



**Loader PLUS**

**OWNER'S MANUAL**



**Release 1.0 – May 2004**

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## 1. TECHNICAL SPECIFICATIONS

INSULATION LABEL	:	I
POWER SUPPLY VOLTAGE	:	88/132 – 180/264 VAC
POWER SUPPLY FREQUENCY	:	47/63Hz
MAX POWER INPUT	:	120 W
FUSE IN THE POWER SUPPLY LINE	:	2 x 1,6A T.
FUSE IN THE PRINTER LINE	:	2,5A T.
FUSE IN THE COIN MECH, BILL ACCEPTOR AND CPU BOARD LINE	:	1,6A T.
DIMENSIONS WxHxD (mm.)	:	500 x 650 x 250
WEIGHT (Kg)	:	31
COMMUNICATION WITH PC	:	Serial RS 485 (or serial RS 232)

## 2. GENERAL SYSTEM FEATURES

### 2.1. COMPOSITION OF THE SYSTEM

The ZIP Loader PLUS consists of:

- 16 x 2 characters LCD display;
- 16 keys keypad;
- contactless key/card reader (communication with key/card: radio frequency 125 KHz);
- thermal printer (CUSTOM model TPTCM60) ;
- RS 485 (or optional RS 232) connector for the communication with the PC.
- Coin Validator (Innovative Technology Ltd. Mod. NV7);
- Bill Acceptor (SECI mod. RM5).

#### 2.1.1. KEYPAD DESCRIPTION



The 16 keys keypad is divided as follows:

- 10 numerical keys (0, ... , 9);
- the multiplication key 'X' is used when more items of one article are sold in the same transaction (e.g. 4 cups of coffee) ;
- CLEAR key is used to reject a sale sequence or to exit from the "Payroll Menu";
- CANCEL key;
- ENTER Key is used to confirm a selection in a sale sequence. "0" key and ENTER key are used to enter the "Payroll Menu";
- PRINT Key is used to close a sale sequence.

## 2.2. MAIN FEATURES OF THE SYSTEM

- It allows sales using a prepaid amount charged into the key or into the card.
- It allows using coin validators or banknote acceptors for sales or for charging the key/card.
- It allows charging key/card credit transferring funds from the payroll (using a connection with a PC).
- It allows choosing within 60 selections.
- It can manage 5 different price categories (cash, key, 3 levels of discount with key/card).
- It allows granting bonuses or rewards.
- It allows enabling the sale operations within 3 programmable time bands.
- It can be programmed directly on the system using a *Programmer* or using the "ZIP Loader Plus" software loaded in a PC.
- It allows sending to the PC data regarding sales made using cash or key/card.
- It offers the possibility to collect statistical data concerning sales and transferring of funds. These data are collected with the *Data Box* and are printed by means of a personal computer.

## 3. SALES METHODS

The ZIP Loader Plus makes it possible to make sales using the credit stored on a key/card or using cash (coins or banknotes).

The user can choose from amongst 60 programmed selections by entering the corresponding number on the numerical keypad.

The names and prices of the 60 selections can be programmed using:

- "ZIP Loader Plus" software when the system is connected to a PC via RS 232 or RS 485;
- the *Programmer*. In this case, the settings are programmed directly onto the system using the *Programmer* and going to the "PROGRAMMING" – "SALE PRICES" and "SELECTION NAMES" menu.

It is possible to programme up to 5 different prices for each selection: cash, key, key with discount level 1, 2 or 3.

### 3.1. INSERTING A SALES KEY/CARD

When a sales key/card is inserted into the reader, the display can show:

- the key/card data if it is compatible with the ZIP Loader PLUS and no anomalies have occurred. The first line shows the key/card number and its remaining credit, while the second line alternately displays bonus tokens and reward points.

#### **ATTENTION**

The bonus tokens and reward points are only displayed if "BONUS 2" and "REWARD" are enabled: if this is not the case, nothing will be displayed in the second line.

- one of the following messages:
  - "EVENT 1": the inserted key/card has an altered credit area (statistic S48 is updated);
  - "EVENT 2": the inserted key/card's codes are incompatible with the programmed system codes (statistic S49 is updated);
  - "EVENT 6": the inserted key/card's function code is incorrect (statistic S53 is updated);
  - "EVENT 7": the inserted key's credit is over the programmed "ABSOL.MAX.CREDIT" (statistic S54 is updated);
  - "EVENT 13": the inserted key is on the "BLACK LIST" (statistic S60 is updated).

#### **ATTENTION**

"ERROR MESSAGES", in the "OTHER PARAMETERS" menu, must be enabled in order for the messages to be displayed.

### 3.2. SALES SEQUENCE

The sale takes place in the following order:

1. Consult the list of available selections and identify the number corresponding to your choice, which must be between 1 and 60 (e.g. sandwich = 12, chocolate = 15).
2. Enter the number corresponding to your choice using the numerical keypad (e.g. if you want the sandwich (=12) press keys 1 and 2) and check that the name of your chosen product (e.g. "sandwich") and the relative price (the price displayed is that programmed in the "SALE PRICES" – "CASH" table) appear on the second line of the display. If you wish to purchase more than 1 product of the same kind (e.g. 3 sandwiches), press the "X" key followed by the number (e.g. in order to select 3 sandwiches, press "1", "2" "X" "3" in that order; the second line of the display will show "sandwich x 3" followed by the price);
3. If the displayed selection is correct, press the "YES" key to confirm (selection name followed by OK appears on the second line of the display ); if it is incorrect, press the "NO" key to cancel.
4. Complete the sales session by repeating the operations described in points 2 and 3 until you have made all your required selections.
5. Press the "ENTER" key to conclude the operation; the first line will display "Total xx.xx", while the second line will display "Cash 0.00" (N.B. the total sum is calculated using the prices programmed in the "SALE PRICES" – "CASH" table).
6. Press "CANCEL" to cancel the entire sales session.
7. If you wish to make the payment using a key/card, insert it into the reader now. If the inserted key/card is compatible with the programmed system codes, the total shown on the first line of the display will be recalculated on the basis of the key/card's programmed discount level and any bonus tokens and reward points (make sure that the parameters relative to the discount levels, bonus and reward are correctly programmed in the system).
8. If the key/card has sufficient credit (key/card credit = > "Total"), the total amount is deducted and a receipt containing all the information relative to the operation (see note) is automatically printed.
9. If the key/card does not have sufficient credit (key/card credit = < "Total"), the first line of the display shows the "Total", while the second line displays the key/card's available credit. In this case it is possible to top up the key/card credit by using coins and/or banknotes or to cancel the sales session by pressing the "CANCEL" key.
10. If you wish to pay by cash, introduce coins and/or banknotes into the appropriate slots until reaching the "Total". The second line of the display shows the "Cash" received. (**ATTENTION the system does not give change**). As soon as the "Cash" value exceeds or reaches the "Total", stop introducing coins and/or banknotes as the system does not give change. The system will automatically print the receipt with the relative data as soon as the operation is concluded. If you press the "CANCEL" button, the current sales session will be cancelled and any coins and/or banknotes already introduced will remain in the machine.
11. It is now possible to start a new sales or top-up session.

#### **ATTENTION**

- If you want to enable the system to accept payment by coins and/or banknotes, you must programme the coin validator and note acceptor correctly in the "PROGRAMMING" – "COINS" and "BANKNOTES" menus.

### 3.3. FREE SALES KEY

The free sales key is a special key that makes it possible to obtain products without the corresponding price being deducted.

In order to be enabled, the free sales key must be programmed ON in the "PROGRAMMING" – "OTHER PARAMETERS" menu.

When an enabled free sales key is inserted into the system reader, the first line of the LCD display shows the key number followed by the word "free".

The sales sequence is identical to that described in points 1, 2, 3, 4, 5 and 6 of the previous paragraph. Note that when a free sales card is inserted, the display shows "Total 0.00" given that the selections are supplied free of charge. The receipt issued automatically at the end of the sales session includes the word "free" alongside the selections made.

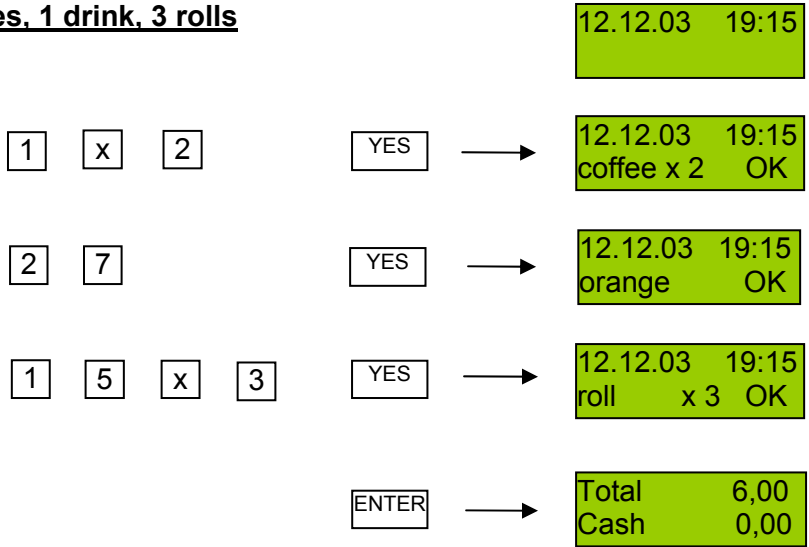
Sales made using a free sales key are recorded in statistic S8.

### 3.4. SALES SESSION EXAMPLE

Let's suppose we want to buy:

- 2 coffees (coffee = sel.1 and "cash" price = \$ 0.80);
- 1 drink (fizzy orange = sel. 27 and "cash" price = \$ 1.25);
- 3 rolls (roll = sel. 15 and "cash" price = \$ 1.05).

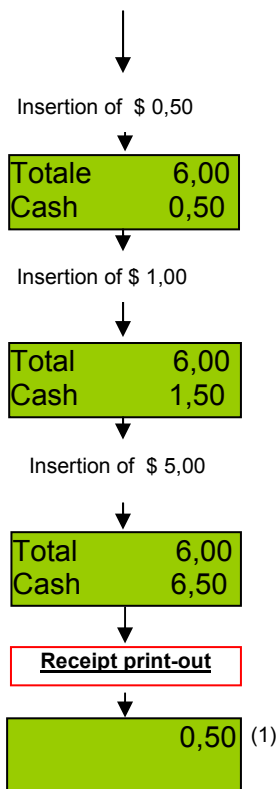
**Sales session example:  
2 coffees, 1 drink, 3 rolls**



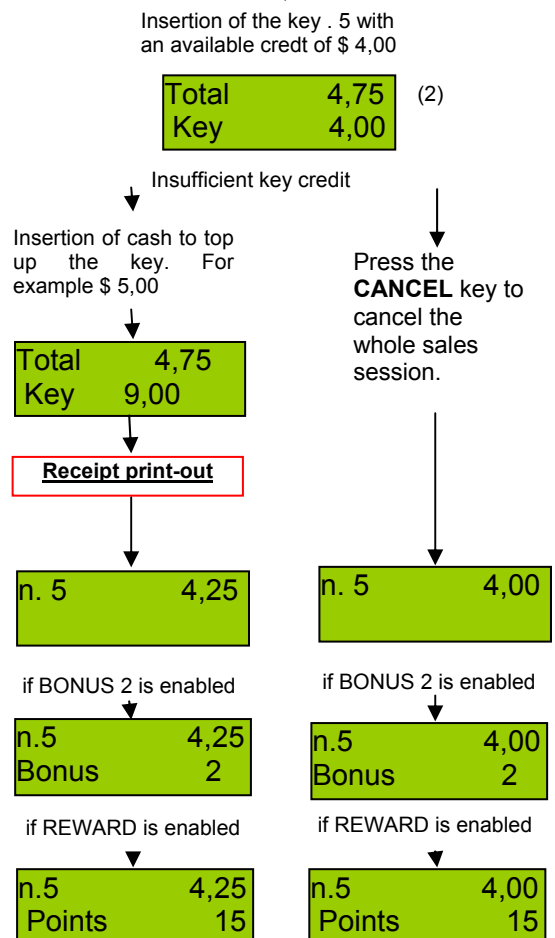
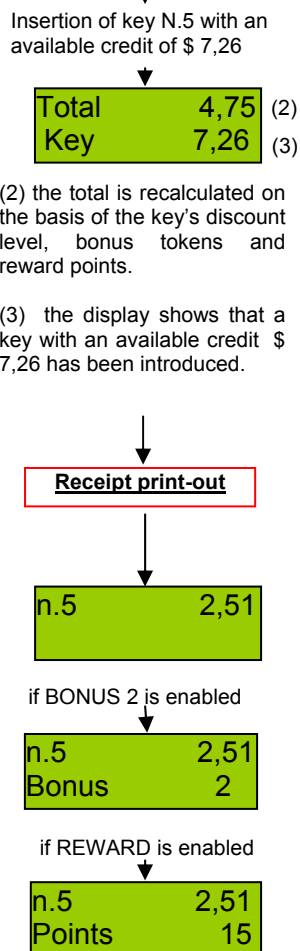
Payment by cash

Payment by key/card

Press the **CANCEL** key to cancel the whole sales session.



