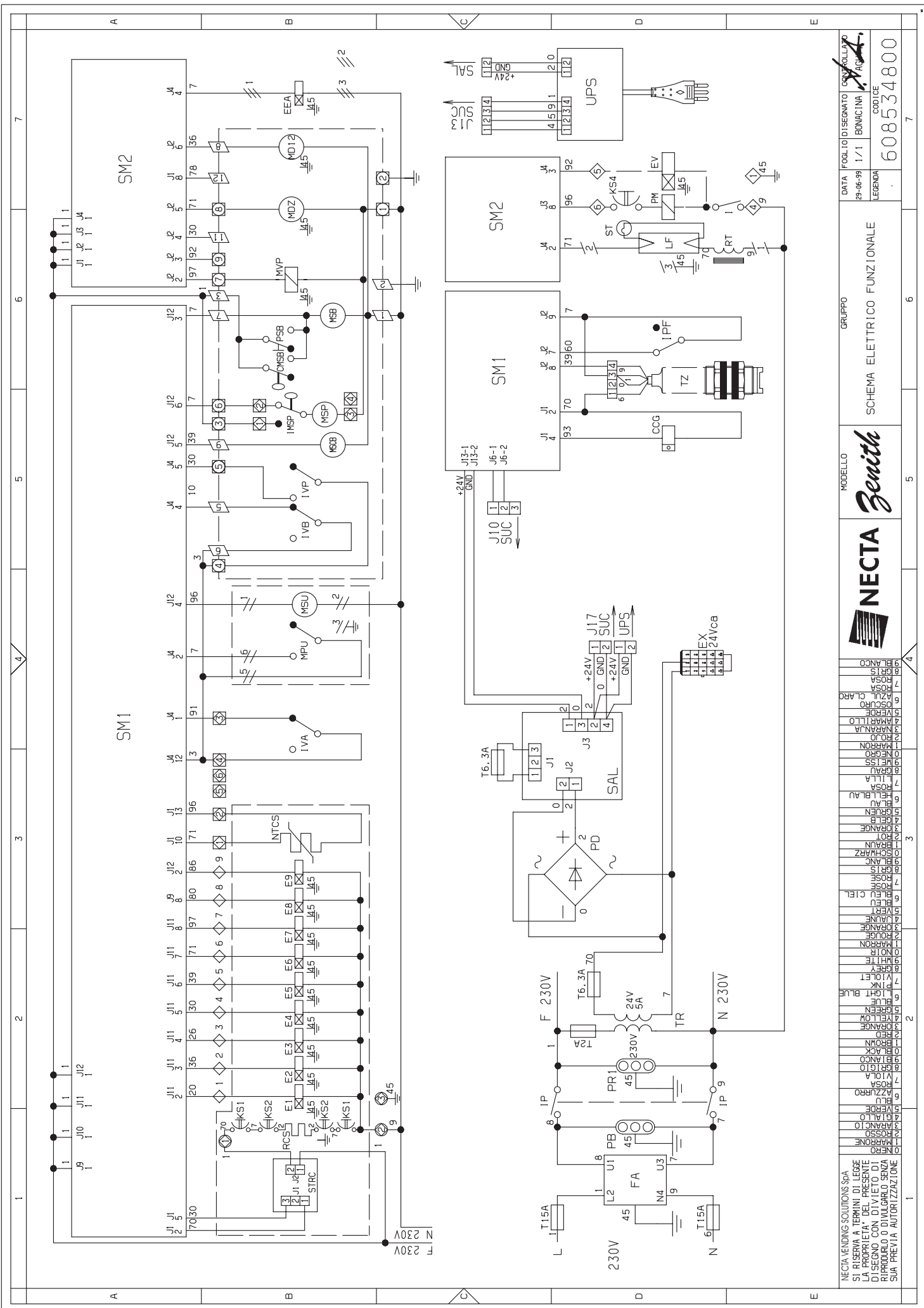


Programming menu - Summary



WIRING DIAGRAM LEGEND

INITIALS	DESCRIPTION	INITIALS	DESCRIPTION
BDV	BDV COIN MECH CONNECTORS	MPF	FRESH BREW PISTON MOTOR
CCG	GENERAL COUNTER	MPU	SPOUT POSITIONING MICROSWITCH
CM1	COFFEE UNIT MOTOR CAM	MSB	CUP RELEASE MOTOR
CM2	COFFEE DISPENSING POSITION CAM	MSCB	CUP CONTAINER SHIFT MOTOR
CMF	FRESH BREW MOTOR CAM	MSP	STIRRER RELEASE MOTOR
CMPF	FRESH BREW UNIT PISTON MICROSWITCH	MSU	SPOUT MOVING MOTOR
CMSB	CUP RELEASE MOTOR CAM	MVP	EMPTY STIRRER DISPENSER MOTOR
CV	VOLUMETRIC COUNTER	NTC1..	TEMPERATURE PROBE
EEA	WATER INLET SOLENOID VALVE	NTCS	INSTANT BOILER TEMPERATURE PROBE
ER	COFFEE DISPENSER SOLENOID VALVE	PAG	FAILURE RESET BUTTON
ESC	COFFEE RELEASE MAGNET	PB	POWER SUPPLY SOCKET
EV	SANITISING KIT SOLENOID VALVE	PD	DIODE RECTIFIER
EX	EXECUTIVE COIN MECH CONNECTOR	PG	UNIT DETECTION MICROSWITCH
FA	RADIO INTERFERENCE SUPPRESSOR	PIP	PROGRAMMING BUTTON
