BACSA®
WEIGHT QUALITY

BLS4000

User's Manual

Version 15.05.16

MANUAL CONTENTS

1. INTRODUCTION

The weighing and labelling equipment from the 4000 series have been designed to comply with the more exigent requirements of the industry, including the particular requests of the food industry.

The most remarkable characteristics of the BLS-4000 equipment are: weight precision, printing quality, complete information in label and high working speed.

The equipment has been designed in order to make easier the maintenance tasks (quick belts change, easy cleaning, etc...) and the possible changes in the production lines (exchange of working direction from right to left or vice versa).

The label can be applied by “AirJet” system or by a mechanical applicator. The “AirJet” sistem guarantees the maximum care even with delicate products. The mechanical Applicator (Piston) guarantees the maximum precision in the label positioning. It is also possible to have Underlabelling systems.
The LS-4000 equipment can include a maximum of 3 printers with standard and underlabelling application.

Moreover, the PC connection allows the complete system programming, the graphic design of the label formats and the analysis of the production data received from the equipment.

The frame made with stainless steel and anodized alumynum and the FDA (if necessary) compliant belts guarantee the compliance of the food industry standards.

The modular design allows to adapt the equipment to special product dimensions and weight ranges, not included in the standard models.

2. MAIN CHARACTERISTICS

2.1 TECHNICAL DATA

Characteristics:
Supply : 110 V - 230 VAC
Power Consumption: 1KW
Working Temperature: From -10 ºC to 40ºC
Manufacturing: Frame made with stainless steel AISI-304 and anodyzed aluminum

- Communications

The LS -4000 has different possibilities of communication with computer or other peripheral devices. The possible communications are:

- RS 232.
- Ethernet TCP/IP.
- Wireless IEEE 802.11b/g
- Software for Windows:
    - RMS: Programming of the equipment and management of the received data..
    - DLD: Graphic design of label formats.

- Connnection to labeller BLP-3000 for printing totals labels.
- Barcode Reader: for EAN13 or EAN128 barcodes.
- Digital Output: To control external equipment.

The communications with PC (RS-232), totals label and barcode reader can not be simultaneous.

2.2 EQUIPMENT DESCRIPTION

The equipment includes the following elements:
- Three motorised belts: input and separation, weighing and labelling
- Optical detector for products.
- Guiders
- Console and Graphic Display.
- Input belt: Depending on the characteristics of the installation, sometimes is necessary to use and additional belt to separate the packages which arrive too close ones to others and guarantee the right reception of the products in the equipment (avoiding oscillations which could affect the weight stability).

2.3 INTEGRITY CHECK

Check the equipment at the reception in order to verify that it has not been damaged during the transpor. The damages suffered during transport must be communicated inmediately to the transport company.
The equipment is supplied with the following accesories/documentation:
- User´s manual.
- Exploded Views.
- List of recommended spare parts.
- Declaration of Conformity.
- Key for the electronics box.(only for equipment including this box).

In case of non receiving all this elements, contact directly BACSA

2.4 STORAGE

- Storage Temperature: -10ºC to +40ºC
- Air Humidity: <93% to + 45ºC

2.5 UNPACKING

Extract the equipment carefully from the transport box and place it in the definitive location. Once placed in the definitive location, make the electrical and pneumatic connections and attach the equipment to the floor to avoid the risk of upset.

2.6 INSTALLATION AND SAFETY

The safe and efficient working of the device can only be guaranteed if the recommendations indicated in this manual are followed. Before starting to work with the equipment, read the installation and user manuals carefully.

Keep the following points in mind for the correct installation and functioning of the equipment:

The device should be placed on a firm, level surface and should be anchored to the floor to prevent possible overturning in the event of the extension of the labelling head (if there is one).

The electrical installation should only be carried out with the electrical supply source disconnected!

Make sure that the power line to which the equipment is connected does not have variations above 20% of the rated voltage.

Make sure that the power line to which the equipment is connected has ground connection complying with authorized standards.

Make sure equipment such as coldrooms, cutting machines, etc. are not connected to the same power line.

Make sure that the voltage of the power line to which the equipment is connected corresponds to the one marked on the device's specification plate.

It is recommended that the power outlet to which the device is connected be protected by magnetothermic circuit breakers.

Use the equipment in places that meet the atmospheric conditions indicated on the specification plate (from -10ºC to 40ºC).

The equipment can only be used when the covers of the different electronic parts are closed.

No object must be in contact with the load receiving platform (weigh belt)

. Similarly, the weighing carriage must not be in a draught.

Unless there are particular indications as to IP protection for the particular device purchased, you are recommended to avoid high levels of humidity which could cause condensation. Avoid direct contact with water. Do not spray water on the equipment or submerge it. If the equipment comes into contact with water, switch off the electrical supply immediately.

The equipment has mobile parts so there is a risk of entrapment. Take special care if wearing accessories (necklaces, bracelets, ties, loose clothing, etc.) which are liable to get caught in the conveyor belts or be dragged by them. During normal working of the equipment, the thermal head can be hot. Avoid touching the thermal head or other elements of the printer (if there are any).

Never place a weight on the device in excess of its maximum range or place weights over one sixth of the maximum range abruptly on the dish and do not apply lateral stress to it.

The device should only be used by personnel adequately trained in its operation.