(1) see "OVERPAY" parameter



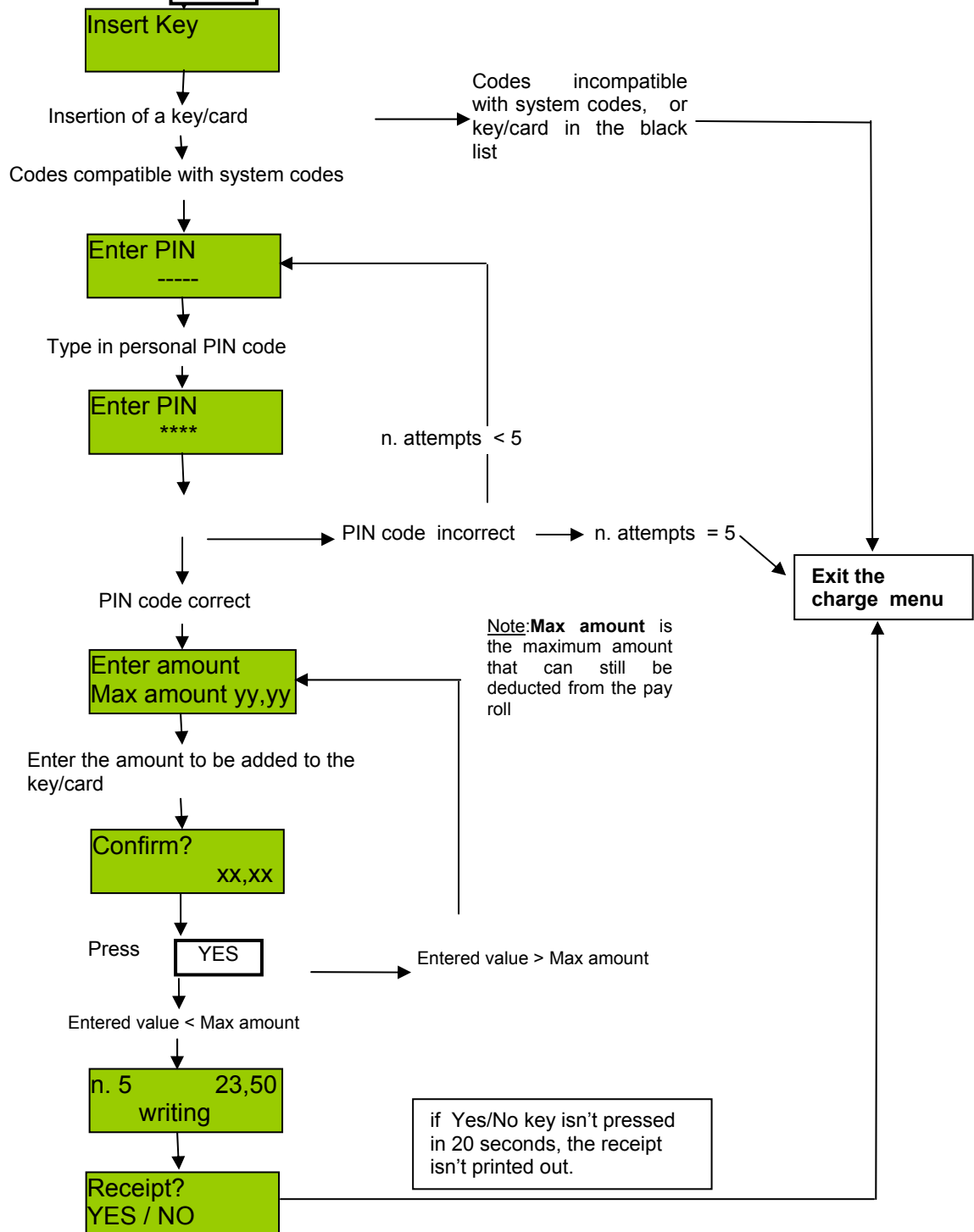
**4. KEY/CARD CHARGE METHODS**

**4.1. CHARGING THE KEY/CARD USING PAY ROLL**

The key/card credit can be charged by deducting the required amount from personal pay roll. This charge method requires the system to be connected to the PC where the "ZIP Loader Plus" software provided together with the ZIP Loader PLUS has been installed. In order to be able to use this charge method, the user must already be enabled through insertion in the user database and must have been assigned a key number and a PIN code (secret). For further information on the registration procedure, consult the PC software manual.

In order to enter the pay roll charge menu, press  followed by

NOTE: Pressing the CANCEL key at any time will cause you to exit the charge menu.





## 4.2. CHARGING THE KEY/CARD BY MEANS OF A CHARGE KEY (READ KEY)

The charge key is a special key that makes it possible to charge the credit on a sales key/card with a set value.

The following sequence of operations should be followed in order to charge a sales key/card:

1. make sure that the "CHARGE KEY" entry in the "OTHER PARAMETERS" menu inside the "PROGRAMMING" menu is programmed ON;
2. insert the Charge Key into the reader: if the key contains some charges, the number of charges will be displayed for 3 seconds followed by the value of the individual charge;
3. after the charge value has been displayed, extract the Charge Key and insert the sales key/card to be charged: the charge value will be transferred to the sales key/card.  
If a key/card is not inserted within 30 seconds from extracting the Charge Key, the charge value will be reset; this value will be recorded in statistic S58.

### **ATTENTION**

During the 3 seconds that the number of charges is displayed, the Charge Key can be removed without the number of charges being reduced (this means that it is possible to enter the key simply in order to check the number of charges available).

If the key/card to be charged has a credit greater than/equal to the maximum allowed credit, the key will not be charged. In this case the display will show the effective credit available on the key/card and it will be possible to use the key as normal. If the key/card credit falls below the maximum allowed credit after making some purchases, the charge value will automatically be added to the key; otherwise, the charge value will remain available in the machine after extracting the key and can be used to charge another key/card (with credit below the maximum allowed limit).

## 4.3. CHARGING THE KEY/CARD BY MEANS OF THE PROGRAMMER

The sales keys/cards can also be charged using the Programmer.

The new credit to be added to the sales key/card can be programmed in the "KEYS HANDLING" menu. This menu also makes it possible to modify the number of charges on a Charge Key.

## 4.4. CHARGING THE KEY/CARD WITH COINS

1. Program the system in advance so that the cash validator in the "PROGRAMMING" – "COINS" menu is correctly enabled.
2. Insert the key/card into the reader and make sure that the available credit is displayed.
3. Introduce coins in the appropriate slot on the ZIP Loader PLUS and make sure that the credit displayed is increased by the value corresponding to that of the coins inserted.
4. You can extract the key/card when you have finished charging the credit

## 4.5. CHARGING THE KEY/CARD WITH BANKNOTES

1. Program the payment system in advance so that the banknote acceptor in the "PROGRAMMING" – "BANKNOTES" menu is correctly enabled.
2. Insert the key/card into the reader and make sure that the available credit is displayed.
3. Introduce the banknotes into the appropriate slot on the ZIP Loader PLUS and make sure that the credit displayed is increased by the value corresponding to that of the banknotes inserted.
4. You can extract the key/card when you have finished charging the credit.

## 4.6. OTHER WAYS OF CHARGING KEY/CARD

The key/card can also be charged as follows:

- ⇒ by using a PC Interface;
- ⇒ by using wall-mounted (ZIP Loader) or table-top key chargers;
- ⇒ by using automatic vending machines equipped with validators or banknote acceptors.

## 5. SYSTEM PROGRAMMING

The ZIP Loader PLUS system can be programmed:

- directly on the system using a *Programmer* (connected to the D-SUB 9 pin connector on the connector side of the CPU board inside the ZIP Loader PLUS).
- using the PC connection and the "ZIP Loader Plus" software supplied with the ZIP Loader PLUS. This method does not allow you to programme the system security codes and other parameters that must be programmed directly using a *Programmer*.

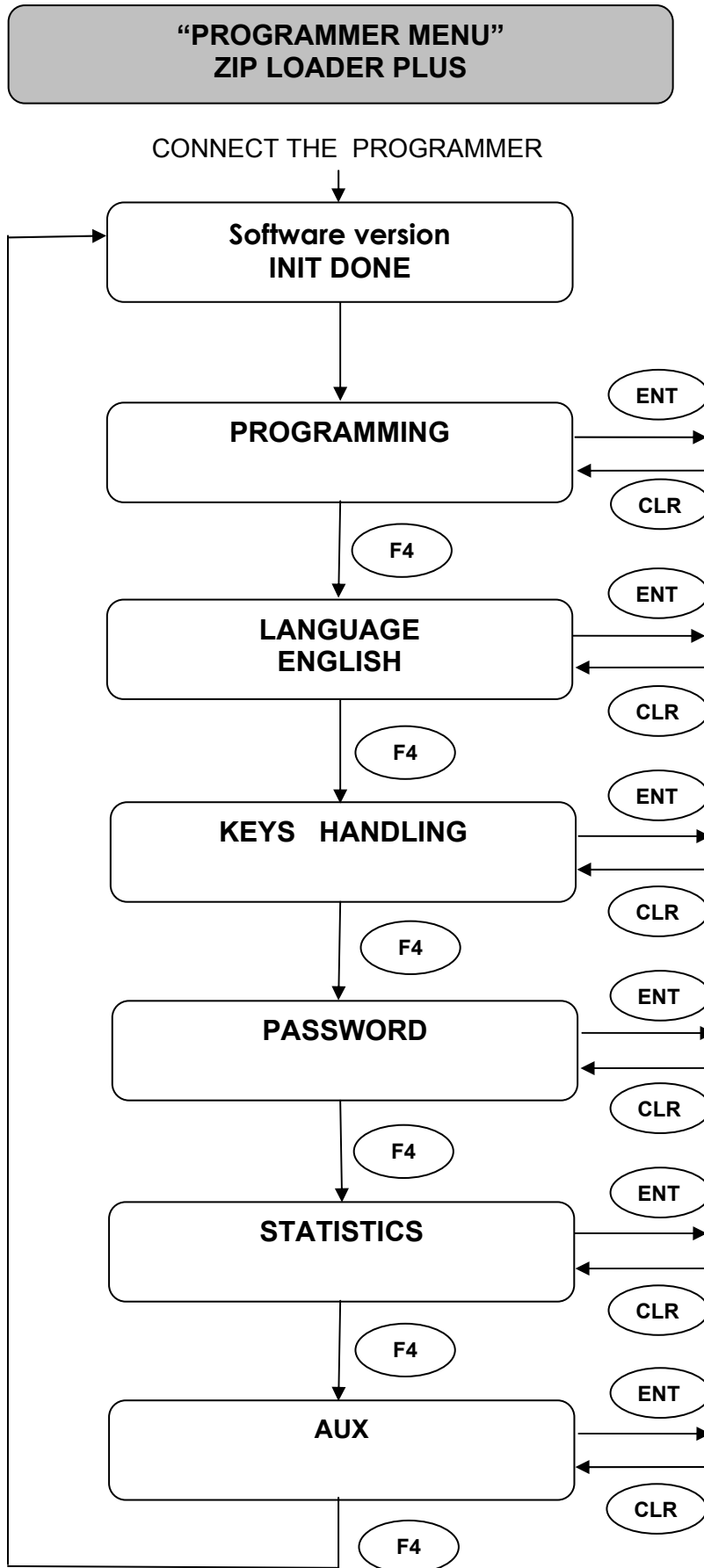
For further information consult the "ZIP Loader Plus" software manual.