FREE	FREE VENDING SWITCH	PM	PUMP
I	SANITISING KIT SWITCH	PSB	CUP RELEASE BUTTON
ID	COFFEE DOSE SWITCH	RCC	COFFEE BOILER HEATING ELEMENT
IMSP	STIRRER RELEASE MICROSWITCH	RG	UNIT HEATING ELEMENT
IP	DOOR SWITCH	RS232	SERIAL PORT
IPF	WASTE CONTAINER OVERFLOW SWITCH	RT	BALLAST
IVA	EMPTY BOILER MICROSWITCH	SAL	VOLTAGE SUPPLY CARD
IVB	EMPTY CUP DISPENSER MICROSWITCH	SLCD	LIQUID CRYSTAL DISPLAY CARD
IVP	EMPTY STIRRER DISPENSER MICROSWITCH	SLED	LED BOARD
JUG	JUG FACILITIES SWITCH	SM1	CONTROL BOARD
KC1-..	COFFEE BOILER CUTOUT	SM2	EXPANSION BOARD
KS1-..	SAFETY CUTOUT	SP	PUSH-BUTTON BOARD
LF	LAMP	ST	STARTER
M	COFFEE UNIT MOTOR	STRC	BOILER HEATING TRIAC BOARD
MAC	GRINDER	SUC	C.P.U. BOARD
MD1-..	INGREDIENT MOTOR - INSTANT	TR	TRANSFORMER
MDB	CONNECTOR FOR MDB COIN MECHANISM	TX....	DELAYED FUSE (X=COURRENT)
MDFB	INGREDIENT MOTOR - FRESH BREW	TZ	CUP SENSOR
MDZ	INGREDIENT MOTOR - SUGAR	UPS	COLD UNIT PRINTED BOARD
MF1-..	WHIPPER MOTORS	VENT	FAN
MFB	FRESH-BREW MOTOR		