2.7 GROUND CONNECTION AND ELECTROSTATIC DISCHARGE PRECAUTIONS

Connect the equipment to a supply source outlet with ground connection complying with authorised standards.
The equipment will not be affected by electrostatic discharge below 6kV in direct discharge and 8kV in air discharge.

* In the event that there is physical contact between two machines, it may be necessary to join them with a net.

2.8 CONNECTION OF COMPRESSED AIR

The equipment must be connected to a compressed air intake with a pressure of 6-8 bars and a minimum flow of 150l/min. The air must be dry and filtered to 5 µm.
To connect the compressed air intake, follow this procedure:

1. Close the compressed air intake and connect the tube

2. Insert the fitting into the stud.

3. Open the air intake valve

2.9 CLEANING AND MAINTENANCE

The cleaning and maintenance operations on the equipment depend on the characteristics and working conditions of each of them. As a general rule, the following applies:

- Switch the device off and disconnect it from the mains when cleaning it.
- Always use original replacement parts for repairs or maintenance.
- You are recommended to switch off the machine in order to carry out mechanical adjustment tasks.
- Always keep the equipment's keypad and belts clean.
- Do not handle the equipment's printer (if there is one) when it is switched on.
- Do not modify the equipment's mechanical or electrical properties.
- Check the bleed-off in the maintenance unit on a periodic basis.
- Check the air outlet on the blow bar on a periodic basis.
- Once a month apply cooking grease to the guides.
- The air for use in the machine must be filtered and dry (5 µm). The life of the pneumatic actuators depends on this.
- Once a month check the condition of the belts and drive of the head.
- Once a year check the consumption levels of the gear motors and the belt drive.
- The conveyor belts are made of polyurethane on a fibre base. Only products for which the device was designed should be transported and never any products with cutting edges. The belts should be on a level in order to avoid blows and premature wear. Check the condition of the belt every 3 months.
- The thermal head (if there is one) should be cleaned with the device switched off. Sharp objects should not be used. Cleaning should be carried out by authorized personnel with the proper training. If it is dirty, clean it with a cloth dipped in alcohol.
- Clean the detectors and catadioptrics every day.

2.10 SWITCH ON/OFF AND STAR UP

Check the connection to the electric mains. Turn the switch to ON. This switch is also the emergency stop switch.

The screen will light up and the start message displays, with memory and printer checks being made. The weigh belts and label belts will operate for two seconds to remove the packages that may have been left on the machine.

In case the machine has a touchscreen console , when switching the machine OFF, first turn off the console and after switch off from the mains

Once the initial checks have been completed, initialisation of the scale gets underway. During this process, make sure that no object is on the weigh belt (very important!). At the end of the countdown, zero weight is taken and the weight is shown.

In the event that the equipment detects any anomaly in relation to the weighing function, it will only allow items of the fixed weight type, i.e., those that do not require weighing, to be labelled.

3. PROGRAMMING MENU

The LS-4000 offer a menu-based programming system, i.e. there is a hierarchical coded structure of programming menus that provides fast and simple access to the different programmes and functions by using their corresponding codes.

Access to the main programming menu is gained by pressing the key **MENU** .

After gaining access to the programming mode, the selected option will be shown in black. Change from one option to another by using ↓ to go down the menu and ↑ to go up.

> An option can also be selected by entering its code using the number keys, you can also access the required option by pressing the corresponding PLU key.

To select an option it is necessary to press the key **OK** .

An option can also be selected by entering its code using the number keys.

When the submenus can not be shown in one screen, it is possible to see the next screens by pressing the key → , to return to the initial screen it is necessary to press the key ←

To exit programming, press **ESC**.

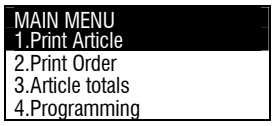
4. OPERATIVE

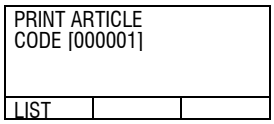
4.1 PRINT ARTICLE(1)

MENU

1

OK





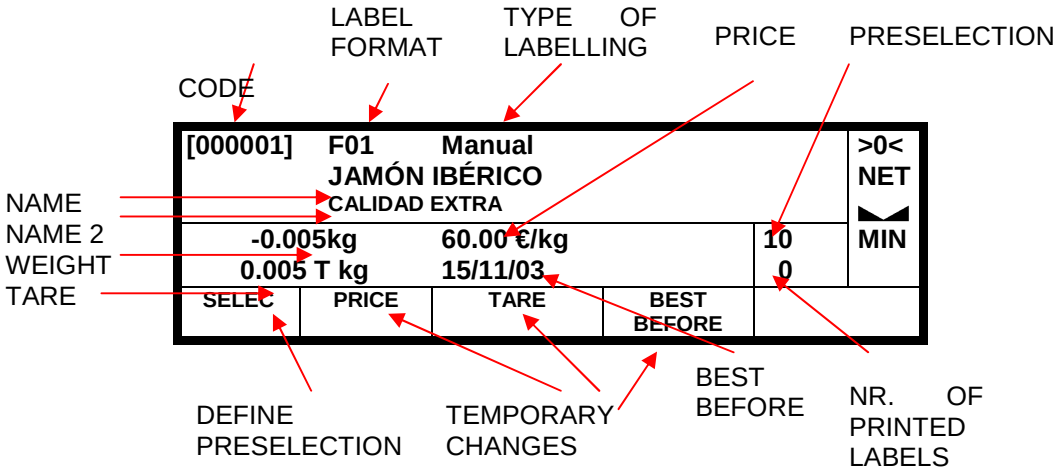
From the initial display, press the key **MENU**, the LS-4000 will show on the display the Main Menu, select 1, Print Article, enter the code (6 digits) of the article to be labelled, press the key **OK**, the LS-4000 will search this article in the memory, if the article is not programmed, the LS-4000 will show an error message (ARTICLE NOT DEFINED).