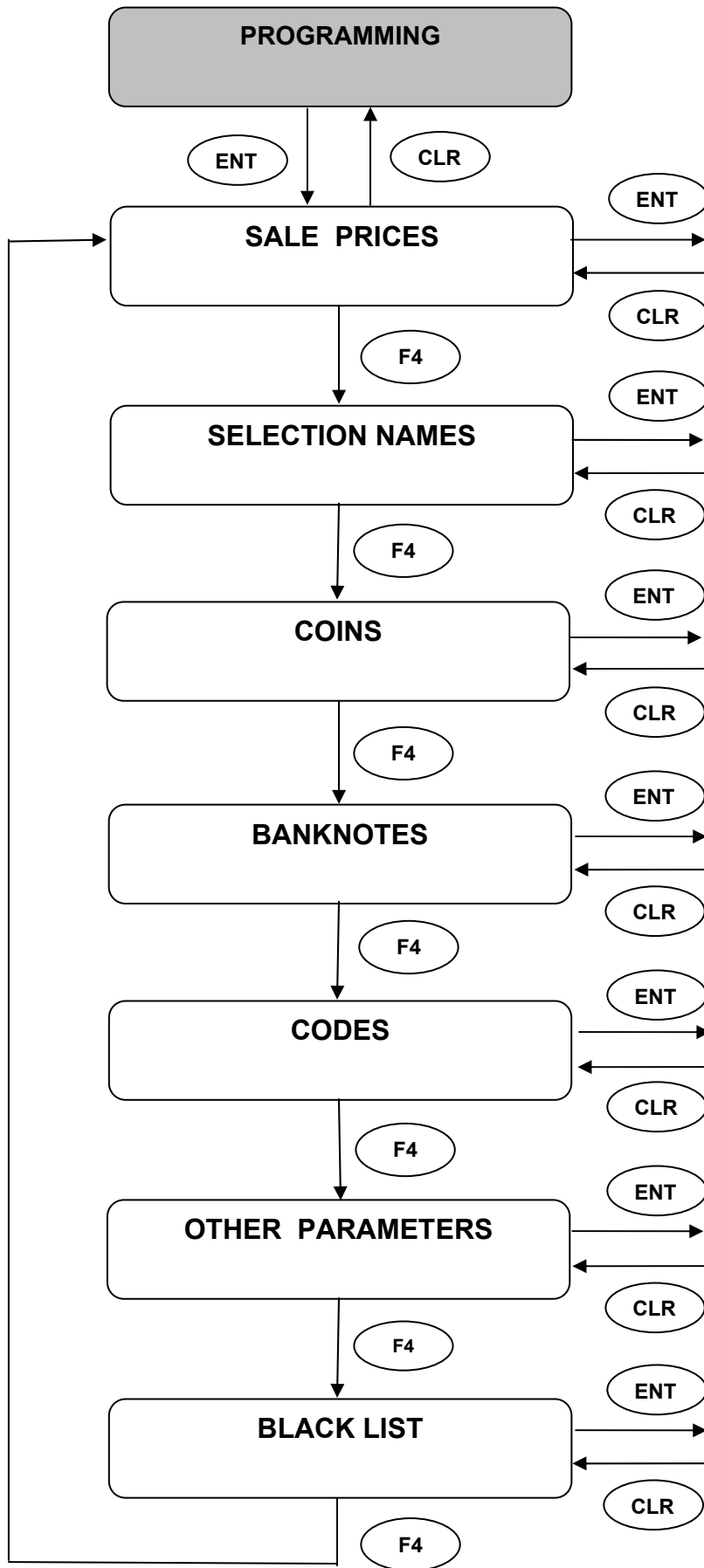
The system programming menus that are displayed on the *Programmer's* LCD display are illustrated below. The main programmer menu opens automatically when it is connected.

### **ATTENTION**

The *Programmer* should be connected and disconnected with the ZIP Loader PLUS switched on.

5.1. PROGRAMMING





### 5.1.1. SALE PRICES

Up to 60 selections can be programmed on the system. It is possible to programme the name and up to 5 different prices for each selection: cash, key, key with discount level 1, 2 or 3.

Note. Prices are expressed in cents (for example: 1250 = 12.50).

#### **Cash sale prices**

Menu: PROGRAMMING / SALE PRICES / CASH

The system can hold up to 60 cash sale prices at a value between 0 and 65535.

#### **Key sale prices**

Menu: PROGRAMMING / SALE PRICES / KEY

The system can hold up to 60 key sale prices at a value between 0 and 65535.

#### **Key with discount level 1, 2 or 3 sale prices**

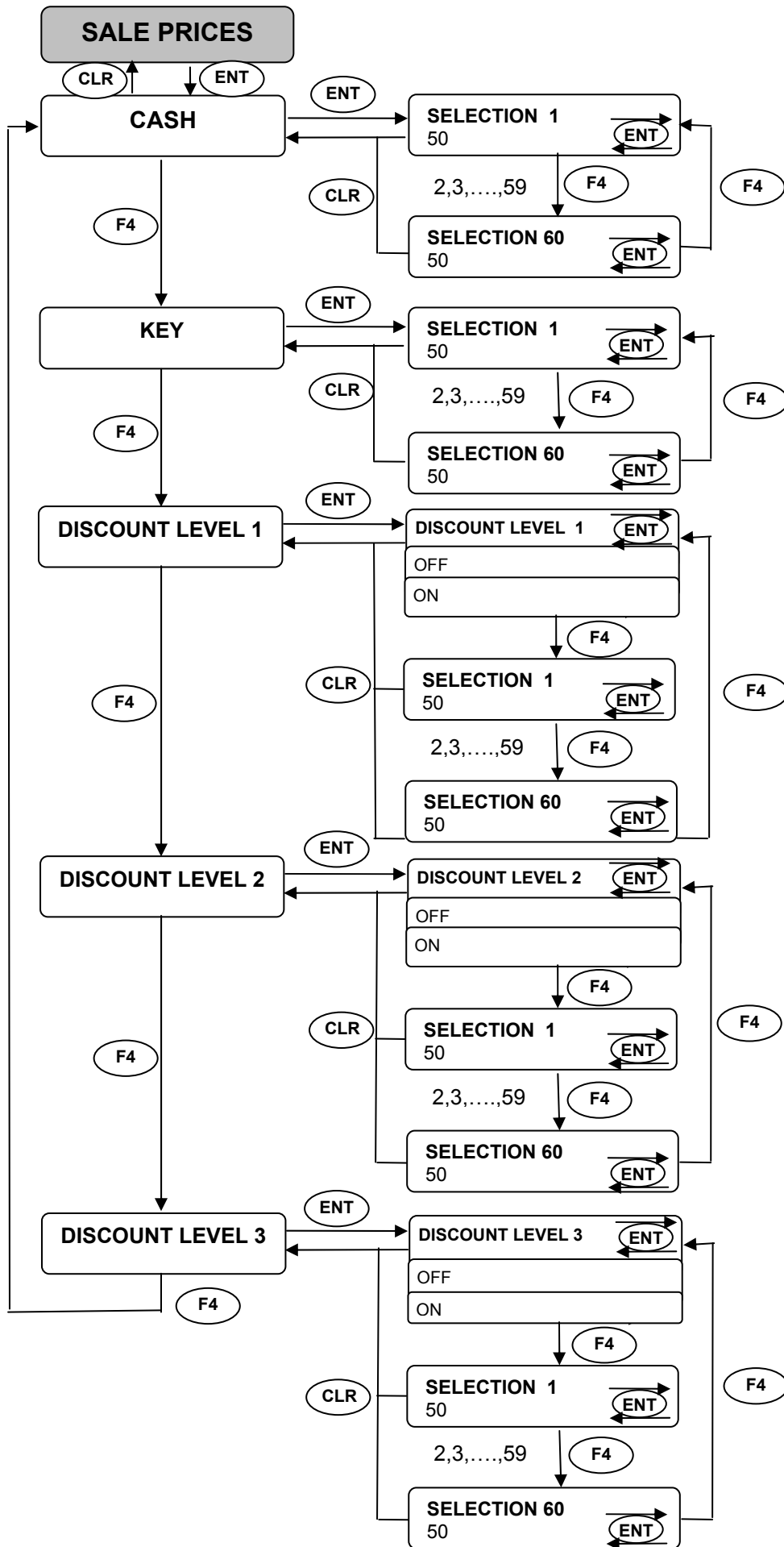
Menu: PROGRAMMING / SALE PRICES / DISCOUNT LEVEL 1, 2, 3

The 3 discount menus offer three different discounts for key sales.

In order to use this function, it is necessary to enable the system discount levels and record the desired discount code (1, 2 or 3) on the key/card using the PC interface.

The code "0" should be assigned to "normal" sales keys/cards.

The discounted prices, ranging from 0 to 65535, can be programmed in the "DISCOUNT LEVEL 1, 2, 3" tables.

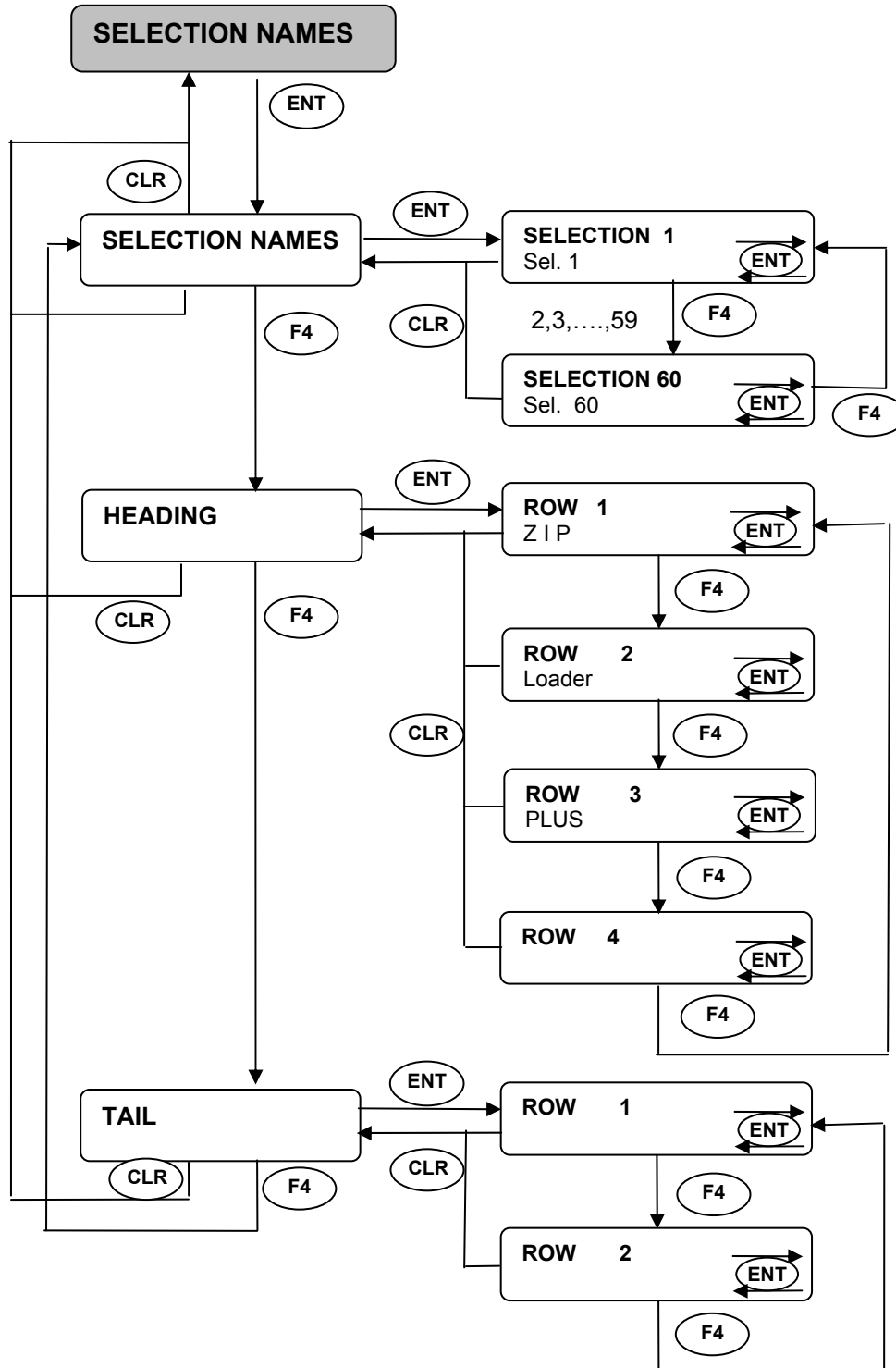


5.1.2. SELECTION NAMES

The names of the 60 selections can be programmed on the system. Each name should consist of a maximum of 8 letters or numbers.