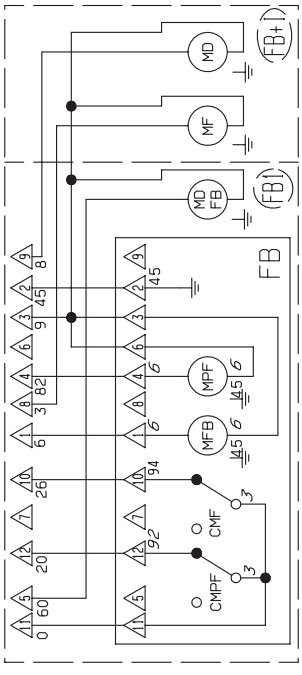
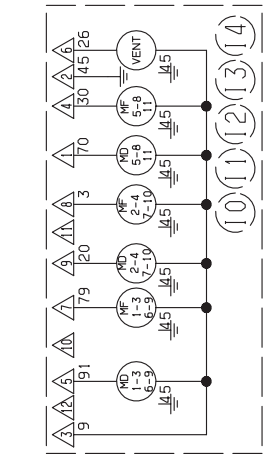
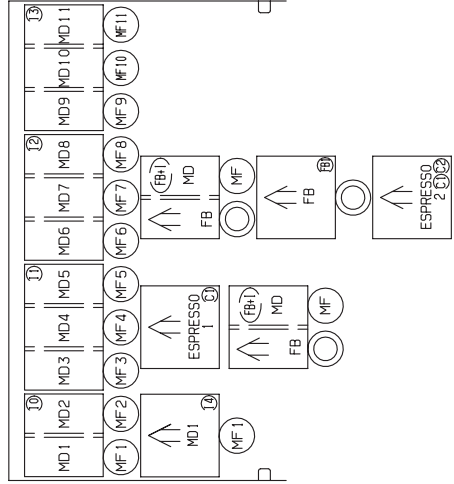