If the article is programmed in memory, their data will be shown on the display and the LS-4000 is ready for starting the labelling.

It is possible to enter directly the code of the article to be printed by pressing the key **P**

The data shown are the following:

- Code.
- Label Format.
- Number of labels printed.
- Name (1 and 2)
- Unit Price.
- Best Before.
- Weight.
- Tare.



Δ LIST

It is also possible to select the article pressing the multifunction key Δ in the position **LIST**, the LS-4000 will show the list of articles and using the arrows 🡻 🡹 and the key **OK** is possible to select the article to be labelled.

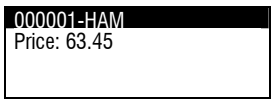
For fixed price items it is possible to vary the quantity using the softkey “units” that will appear instead of the tare for this type of items.

Press the **T** key from the printing screen to view level 1 accumulates.

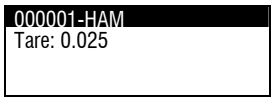
The batch number can be changed. To do this, press **L** from the item printing display.

4.1.1 Temporary change of data

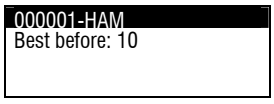
Δ PRICE



Δ TARE



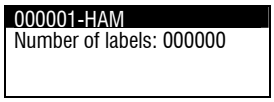
Δ BEST BEFORE



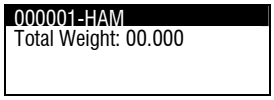
The unit price, tare and use-by date of the article to be labelled can be altered temporarily. The new data will be applied to the products being weighed at that time but not stored in the memory.
To modify these data, select using the corresponding multifunction key Δ the data (**PRICE, TARE** or **USE BY DATE**) to be modified and enter the new value.
It is also possible to make a temporary change in the tare, by selecting a weight placed on the platform as the tare. To do this, place the weight to be tared on the platform and press **T**

4.1.2 Preselection

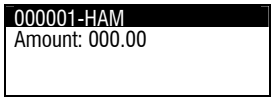
Δ SELEC
Δ LABELS



Δ SELEC
Δ WEIGHT



Δ SELEC
Δ AMOUNT



It determines the way of making the automatic stop of the machine. Pressing the multifunction key Δ in the position SELEC, the preselection mode menu is activated. The possible options are: -

1. -Select number of trays. '(N= 6)' labelling will stop when chosen number of trays has been labelled.

2.- Select total weight. '(W= 1.234)' labelling will stop when the total weight of all trays reaches preprogramed weight.

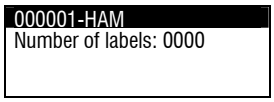
3.- Select total amount. '(A= 1.234)' labelling will stop when the total amount reaches the preprogramed amount.

Enter the value of the preselection to be used and press the key **OK**.

When the LS-4000 is working, once the value of the preselection has been reached, the display will show the message "**SELECTION COMPLETED**".

4.1.3 Repeat last label

F1



From the article labelling menu, it is possible to print copies of the last label, to do it press the key **F1** , enter the number of copies and press the key **OK**.
The copies of the labels are added to the totals.

4.1.4 Cancel labels

F2

From the article labelling menu, it is possible to cancel labels, so these labels will not be added to the totals. To cancel a label press key **F2** .
The LS-4000 shows the message LABEL CANCELLED.

4.1.5 Mode Discount

F3

MODE DISCOUNT

From the article labelling menu, it is possible switch the LS-4000 to Mode Discount by pressing the key F3 . When the LS-4000 is working on mode discount, the labels printed will be discounted from the totals.
The LS-4000 will show the message MODE DISCOUNT.

F3

MODE ACCUMULATE

If the LS-4000 is working in MODE DISCOUNT, to work again in MODE ACCUMULATE, it is necessary to press the key F3

4.1.6 Mode Not Accumulate

F4

MODE NOT ACCUMULATE

From the article labelling menu, it is possible switch the LS-4000 to Mode Not Accumulate by pressing the key F4 . When the LS-4000 is working on mode NOT ACCUMULATE, the labels printed will not be accumulate to he totals.
The LS-4000 will show the message MODE NOT ACCUMULATE.

MODE ACCUMULATE

F4

If the LS-4000 is working in MODE NOT ACCUMULATE, to work again in MODE ACCUMULATE, it is necessary to press the key F4

4.1.7 Do not print

F8

MODE NOT PRINT

In the item labelling menu, key F8 permits operation mode to be changed to DO NOT PRINT. In the DO NOT PRINT mode, labels that are issued will be accumulated in the totals.
The labelling machine will display the message DO NOT PRINT.

MODE PRINT

F8

If the labelling machine is operating in DO NOT PRINT MODE, press key F8 again to return to PRINT MODE, and a PRINT MODE message will be displayed.