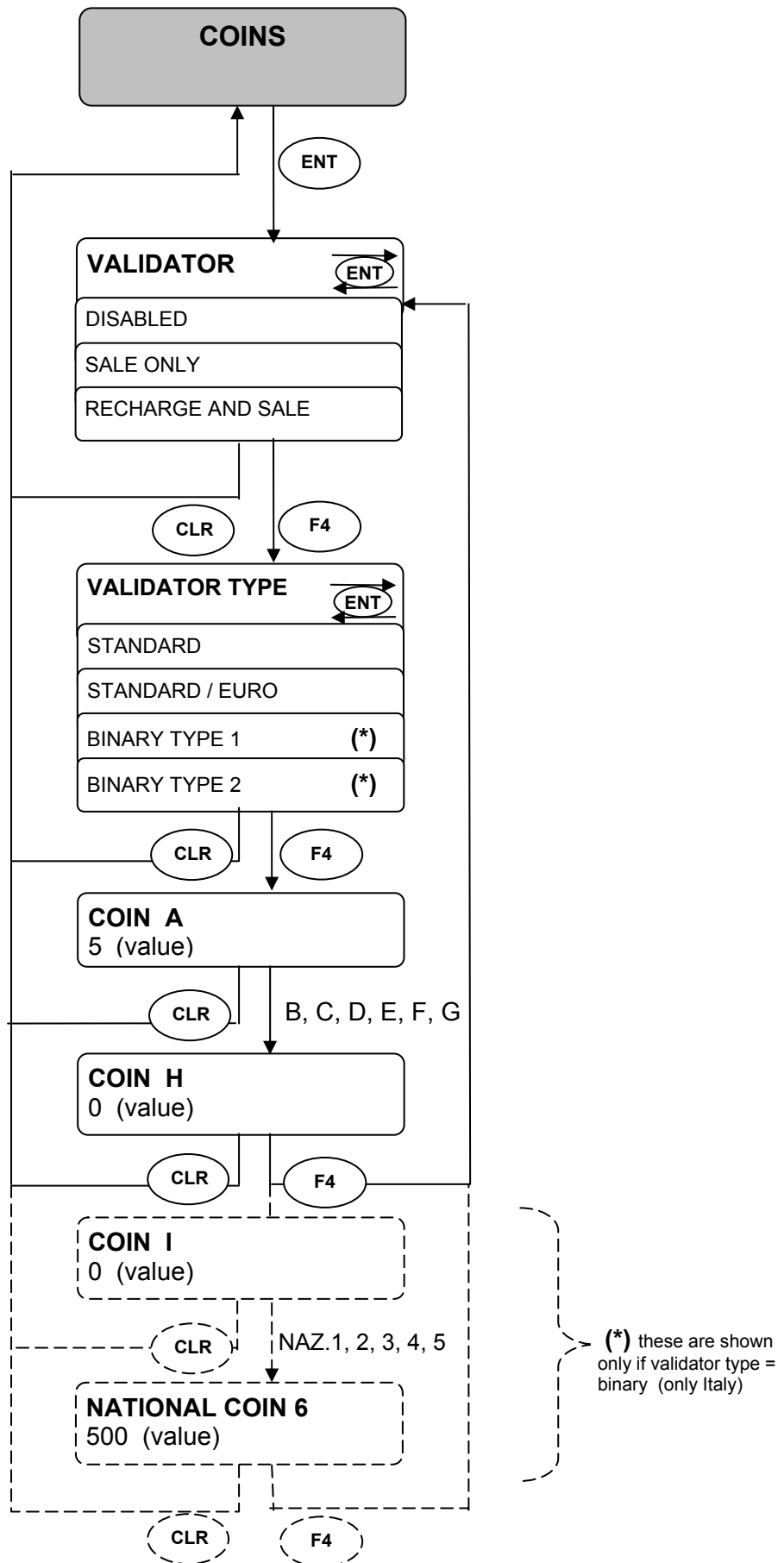
It is also possible to programme the heading and footer for the receipt that is printed after each sale or charge operation. The heading consists of 4 lines, each composed of 16 alphanumerical characters; the footer, on the other hand, consists of 2 lines of 16 alphanumerical characters each.

Note: Use the F2 and F3 keys on the *Programmer* to run through the letters of the alphabet



5.1.3. COINS

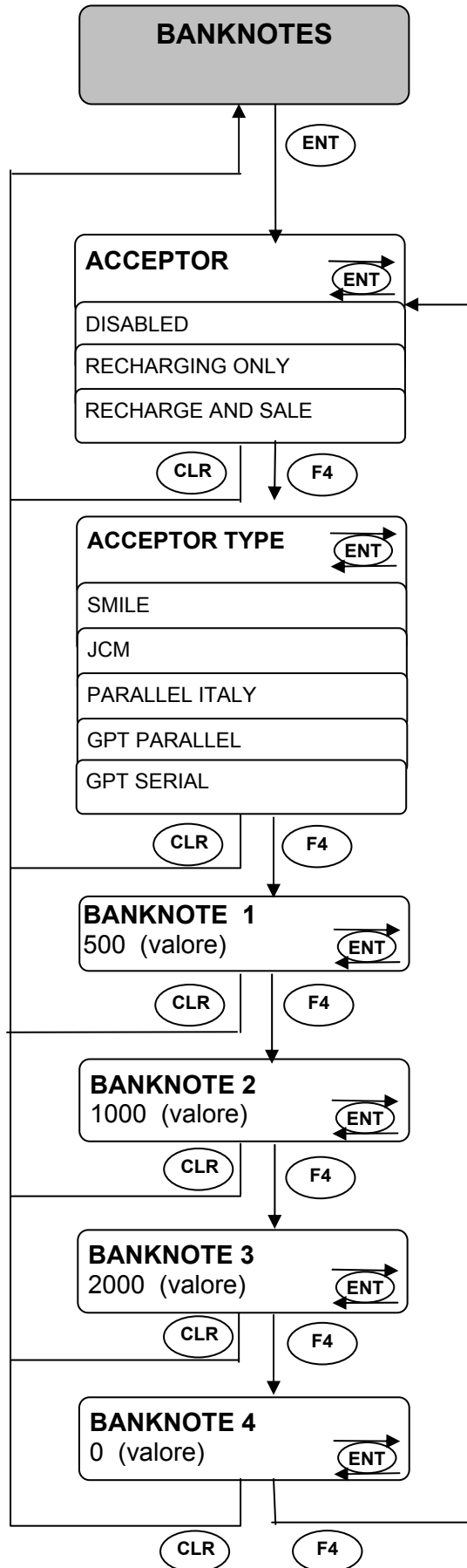
This menu is used to programme the coin validator.





5.1.4. BANKNOTES

This menu is used to programme the banknote acceptor.



Note: For MARS Bill  
 Acceptor AE2601 you have  
 to program:  
 - ACCEPTOR TYPE = GPT  
 serial;  
 - BANKNOTE1=100 (\$1.00)  
 - BANKNOTE 2, 3, 4 = 0

5.1.5. CODES

The system has some protection codes that prevent people using keys/cards not programmed with the same codes as the ZIP Loader Plus system. If the "ERROR MESSAGES" are enabled and a key/card with incompatible codes is inserted into the system reader, the LCD display shows the "EVENT 2" message.

**Department code** (default setting = 001)

This code consists of 3 numbers (max. 255) and aims to prevent keys/cards from being used in different departments within the same company.

If the key or system is set at 000, the department code is not checked (see Table 1. Code compatibility)

**Customer code** (default setting = 00001)

This code consists of 5 numbers (max. 65535) and aims to prevent keys/cards from being used in different companies run by the same management firm.

If the key or system is set at 00000, the client code is not checked (see Table 1. Code compatibility).

**Operator code** (default setting = 00000001)

This code consists of 8 numbers (max. 99999999) and aims to prevent people using keys/cards that do not belong to the management company that owns the system.

When a key/card with a code other than that programmed in the system is inserted into the system reader, it is not accepted (see Table 1. Code compatibility).

The operator code is hidden.

Table 1. Code compatibility

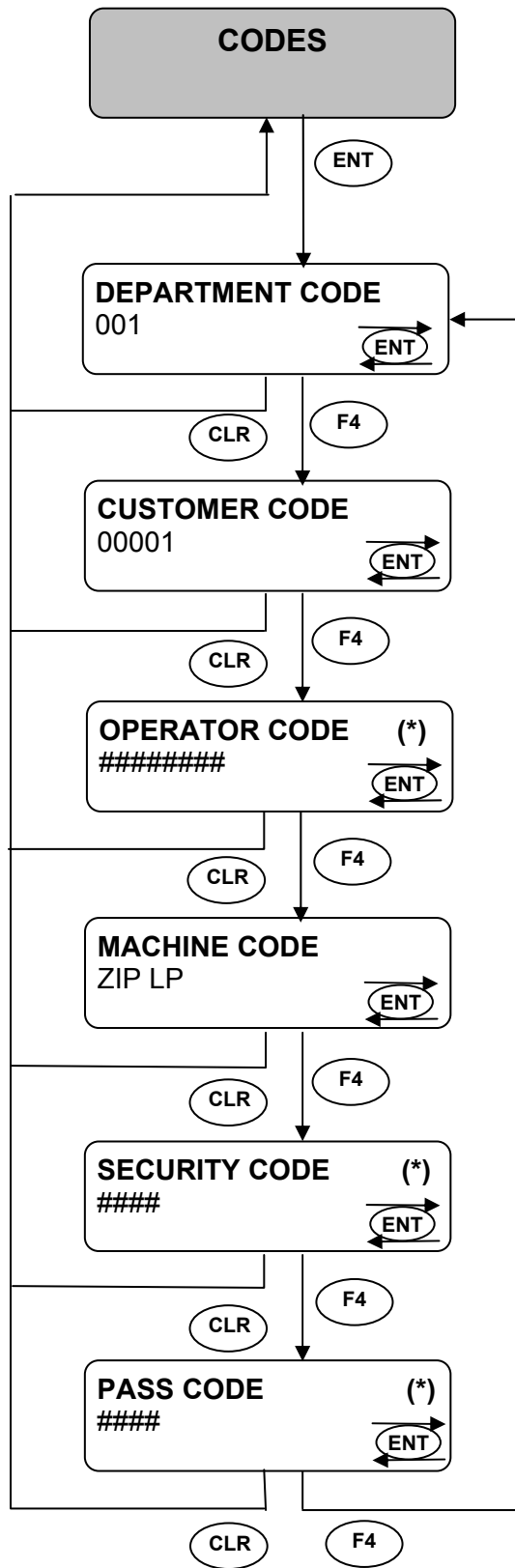
	OPERATOR CODE	CUSTOMER CODE	DEPARTMENT CODE
CODE IN THE KEY/CARD	12345678	12345 OR 0	123 OR 0
COMPATIBILITY CONDITION	EQUAL	EQUAL OR ONE OF THE TWO = 0	EQUAL OR ONE OF THE TWO = 0
CODE IN THE SYSTEM	12345678	12345 OR 0	123 OR 0

**Machine code** (default setting = ZIP LP)

This is not an access code but merely an identification code for the ZIP Loader PLUS system. It consists of 6 alphanumeric characters. It is recorded in the statistics.

**Security code** (default setting = 2222) and **Pass code** (default setting = 1111)

These two security codes are used to enable communication with the PC (containing the "ZIP Loader Plus" software supplied with the system) and are used to prevent unauthorized people from setting the system parameters or accessing information relative to transactions. These codes consist of 4 numbers each and must be programmed in the same way in the PC software. The two codes are hidden (###).



(\*) if Password is programmed, it is required before changing this parameter.

### 5.1.6. OTHER PARAMETERS

#### Maximum chargeable credit

It indicates the maximum credit limit that can be added to the key/card (up to 65535).

#### Absolute maximum credit

It indicates a limit to the credit on the key/card (up to 65535).

If the "ERROR MESSAGES" are enabled and a key/card with credit above this value is inserted into the system reader, the LCD display shows the "EVENT 7" message.

#### Overpay

If this parameter is ON, any credit left in the machine is reset after 3 minutes have passed. The reset amount is recorded in the S05 "Overpay" statistic.

#### Buzzer

It enables/disables (ON/OFF) the acoustic alarm.

#### Error messages

It enables/disables (ON/OFF) the error messages

#### Statistics

It can be enabled/disabled (ON/OFF). If this parameter is enabled, the system controls the integrity of the data collected in the statistics. If an anomaly is discovered and the "STATISTICS" are ON, the system becomes blocked until a statistics collection operation is performed, and the "Statistics Err." message appears on the display. On the contrary, if this parameter is disabled, the system continues to operate even if an anomaly is found in the statistics.

#### **ATTENTION**

The statistics are collected whether or not this parameter is on.

#### Currency symbol

This parameter makes it possible to select the currency symbol to be used when printing the amounts on the receipt. The available symbols are: €, £, \$, Kr.

#### Audit mode

This parameter establishes the format in which the system statistics can be collected by connecting a *Data Box*. Two different formats are available: "DATABOX" (which makes it possible to collect "standard" statistics) and "EXTENDED DATABOX" (which makes it possible collect statistics in an extended format). For more information consult the paragraph dedicated to STATISTICS.

#### Charge key

It enables/disables (ON/OFF) the use of the charge key. If a charge key is inserted in the reader and this parameter is programmed OFF, nothing will be shown on the display.