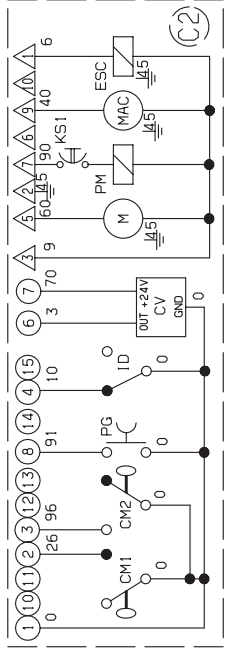
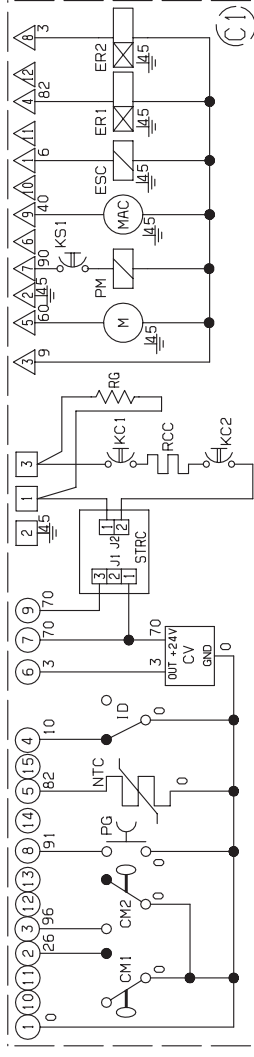
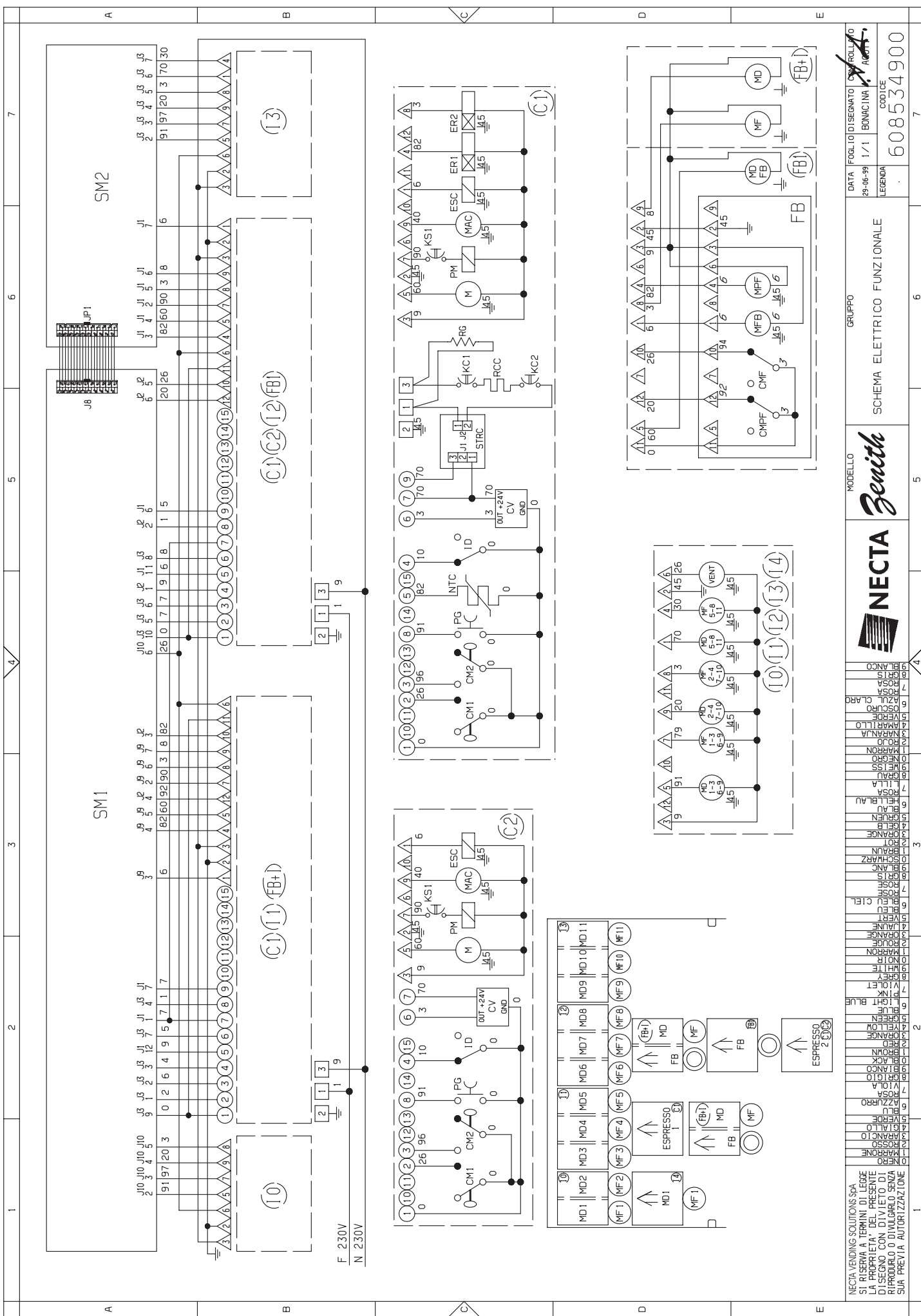