4.1.8 Tare

The machine LS-4000 enables a manual tare to be effected by pressing T. Proceed as follows:

1. Place the weight to be tared on the weighing platform.
2. Press T

The selected tare will remain in force if an item is selected for labelling.

To remove the tare, press T when there is no weight on the platform.

If the tare is pre-programmed, when the tare field is printed, “pt” displays.

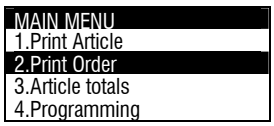
4.2 SHORTCUT KEYS

The shortcut keys of the equipment are the following:

B - "Labelling without moving belts". The belts are stopped to weight the product and to apply the label.
C - "Copy of label. The equipment prints a copy of the last printed label.
D – Manual labelling.
E – There are two posible functions:
When the equipment is not multi-header. Semiautomatic labelling.
Multi-header equipment. Copy of the label in the slave equipment.
F - Date
K – Edition of Heading Line 1
M – Edition of Heading Line 2.
N – Normal labelling.
Ñ - "Only Apply". I weights, accumulate, blow but doesn´t print the label.
L – Edition of batch Number
P – New PLU selection
Q – Change of peripheral device.
S – Stop and Start of the belts
T - Totals.
V – Indicator Mode
W – Edition of the weight of the package
F1 – Repeat Last Label
F2– Cancel Label
F3– Mode "Discount"
F4– Mode "Not Accumulate"
F8– Mode "Not Print"

4.3 PRINT ORDER(2)

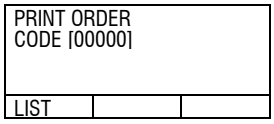
An order is considered to refer to a selection of articles for a specific client. For each order the name of the client, date of the order and number of articles can be stored in the memory; for each line of the order the article code, number of labels required and unit price can be included.



MENU

From the initial position, press the key **MENU**, the LS-4000 will show the main menu, press the key **2** Print Order, enter the code (5 digits) of the order and press **OK**.

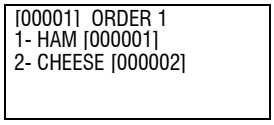
2



Δ LIST

It is also possible to select an order, by pressing the multifunction **Δ** in the position **LIST**, then the LS-4000 will show all the orders programmed and using the arrows **🡻** **🡹** and the key **OK** is possible to select the required order.

OK



🡻 **🡹**

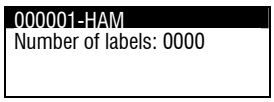
For each line of the order, the following information is given; the code and name of the selected order, the code and name of the article, the number of operations to be processed, the price per unit, the number of trays already labelled and those still pending labelling.

OK

Once these steps have been taken the machine will start automatically and will continue to label until the preset number of labels has been completed. Once all the labels have been printed, the LS-4000 will show a message SELECTION COMPLETED.

4.3.1 Repeat last label

F1



From the article labelling menu, it is possible to print copies of the last label, to do it press the key **F1** , enter the number of copies and press the key **OK**.

The copies of the labels are added to the totals.

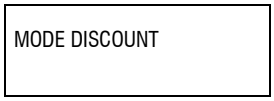
4.3.2 Cancel labels

F2

From the article labelling menu, it is possible to cancel labels, so these labels will not be added to the totals. To cancel a label press key **F2**.

The labeller shows the message LABEL CANCELLED.

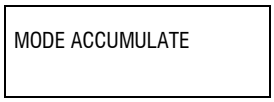
F3



4.3.3 Mode Discount

From the article labelling menu, it is possible switch the labeller to Mode Discount by pressing the key **F3** . When the LS-4000 is working on mode discount, the labels printed will be discounted from the totals.

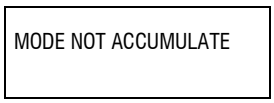
F3



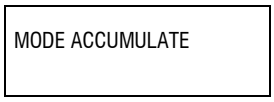
The LS-4000 will show the message MODE DISCOUNT.

If the LS-4000 is working in MODE DISCOUNT, to work again in MODE ACCUMULATE, it is necessary to press the key **F3**

4.3.4 Mode Not Accumulate



F4



F4

From the article labelling menu, it is possible switch the LS-4000 to Mode Not Accumulate by pressing the key **F4** . When the LS-4000 is working on mode NOT ACCUMULATE, the labels printed will not be accumulate to he totals.
The LS-4000 will show the message MODE NOT ACCUMULATE.
If the LS-4000 is working in MODE NOT ACCUMULATE, to work again in MODE ACCUMULATE, it is necessary to press the key **F4**

4.3.5 Label the same article in another order

F5

From the order labelling menu, it is possible to label the same article in another order by pressing the key **F5** .

F6

4.3.6 Label next line

From the order labelling menu, it is possible to label the next line of the order by pressing the key **F6** .

F8

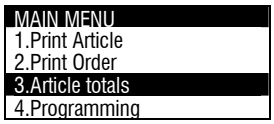
4.3.7 Do not print

F8

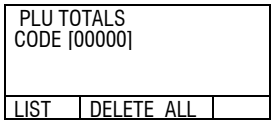
In the item labelling menu, key **F8** permits operation mode to be changed to DO NOT PRINT. In the DO NOT PRINT mode, labels that are issued will be accumulated in the totals.
The labelling machine will display the message DO NOT PRINT.
If the labelling machine is operating in DO NOT PRINT MODE, press key **F8** again to return to PRINT MODE, and a PRINT MODE message will be displayed.