#### Payroll revalue

It enables/disables (ON/OFF) the possibility to charge the key/card credit by deducting the charge value from the pay roll. If this parameter is disabled, it is impossible to access the charge menu, even if you press "0" followed by "ENTER".

#### Free key enable

It enables/disables (ON/OFF) use of the free sales key.

#### Print credit

It enables/disables (ON/OFF) the print-out of the key/card's available credit (initial credit, final credit), bonus tokens and reward points on the receipt.

**Sales**

It enables/disables (ON/OFF) the sales function. If this parameter is disabled, nothing will be displayed or printed when making a selection between 1 and 60.

**Save sales**

It enables/disables (ON/OFF) system memorization of data regarding sales made using a key/card. If the parameter is programmed OFF, data regarding sales made with a key/card will not be memorized in the system memory or sent to the PC.

**Initialization**

It makes it possible to reboot all the settable parameters with the default settings.

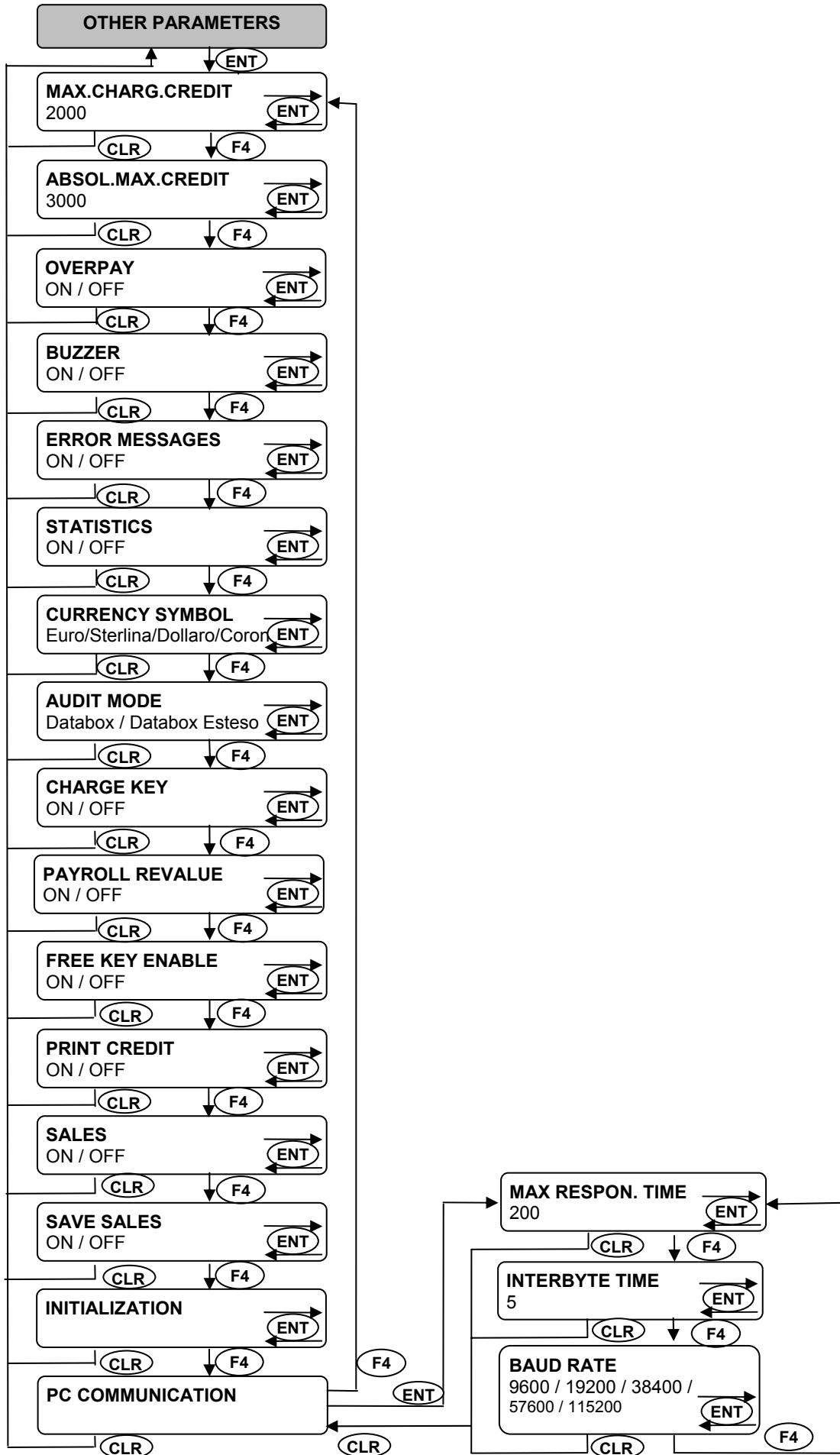
**PC communication**

This menu makes it possible to programme the parameters necessary for communication with the PC that the ZIP Loader PLUS is connected to.

- Max. Respon.Time (default setting = 200): this is the maximum time available to the system for responding to a request from the PC (used in the case of several systems connected to the same PC).
- Interbyte time (default setting = 5): this is the time taken by the system to understand when a data block received from the master has come to an end. It must be at least equivalent to the duration of one byte.
- Baud rate (default setting = 38400): makes it possible to set the data transmission speed between the system and the PC.

**ATTENTION**

The value set in the ZIP Loader Plus must also be set in the "ZIP Loader Plus" software. The value can be set at: 9600, 19200, 38400, 57600, 115200.



5.1.7. BLACK LIST

The Black List contains the list of banned key/card numbers.

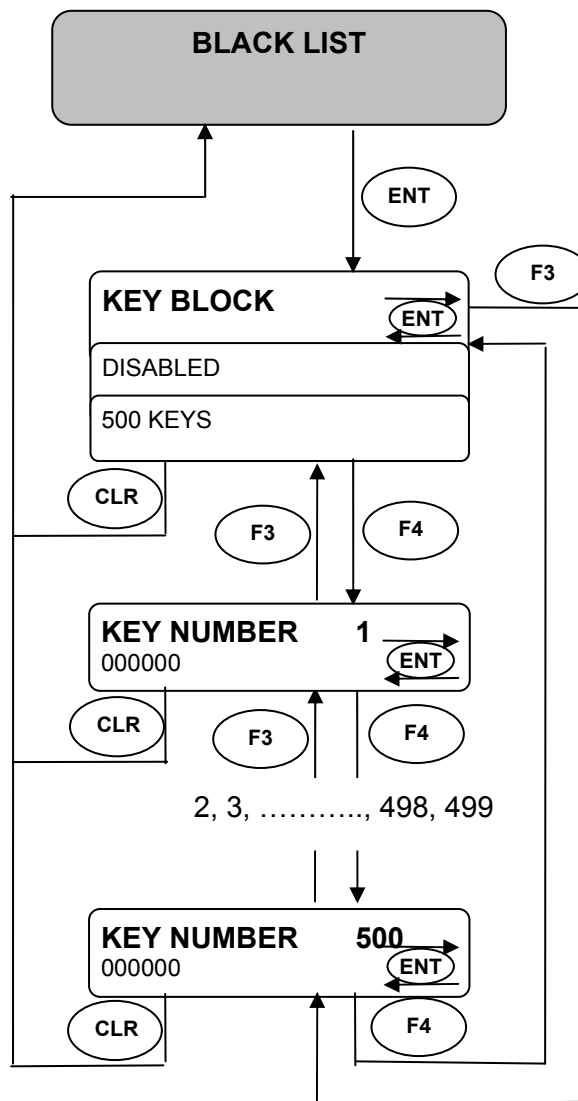
The Black List can be enabled or disabled.

If the "KEY BLOCK" is "DISABLED", the "Black List" is not managed: if a key/card on the "Black List" is inserted, nothing prevents it from being used.

On the contrary, if the "KEY BLOCK" is programmed at "500 KEYS", the system checks whether the inserted key/card number is on the Black List and, if it is, the card is prevented from being used and statistic S60 is updated.

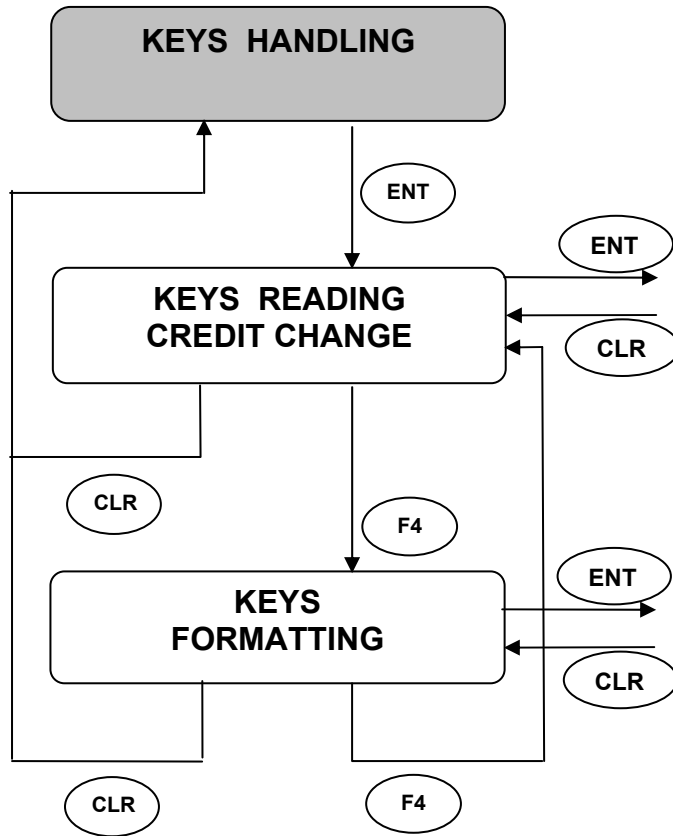
If the "ERROR MESSAGES" parameter is enabled, the system display will show the "EVENT 13" message.

In order to programme the system Black List, see the "ZIP Loader Plus" software manual.



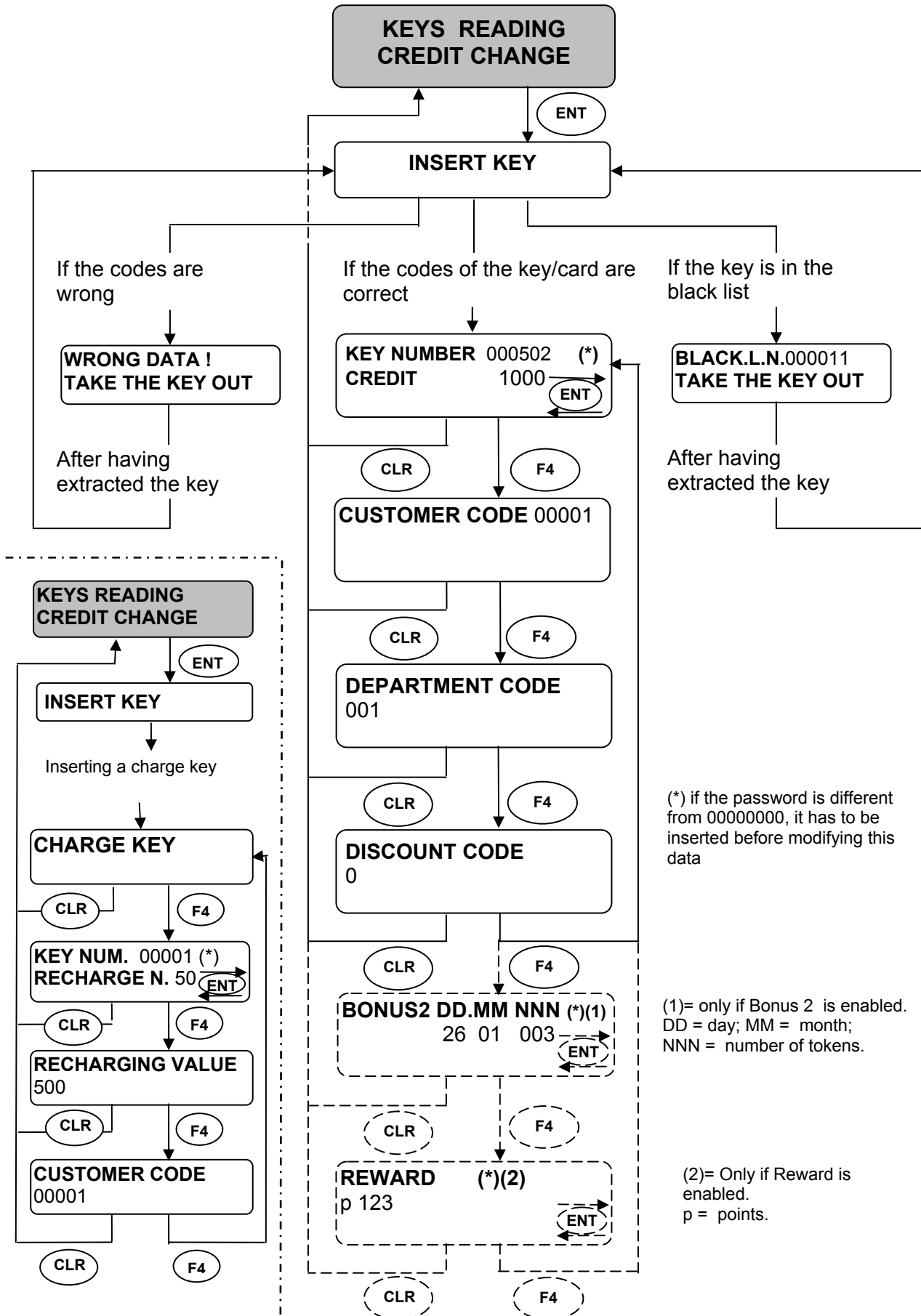
5.2. KEYS HANDLING

This menu makes it possible to read/modify certain data on the keys/cards and format them.