DATA FOGLIO DISEGNATO 29-06-99
 CONFEZIONATO 1/1
 BONACINA 1/1
 CODICE 608534800

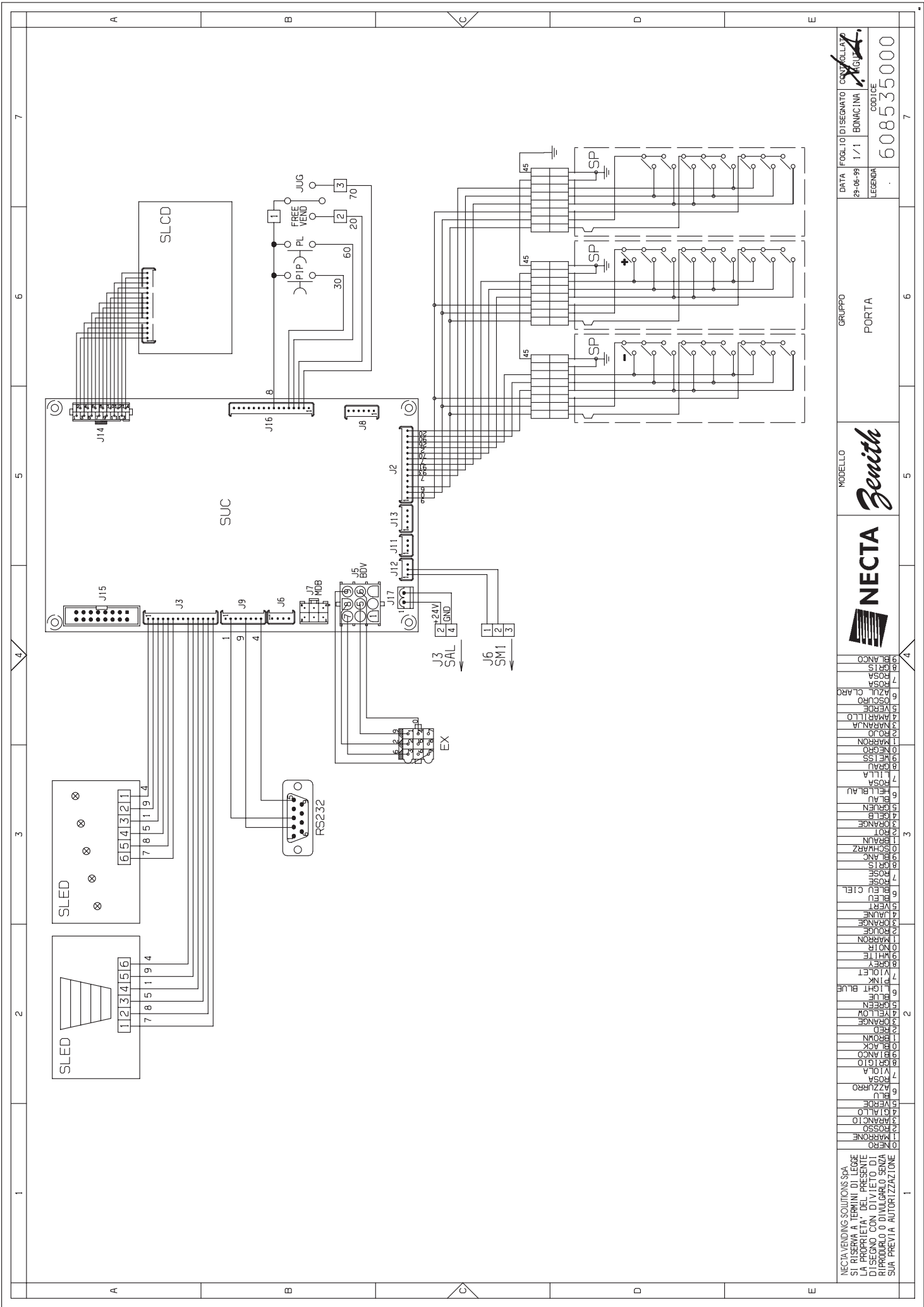
MODELLO SCHEMA ELETTRICO FUNZIONALE
 GRUPPO

NECTA
Zenith

9	BL ANCO	1	NERO
8	ROSA	2	NERO
7	ROSA	3	NERO
6	OSCURO CLARO	4	NERO
5	GIVERDE	5	NERO
4	AMARILLO	6	NERO
3	NERO	7	NERO
2	NERO	8	NERO
1	NERO	9	NERO
10	NERO	10	NERO
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NECIA VENDING SOLUTIONS SPA SI RISERVA I TERMINI DI LEGGE LA PROPRIETA' DEL PRESENTE DI SEGNO CON DIVIETO DI RIPRODURRE O DIVULGARLO SENZA SUA PREVIA AUTORIZZAZIONE.	NECTA	MODELLO Benith	GRUPPO SCHEMA ELETTRICO FUNZIONALE	DATA 29-06-99	FOLIO 1/1	ID BONMACINA	ROLL A	CODICE 608534900
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DATA: FOGLIO DI SEGNATO: 1/1
 29-06-99 BONACINA
 LEGENDA: CODICE: 608535000

MODELLO: **Zenith**
 GRUPPO: PORTA



- NECTA VENDING SOLUTIONS S.p.A.
 SI RISPETTA PER IL PRESENTE
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 RIPRODURLO O DIVERGENTE SENZA
 SUA PREVIA AUTORIZZAZIONE
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EDITION 2001-02 CODE: H 142U 01



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