4.4 ARTICLE TOTALS (3)

MENU
3



OK



Δ LIST

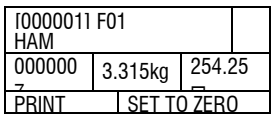
The LS-4000 allows to to print a total label of an article in which it is possible to print the total weight and the total of an article.

4.4.1 Totals labels

The procedure for obtaining article totals is the following:

From the initial display, press the key **MENU**, the LS-4000 will show the Main Menu, select **3** Totals, enter the article code for which the total is required (6 digits) and press **OK**.

OK



Δ DELETE ALL

If the article is not in memory, the LS-4000 will show a message (**ARTICLE NOT DEFINED**).
To see the whole list of articles programmed, it is necessary to press the multifunction key Δ LIST, select the desired article with the arrows ↓ ↑ and press **OK**

If the article is programmed, the totals data will be shown on the display and can be printed by pressing the key **OK**.

It is possible to delete the totals of all the articles by pressing the multifucntion key Δ DELETE ALL..

A clearance of level 1 totals is carried out by pressing soft key 4 from the totals of items printing screen.

It is possible to print all totals labels. To print each label, wait for 2 seconds, unless the print softkey is pressed, or there is no label, in which case the next one is printed.

Δ TO ZERO.
Δ YES

000001-HAM	
DELETE TOTALS	
SURE?	
YES	NO

4.4.2 Set to zero

To set to zero the totals of an article the procedure is the following:
From the screen where the article total is shown, press the multifunction key TO ZERO Δ and then select Δ YES.

Δ

ESC

PIECE COUNT				
Kg	Price	units		
0	0	0		
end	Unit	unit		

4.5 PIECE COUNT MODE

Go to the main display, and press "**Softkey 1**", to display piece count mode. This indicates the weight in kg, unit weight in grams and the number of pieces. To exit this mode, press **ESC** or **Softkey 1**.

Δ

OK

PIECE COUNT				
Kg	Price	units		
0	0	0		
end	Unit	unit		

4.5.1 Determine unit weight

1. Count a sufficient number of pieces.
2. Place them on the weighing platform.
3. Press **Softkey 3**, and the indicator will highlight "Units".
4. Enter the pieces that have been counted and press **OK** or **Enter**.
5. The weight per piece will be shown and has been set.
6. Add any number of pieces, and the number of pieces will be displayed.

PIECE COUNT				
Kg	Price	units		
0	0	0		
end	Unit	unit		

4.5.2 Determine number of pieces

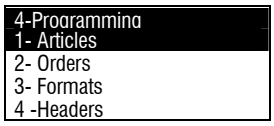
1. Determine the weight per piece.
2. Enter the weight per piece when the Unit Weight is highlighted.
3. The weight must be entered in grams. Use "**.**" for the decimals.
4. Place any number of pieces on the platform, and the number of pieces will be displayed.

5. PROGRAMMING (4)

This is the position of the menu used to program all the data used to perform the labelling: Articles, Orders, Label Formats , Headers and Traceability.

5.1 ARTÍCLES (4 1)

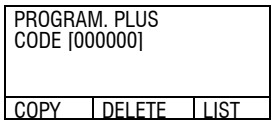
MENU



4

The machine LS-4000 has the possibility of programming 8000 articles.

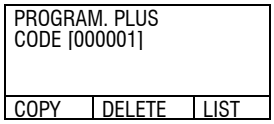
1



From the initial screen press the key **MENU** select **4** Programming, press **OK** , select **1** Articles and press **OK** again.

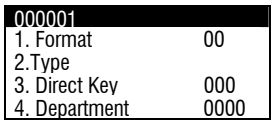
000001

OK.



The display will show the articles programming menu.

First of all, it must be entered the code (6 digits) of the article and press the key **OK**.



Then the article programming starts, the data to be programmed are the following:

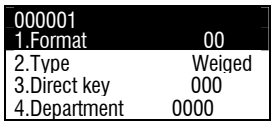
1	Label Format number.
2	PLU type.
3	Direct key
4	Department code.
5	Price.
6	Tare.
7	Best before.
8	Name (24 characters)
9	Name 2 (24 characters)
10	EAN Format
11	EAN Code
12	Text line 1
13	Text line 2
14	Text line 3
15	Text line 4
16	Text line 5
17	Text line 6
18	Text line 7
19	Text line 8
20	Text line 9
21	Text line 10
22	Text line 11
23	Traceability
24	Class of product
25	Number product
26	Expiration date.