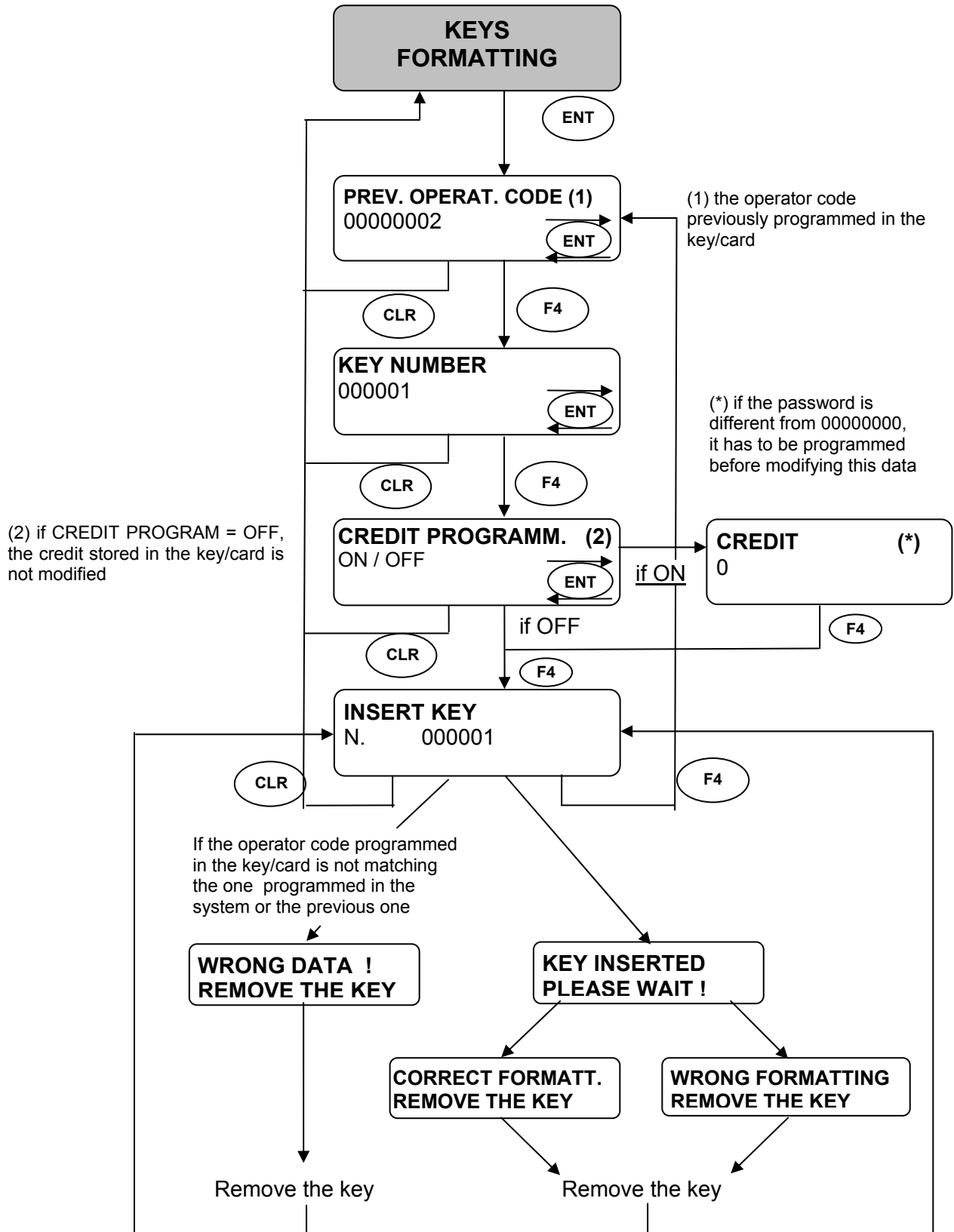




5.2.1. KEYS READING CREDIT CHANGE



5.2.2. KEYS FORMATTING



### 5.3. PASSWORD

The ZIP Loader PLUS makes it possible to programme a password that is requested when modifying:

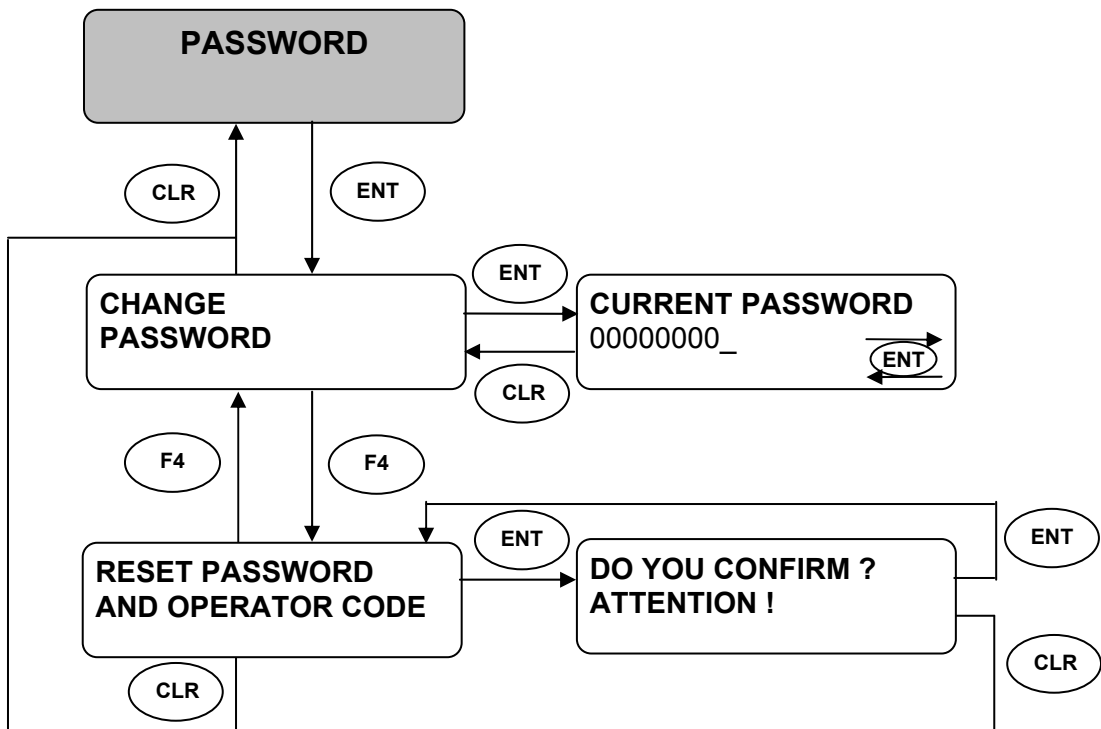
- the operator code, the security code and the pass code;
- the credit, the number of bonus tokens and the reward points on a sales key/card;
- the number of charges on a charge key.

It consists of 8 numbers (max. 99999999) and is hidden (#####).

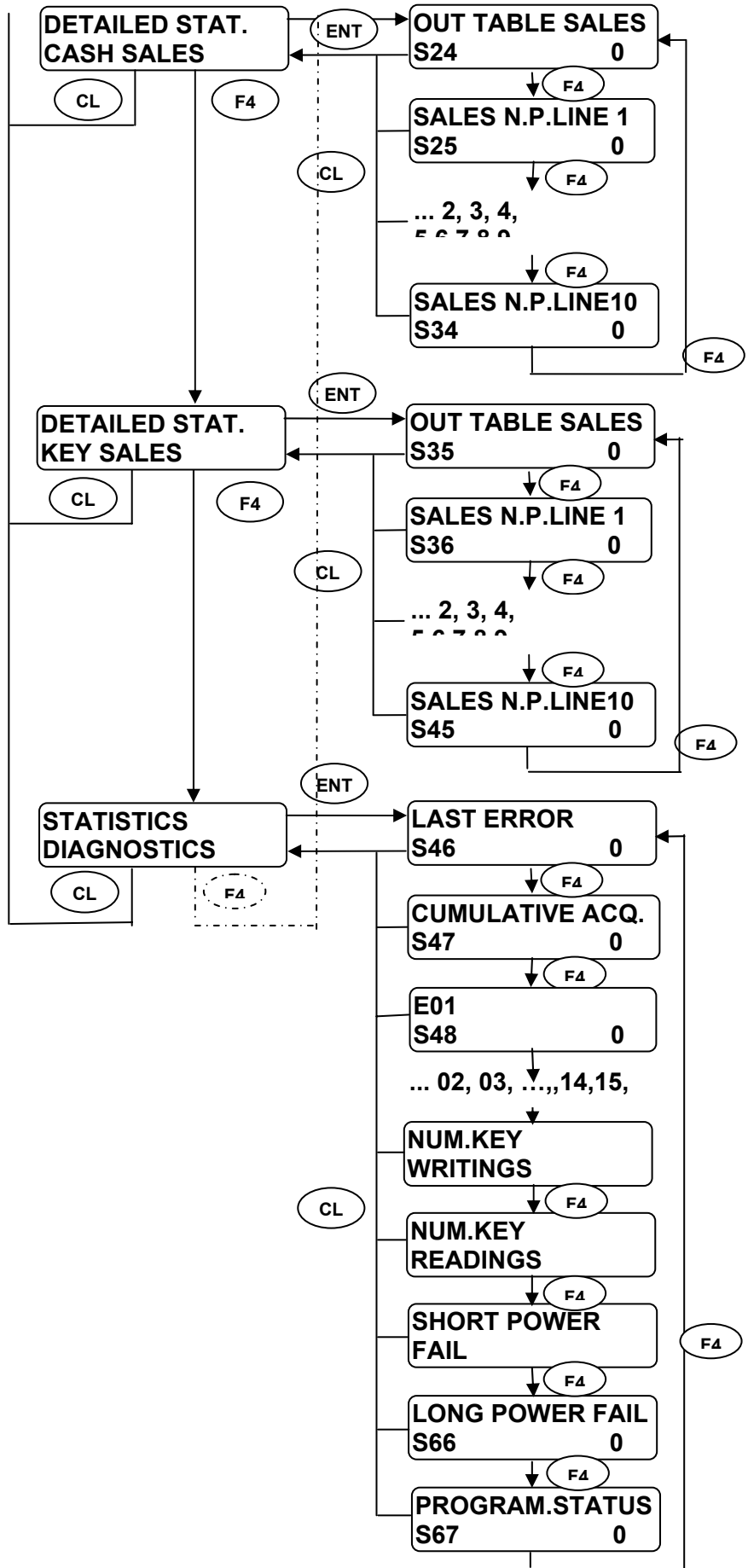
The default setting is 00000000 and is not hidden.

CHANGE PASSWORD makes it possible to set the password.

RESET PASSWORD AND OPERATOR CODE makes it possible to reset the password and set the operator code at 00000001.



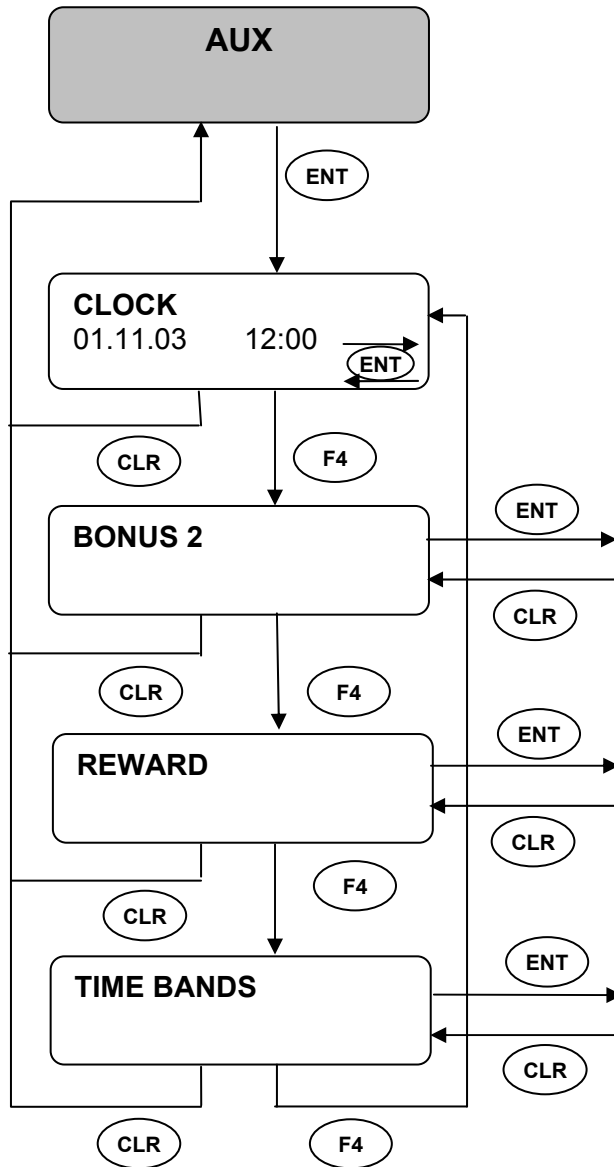




5.5. AUX

**ATTENTION**

The **CLOCK**, **BONUS 2** AND **REWARD** functions can be programmed using “ZIP Loader Plus” software.



### 5.5.1. CLOCK

This menu programmes the system date and time.

### 5.5.2. BONUS 2

Bonuses are allowances made to employees at the company where the ZIP Loader PLUS is installed.

The Bonus 2 has the following characteristics:

- it is only available in “token” mode (a token is equal to the entire value of the selection): a maximum of 127 tokens can be supplied/used (per day/per week/per month);
- it can be activated for certain key/card categories only on the basis of their set discount level;
- it is possible to programme selections that can be supplied using bonus tokens.

## PROGRAMMING:

### Use

- DISABLED: the system does not cater for bonuses;
- SALE ONLY: the system can sell products using bonus tokens from other systems (ZIP, ZIP Caterpay, ZIP Loader PLUS), but cannot issue bonus tokens;
- RECHARGE AND SALE: the system can sell products using bonus tokens from other systems and issue bonus tokens.

### Enabled keys

This menu makes it possible to limit the use of bonus tokens to certain key/card categories only: for example, if you want to limit the use of bonuses to cards with discount levels 0 and 1, it is necessary to programme DISCOUNT LEVEL 0 = ON, DISCOUNT LEVEL 1 = ON and DISCOUNT LEVEL 2 = OFF, DISCOUNT LEVEL 3 = OFF.

### Enabled selections

This menu makes it possible to programme the selections that can be made using bonus tokens. For example, if “SELECTION 1” is ON and all the other selections are programmed OFF, bonus tokens can only be used to purchase selection 1.

### Period

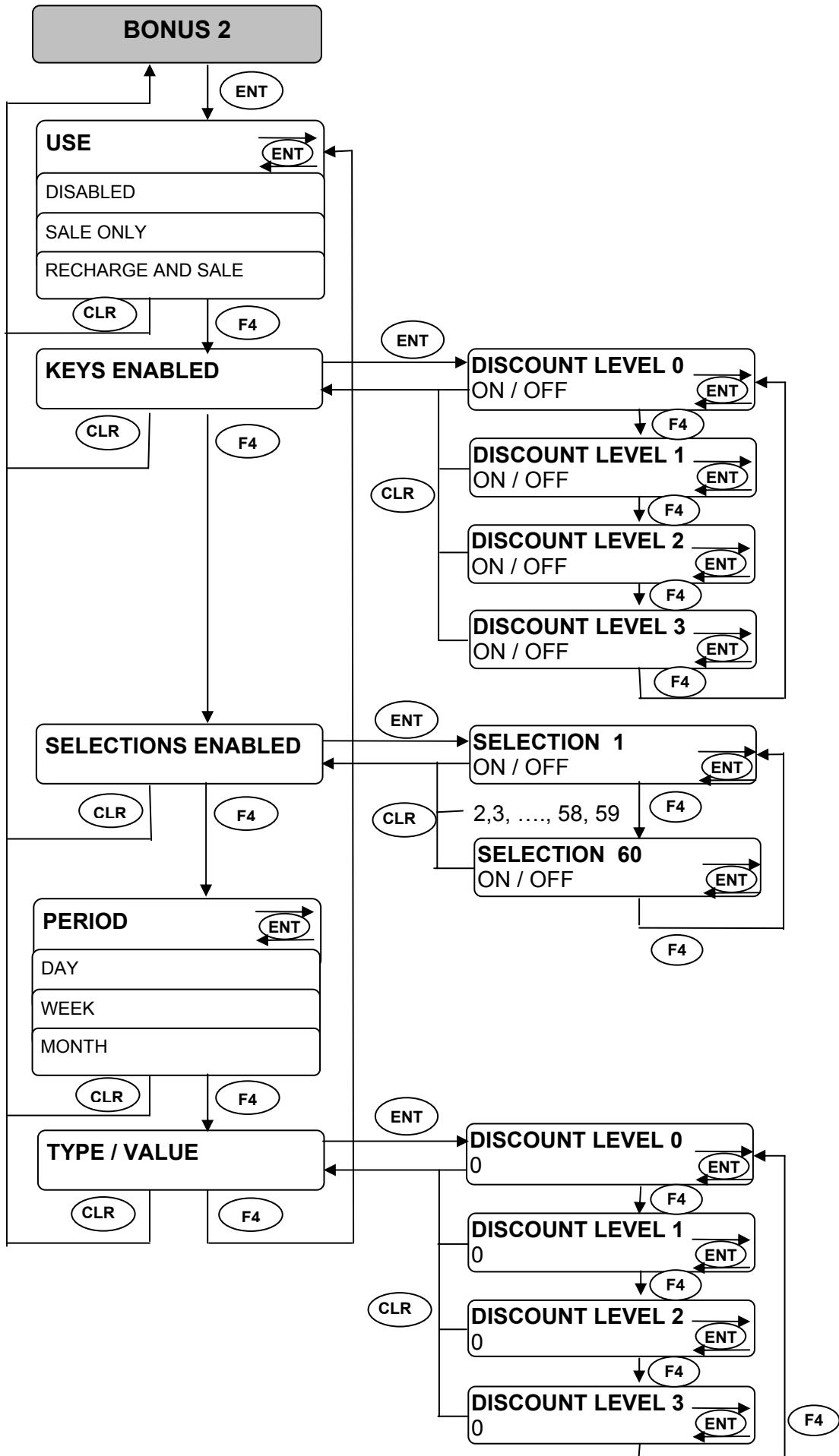
This parameter indicates how often bonuses are awarded. Bonuses can be issued daily, weekly or monthly.

When bonus tokens are issued, they are not added to those already present on the key but replace them. For example, if the system has been programmed to issue 3 tokens per day and the user only uses 2, the unused token will be lost and 3 more tokens will be available the next day.

The daily period runs from 00:00 to 24:00; the weekly period runs from Sunday to Monday.

### **ATTENTION**

The bonus token value is equivalent to the price that would have had to be paid using the key/card (taking any discount levels into account).





### 5.5.3. REWARD

The reward consists of a number of points or credit that is awarded following every purchase made.

#### **ATTENTION**

Reward points/credit are not awarded in the case of purchases made using bonus tokens.

#### **Credit mode**

The credit mode reward adds a sum to the key/card's remaining credit after each sale. This sum is shown in the "DISCOUNT LEVEL 3" table.

#### **Points mode**

The "points" mode reward awards a certain number of points at the end of a transaction. These points are memorized in a specific area of the key/card memory and are therefore managed separately from the credit.

When the key/card has accumulated a number of points equivalent to the price in points of the chosen selection, shown in the "DISCOUNT LEVEL 2" table, the selection is supplied free of charge and the points are deducted from the key/card memory.

In fact, the "DISCOUNT LEVEL 2" table shows the "price in points of the selections", or rather the number of reward points needed to obtain the selection free of charge.

#### **ATTENTION**

- It is possible to programme a different number of points required to purchase each selection. The "DISCOUNT LEVEL 3" table indicates the number of points awarded for each selection.
- If you want to prevent certain selections from being purchased using reward points, just set the points relative to the selection in question at zero in the "DISCOUNT LEVEL 2" table.
- If the number of points relative to a certain selection is set at zero in the "DISCOUNT LEVEL 3" table, no reward points will be awarded when this selection is made.
- The reward points accumulated by the key/card are shown on the second line of the display (alternately with the bonus 2 tokens, if enabled) and printed on the receipt (if the printing function is enabled).

#### **Programming**

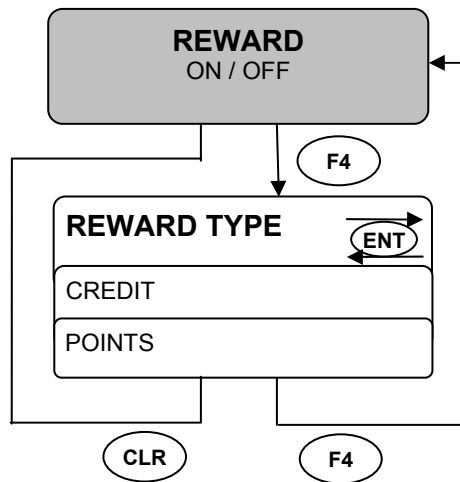
Select ON/OFF in order to enable/disable the reward.

#### **Reward type**

This makes it possible to select the desired reward type: credit or points.

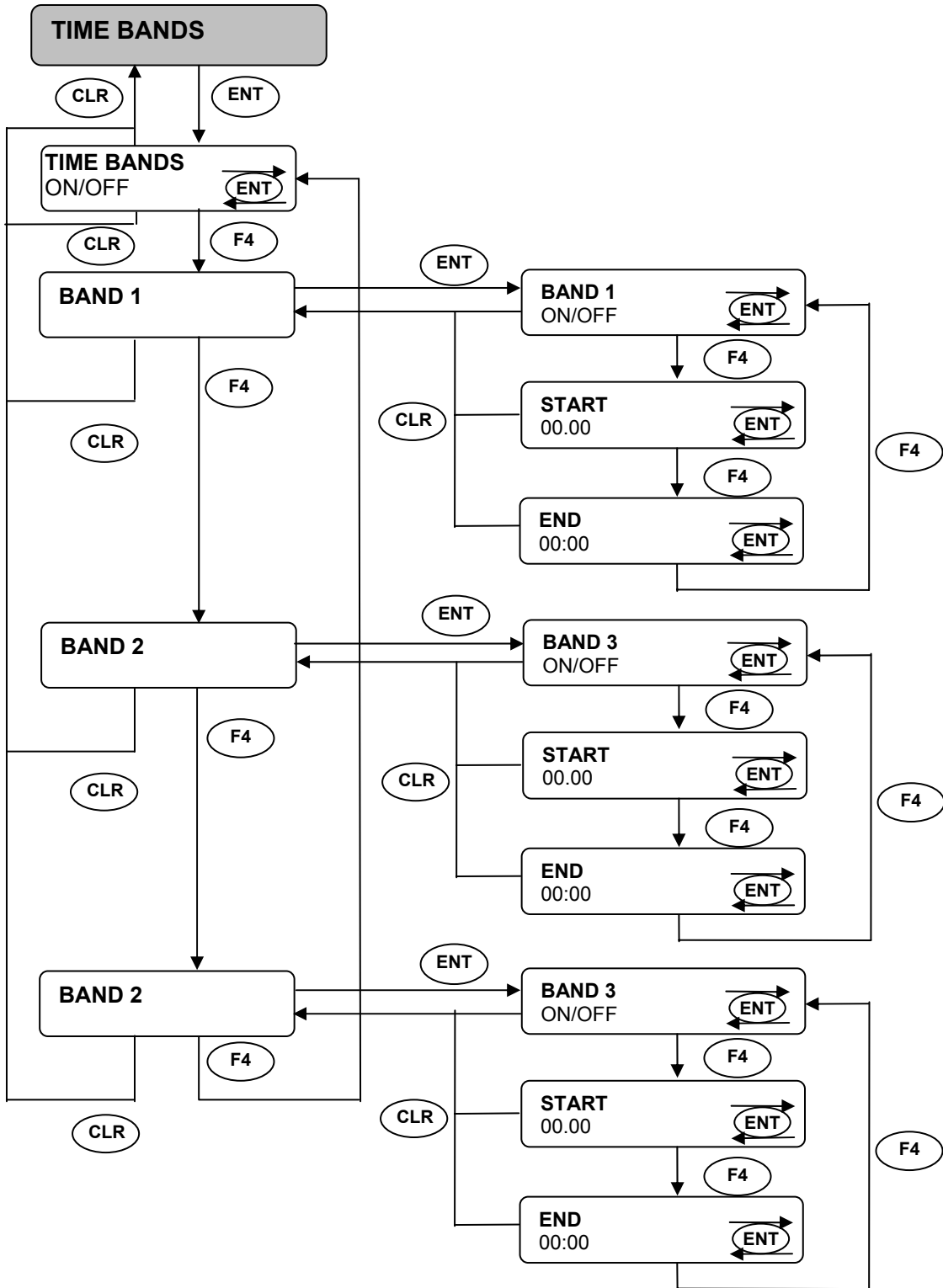
#### **ATTENTION**

- When the reward is enabled, discount levels 2 and 3 cannot be used and, therefore, "DISCOUNT LEVEL 2" and "DISCOUNT LEVEL 3" must be OFF.
- When the "REWARD TYPE" is set to "POINTS", the "DISCOUNT LEVEL 2" table (inside the "PROGRAMMING"- "SALE PRICES" menu) contains a list of the selection prices in points, while the "DISCOUNT LEVEL 3" table indicates the number of points awarded for each purchase made using a key/card.
- When the "REWARD TYPE" is set to "CREDIT", the "DISCOUNT LEVEL 3" table indicates the sum added to the key/card credit after making each purchase.
- Purchases made using bonus tokens are not awarded reward points/credit.
- If Bonus 2 and Reward are both enabled, bonus tokens are given priority.