27	Associated recipe.
28	Associated conservation.
29	Unit weight.
30	Level 1
31	Level 2
32	Level 3
33	Glazing.
34	Minimum Weight.
35	Maximum Weight.
36	Conveyors Speed
37	Center
38	Stock Control
39	Stock Labels
40	Stock Weight
41	Batch number
42	Format EAN 2
43	Code EAN 2
40	Stock Weight
41	Batch number
42	Format EAN 2
43	Code EAN 2
44	PLU EAN A
45	PLU EAN B
46	For. Packing date
47	For Best Before
48	For Extra date

49	For Freezing
50	For Expiration
51	Greader 1
52	Out 1
53	Greader 2
54	Out 2
55	Greader 3
56	Out 3
57	Greader 4
58	Out 4
59	Weigh Symbol
60	Price Symbol
61	Amount Symbol
62	Level 1 (weight)
63	Margin
64	Logo 1

65	Logo 2
66	Logo 3
67	Logo 4
68	Logo 5
69	Cocking time
70	Fix time
71	Totals format
72	Fomart level 1
73	Format level 2
74	Format level 3
75	Length
76	Minimun ON (mm)
77	Maximun OFF (mm)
78	Paquete min (mm)
79	VAT
80	Print only totals

5.1.1 Format

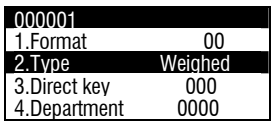


For each article, a choice of label format is available. Select a number from 0 to 99.
These consist of standard, pre-programmed formats (1 to 20) which do not permit modification by the user and programmable options (21-99) whose functions will be explained in detail.

OK

To pass to the next field press OK or 🡻 .

5.1.2 Type



This field specifies how the article is processed by the machine, if it requires weighing, if the weight is to be measured directly by the scales incorporated into the machine or if tare is applied and so on.
Each article should correspond to one of the following types:

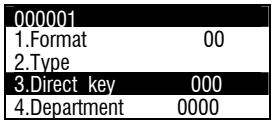
- **1** : Price per unit. Default setting. The price per kg. is entered and the price is calculated based on the weight of the goods. The product is weighed by the machine.
- **2** : Set price. Price is preset. Neither weight nor unit price is printed and the article is not weighed.
- **3** : Set weight. The price is calculated according to the weight, but the weight does not vary and is preset at the time of programming. The article is not weighed by the machine though the weight is printed along with the price.
- 4 : Weight only. Article is weighed by the machine and only the weight is included on the label.
- **5** : Percentage tare. The article is weighed but from the gross weight a percentage will be subtracted as tare. The percentage can be preset in the section which deals with tare options.
- **6** : Piece counter. The product is weighed and the scales display the number of items. To do this, enter the weight of the item in section 5.1.20 Piece Weight.
- **7** Average. The weight selection is done by calculating the target weight from the first n weighed samples. The number of samples will be programmed in the field Department
  When the article is being selected, first of all, the user must make the sampling
- 8 Control. The entire drying process of the hams can be controlled with an LS-4000 and a scanner. These data will be managed by external software.

🡺
🡸.
OK

- **9**. Weighed Uni. When selected, request the number of units and multiplies the value of Tare by the number of units. Is printed in field 11. From RMS is type "A"
- **10**. Unit unid. Same as FIXED PRICE but will ask the number of items. The amount is the price of X units
- **11**. Unit weigh.Same as Weighed Uni but the price is per unit instead of per kilo.
- **12**. Static.The belts stop for weighing the articleEl artículo debe detenerse para ser pesado.
- **13.** Fix D weight. The same as Set weight but the price discriminator is enabled.
- **14**. Dosif G/F.: Not used
- **15**. Dosif G+F: Not used
- **16**. Fix E weigh: The same as fix price but with statistical control enable.

To change the type press the keys 🡺 🡸.
To pass to the next field press OK or 🡻 .

OK

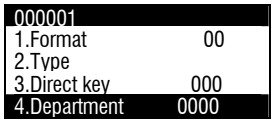


5.1.3 Direct key

This parameter indicates the direct key to be used for this article. The LS-4000 has 60 (30+30) direct keys.
Enter with the numeric keyboard the PLU key number.

OK

1 up to 999 are also available when the D key is pressed from the main screen or printing screen and the required value is entered with the numeric keyboard.

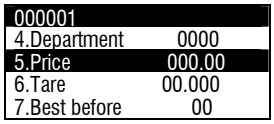


To pass to the next field press OK or ⬇.

5.1.4 Department

OK

Up to 4 digits can be used to create department codes, which can be included on the label as a numeric field or within the bar-code. The creation of department codes allows totals to be listed and grouped per department.

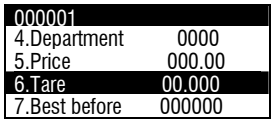


To pass to the next field press OK or ⬇.

5.1.5 Price

OK

Input and modification of price, using up to 5 digits. If the article is Price per unit, set weight or tare type, the price given is per kilo. If it is Set price type then price given is total cost. Weight only type articles do not show price on label.

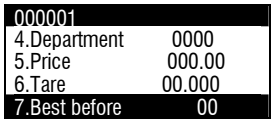


To pass to the next field press OK or ⬇.

5.1.6 Tare

OK

This field allows the user to programme the tare, in grammes, to apply to the article. Accepts up to 5 digits. If the article is Set weight type the weight will be programmed in place of the tare. If it is of Tare percentage type then two digits should be entered to represent the percentage to be subtracted from the weight.

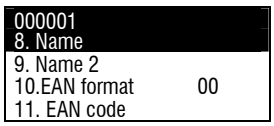


To pass to the next field press OK or ⬇.

OK

5.1.7 Best before

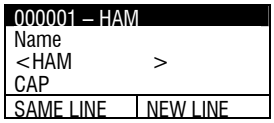
Field available to programme according to need; enter number of days following date of packaging and this will be updated automatically, or insert fixed date. Up to 6 digits can be used for fixed date, as ddmmyy, or 4 digits as number of days. If set to zero the Use-by date will not be printed on the label.



OK

To pass to the next field press OK or ⬇.

5.1.8 Name



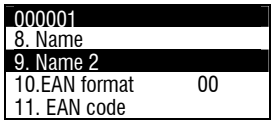
This field allows to program a 24 characters text, as name of the article. The procedure for entering the text is the following: Press the key OK, then the LS-4000 will enter in texts edition mode. The text will be entered using the alphamumeric keyboard.

In texts editing mode, using the multifunction keys Δ, it is possible to enter the characters NEW LINE and Not centering SAME LINE).

To change between lowcase and capital letters press the key tecla ⇧ □(Shift).

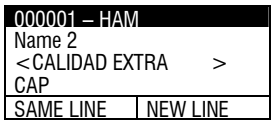
To pass to the next field press OK or ⬇.

5.1.9 Name 2



OK

This field allows to program a 24 characters text, as name 2 of the article. The procedure for entering the text is the following: Press the key **OK**, then the LS-4000 will enter in texts edition mode. The text will be entered using the alphamumeric keyboard.



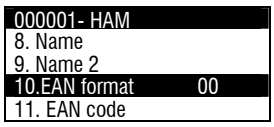
In texts editing mode, using the multifunction keys Δ, it is possible to enter the characters NEW LINE and Not centering SAME LINE).

To change between lowcase and capital letters press the key tecla ⇧ (Shift).

To pass to the next field press **OK** or 🡻 .

OK

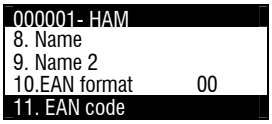
5.1.10 EAN Format



It is possible to enter a 2 digits number between **0** and **90**, it allows to select the bar code format of the labels.

The possible values are:

Cód.	Content	Cód.	Content
0	No EAN	52	ABBBBBB
1	AABBBBBCCCCC	53	AABBBBB
2	AABBBBBDDDDD	54	ITF-14 Framed from Text3 of PLU
3	AABBBBBEEEEE	55	ITF-14 Framed from EAN PLU
4	AABBBBBFFFFF	56	ITF-14 Framed from ITF 14 A
5	AABBBBBGGGGG	57	ITF-14 Framed from ITF 14 B
6	AAGGGGGBBBBB	58	ITF-14 Framed from ITF 14 C
7	ABBBBBBCCCCC	59	ITF-14 Framed from PLU EAN 2
8	ABBBBBBDDDDD	60	ITF 14 from Text 3 of PLU
9	ABBBBBBEEEEE	61	ITF 14 from Text EAN of PLU
10	ABBBBBBFFFFF	62	ITF14 A Programable
11	AHHBBBBCCCCC	63	ITF 14 B Programable
12	AHHBBBBDDDDD	64	ITF 14 C Programable
13	AHHBBBBEEEEE	65	2D5 from Text3 of PLU
14	AHHBBBBFFFFF	66	2D5 from EAN of PLU
15	AHHIIIICCCCC	67	2D5 from ITF-14 A
16	AHHIIIIDDDDD	68	2D5 from ITF-14 B
17	AHHIIIIEEEEE	69	2D5 from ITF-14 C
18	AHHIIIIFFFFF	70	EAN 128 from Text EAN of PLU
19	AAHBBBBCCCCC	71	2D5 + CTRL from EAN of PLU
20	AABBBBQCCCCC	72	EAN 128 (Text 2 of PLU)
21	AABBBBQDDDDD	73	EAN 128 (Texts 2+3 PLU)
22	AABBBBQEEEEE	74	EAN 128 (Texts 2+3+4 PLU)
23	AABBBBQFFFFF	75	EAN 128 (Texts 2+3+4+5 PLU)
24	AAJJJJJBBBBBB	76	EAN 128 (Texts 2+3+4+5+6 PLU)
25	AAJJJJJCCCCC	77	EAN 128 (Texts 2+3+4+5+6+7 PLU)
26	EAN 13 from PLU EAN 2	78	EAN 128 (Texts 2+3+4+5+6+7+8 PLU)
27	EAN 128 from Text 3 of PLU	80	EAN 128 A Programable
28	ITF from PLU EAN 2	81	EAN 128 B Programable
30	EAN 13 from Text 3 of PLU	82	EAN 128 C Programable
31	EAN 13 from Text EAN of PLU	83	EAN 128 from texts 9 and 10 of item
32	EAN 13 A Programable	84	EAN 128 D Programable
33	EAN 13 B Programable	85	EAN 128 E Programable
34	EAN 13 C Programable	86	EAN 128 F Programable
36	EAN 13 D Programable	87	EAN 128 G Programable
37	EAN 13 E Programable	88	EAN 128 H Programable
38	EAN 13 F Programable	89	EAN 128 I Programable
39	EAN 13 G Programable	90	EAN 128 J Programable
40	UPC from Text 3 of PLU	91	RSS-14 Databar from EAN 128 A
41	UPC from Text EAN of PLU	92	RSS-14 from EAN PLU
42	EAN 13 H Programable	93	RSS-14 stacked EAN 128 A
43	EAN 13 I Programable	94	RSS-14 stacked EAN PLU
44	EAN 13 J Programable	95	RSS-14 stacked omnidirectional 128 A
45	EAN 128 From PLU EAN A	96	RSS-14 stackedomnidirectional 128 A
46	EAN 128 From PLU EAN B	97	Databar Expanded
50	EAN 8 from Text 3 of PLU	98	RSS-14 stacked omnidirectional128 A
51	EAN 8 from Text EAN of PLU	99	EAN 13 Read Scanner



The text will be entered using the alphamumeric keyboard.
To pass to the next field press **OK** or ↓.