#### 5.5.4. TIME BANDS

This menu allows programming up to 3 time periods in which the sale function is enabled. Out of these periods it is only possible charging keys/cards. Programming "TIME BANDS" = OFF every time band is disabled; otherwise programming "TIME BANDS" = ON, each band can be enabled/disabled individually and for each band the starting and the ending time (hh:mm) can be programmed.



## **6. DIAGNOSTIC MESSAGES OF THE ZIP LOADER PLUS**

### **6.1. GENERAL MESSAGES**

**EVENT 1: AREA KEY CREDIT ALTERED:**

The event may be caused by erroneous reading of the key/card; in this case try extracting and reinserting the key/card. If the error persists it is due to erroneous writing of the key/card, because it was extracted while writing was in progress (which is in any case a very rare event). The key/card can be restored by means of the PC interface.

**EVENT 2: INCORRECT KEY ACCESS CODES:**

The codes present in the key/card (Operator, Department or Customer code) are different than those programmed into the ZIP Loader Plus.

**EVENT 6: ERRONEOUS KEY FUNCTION CODE**

**EVENT 7: KEY CREDIT OVER LIMIT:**

The credit in the key/card is greater than the credit programmed in the ZIP Loader Plus, in the menu PROGRAMMING / OTHER PARAMETERS / ABSOL.MAX.CREDIT.

**EVENT 9: KEY WRITING ERROR during credit updating phase:**

This event may occur when a key/card is extracted during a writing phase (red LED on). In some cases the event may cause the alteration of the credit area in the key/card. (see EVENT 1).

**EVENT 10: CONNECTION ERROR between Data Box and the ZIP Loader Plus during the auditing.**

This event occurs when you do not wait 2 minutes between two successive collections in the same system or when the connector has not been inserted properly.

**EVENT 12: KEY WRITING PERFORMED BUT NOT VERIFIED:**

This event may occur when a key/card is extracted during a writing phase (red LED on). If this message is displayed after having made a selection, the key may be decreased but the sale does not take place because the key was extracted.

**EVENT 13: KEY ON BLACKLIST INSERTED when the Black List is enabled.**

### **6.2. PRINTER MESSAGES**

**RECEIPT NOT AVAILABLE:**

This message is displayed when the receipt is not available: check if the printer is correctly connected to the main CPU of the ZIP Loader Plus or if the unit is out of paper.

**PAPER RUNNING LOW:**

This message indicates that the paper in the printer is running low. The ZIP Loader Plus keeps working until the paper is finished.

**PRINTER OUT OF ORDER:**

This message indicates that the printer is in a general error state.

**REMOVE PREVIOUS RECEIPT:**

This message indicates that there is a receipt in the presenter of the printer and it has to be removed.

## 7. ZIP LOADER PLUS CONNECTION/ PC

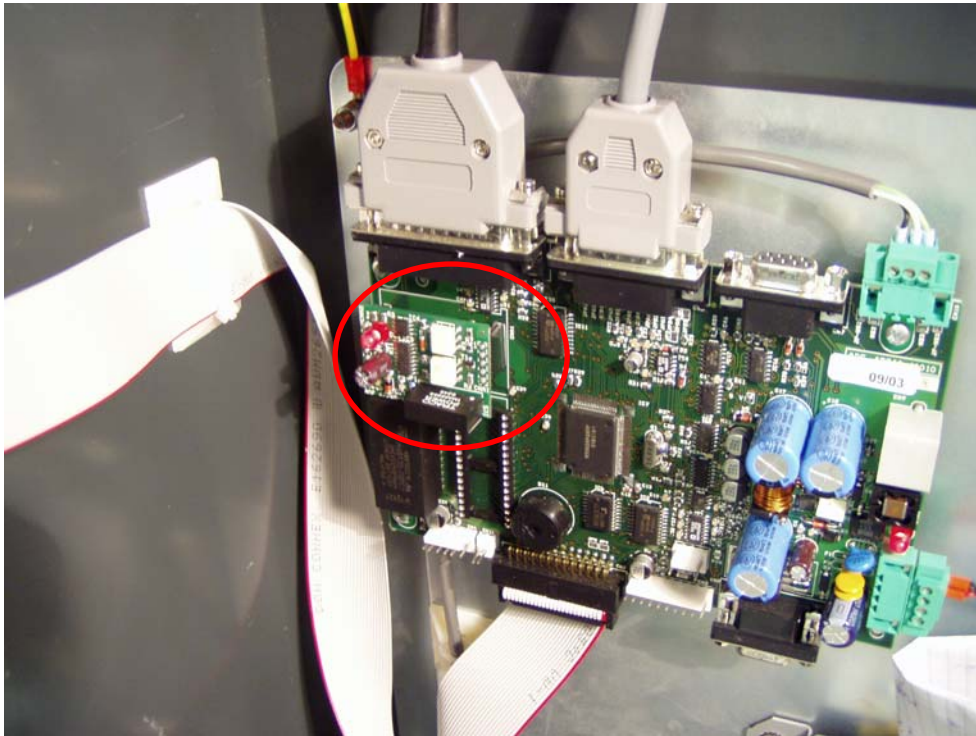
The ZIP Loader PLUS can be connected to a PC using an RS-485 or RS-232 serial interface. The standard RS-485 makes it possible to connect devices which may be located at a distance of up to 1200 meters, whereas the standard RS-232 makes it possible to connect devices located at a maximum distance of approximately 10 meters.

The ZIP Loader PLUS is standard equipped with the RS-485 interface, while the RS-232 interface is supplied separately with the unit.

### 7.1. CONNECTION TO A PC BY MEANS OF THE RS-485 INTERFACE

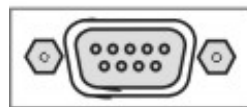
The RS-485 interface is included standard on the motherboard of the ZIP Loader PLUS. (See Fig. 1).

Figure 1



The RS-485 interface is made available externally by means of a 9-way female DB connector located on the back of the ZIP Loader PLUS. The position of the pins is illustrated in Fig. 2:

Figure 2



2 RS-485 -  
3 RS-485 +  
5 GND

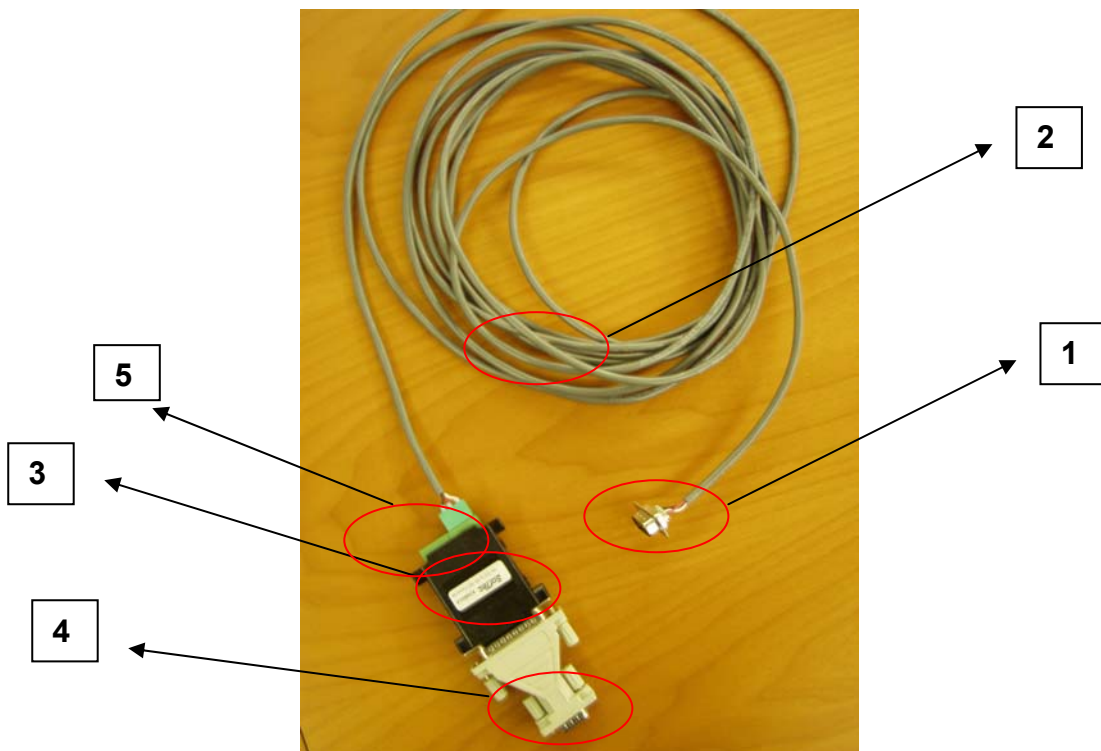
In order to connect the ZIP Loader PLUS to the PC using the RS-485 interface it is necessary for the PC to be equipped with an RS-485 interface as well. Otherwise, you can use an RS-232/ RS-485 converter, to be connected to an RS-232 serial portal of the PC.

7.1.1. RS-232 / RS-485 CONVERTER (OPTIONAL KIT)

The optional kit is composed of the following parts (Fig. 3):

1. 9-way male DB connector which is to be connected to a 9-way female DB connector located on the back of the ZIP Loader PLUS;
2. A few meters of cable (the cable can be substituted with a cable which is 1200 m long);
3. RS-232 / RS-485 converter;
4. If the RS-232 serial interface of the PC calls for a 9-way DB connector, to connect the RS-232/RS-485 converter to the PC a DB 25 way / DB 9 way adaptor is required (the adapter is not included in the kit);
5. The converter must be powered with voltage between 9 and 15 V DC inclusive; the maximum current absorption is 90 mA (the power supply unit is not included in the kit)

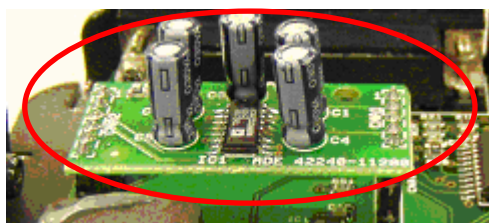
Figure 3



7.2. CONNECTION TO A PC BY MEANS OF THE RS-232 INTERFACE

To connect the ZIP Loader PLUS to the PC according to standard RS-232, it is necessary to replace interface RS-485 (see Figure 1) with interface RS-232 (see Figure 4).

Figure 4

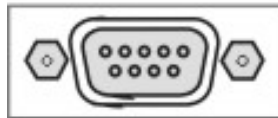


Once the interface has been replaced, it is possible to connect the 9-way DB connector located on the back of the ZIP Loader PLUS directly with the serial interface RS-232 of the PC using non-inverting wiring (not included with the unit).

The following table describes the 9-way DB connector located on the back of the ZIP Loader PLUS.

Table 1

Number of pins	Name	Direction	Description
2	TxD	Output	Pin for data transmission to the PC
3	RxD	Input	Pin for data reception from the PC
5	Gnd		Ground



**2 TX**  
**3 RX**  
**5 GND**