5.1.11 EAN Code

OK

Use the numeric keyboard to program the EAN code of the article. In this parameter it is programmed the value of the EAN selected in the previous parameter
The substitution keys are the following:

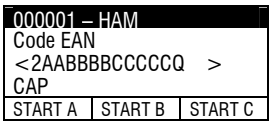
A	EAN Header	**a**	Net non-drained weight
B	Article code	**b**	Price/Kg net non-drained weight
C	Amount	**c**	Date of freezing
D	Weight	**d**	Identification number
E	Price	**e**	Batch number in code 128
F	Unit weight	**f**	ADDD format in code 128
G	Quantity	**g**	Current date as day
H	Department	**h**	Expiry date as Julian Day
I	Number of sales	**i**	Text 8 as EAN 128
J	Manufacturer code	**j**	Text 9 as EAN 128
K	Group number	**k**	Text 10 as EAN 128
L	Worker code	**l**	Client code as EAN 128
M	Counter	**m**	EAN-13 of client in EAN-128
N	Batch Number	**n**	Date in day of the week, week of the year and year (ddwwyy) format.
O	PLU's fast key number	**r**	To replace text 2 of the traced product. (EAN 128)
Q	Check price		
R	Tare	**o**	Expiry date (days)
S	Gross weight	**p**	Packing year
T	Weight / 10	**q**	hhmm
U	Packing date	**s**	Amount in Francs
V	Best before	**u**	Weight with 2 decimals not rounding
W	Extra date	**v**	Amount in the second currency
X	Price in secondary currency	**w**	Gross amount
Y	Amount in secondary currency	**y**	Batch number programmed in plu from behind
[	Net non-drained weight/10	**x**	Terminal mode
]	Weigh in Pounds	**z**	Counter 2
:	Amount Digits number	**;**	Amount in 4 digits
!	Weigh non drained in lb	**<**	Amount non drained
$	Amount calculated with weigh in lb.		
Z	Control digit for all that requires a control digit, without limit on the length of data involved in the calculation. Valid for 00, 01, 02, 410, 411, 412, 413, 414,	**txx**	To replace the texts of the item. (EAN 128) where xx is the number of the text of the PLU that will be fully printed until the maximum number of characters allowed by the IA or until the end of text characters

If it has been selected EAN 128 in the field EAN Format, the multifunction keys allow to program the EAN 128 data, which structure is the following:
The structure of an EAN 128 is as follows:

START + FNC1+ IA→DATA (CHANGE+ IA→DATA)+...+FNC1

where:
START (start A, start B or start C) is the special character indicates that the characters that follow form part of an EAN 128 code. Likewise:

- **A** indicates that standard capital letters follow.
- **B** indicates that capitals, small letters and special characters follow.
- **C** indicates that digits follow (this is the most common for numeric data).



Δ

→

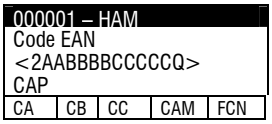
Δ

The start characters are programmed with the multifunction keys Δ
To program FNC1 and the changes A, B and C, it is necessary to press the key → and select them using the multifunction keys Δ

FNC1 is the special character that shows the beginning and end of each data field.

IA is a number that represents the application ID (barcode field), i.e. it specifies the data to be represented by the EAN 128. The **IA**s that can be used are shown in the next page.

DATA represents the data that will be printed followed by the corresponding **IA**. Letters may be entered in the numerical field positions, and these will be substituted when printed by the corresponding value stated in the table given in sect. *6.4.1.10 EAN Format*. The following table shows the fields that have been added to the already existing ones:



The length of the data depends on the **IA**. Some fields are of a fixed length and others are variable. All positions must be completed in fixed-length fields.
If not all the positions are completed in variable-length fields, the **FNC1** character must be entered at the end in order to indicate end of field.

CHANGE (Change A, Change B and Change C) is a special character that permits the code type to be changed within an EAN 128. Therefore, when a change character is encountered, the EAN 128 will be printed with the new code specified until another change character is encountered.

The Change character only makes a change between sets of A and B characters and only affects the following character found after the Change character.

Ñ: When "Ñ" is entered, the meaning of all subsequent fields will be substituted, regardless of whether they are letters or numbers. If another "Ñ" is entered, substitution stops and normal functioning recommences. If no other "Ñ" is entered, substitution continues until the end of the IA.

e.g.: With crotal code vc789b, and programming in ean128:

Cf2511234ñddddddñ567f
The following label will be printed:
(251)1234vc789b567

"Code128" can be printed and edited. To print a **Code128** instead of an EAN128, simply omit the FNC1 character after the characters Start A, Start B or Start C. Editing and character symbol changes are effected as in EAN128 editing. The IAs are void of meaning here.

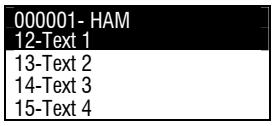
IA	CONTENTS	FORMAT
00	Series Code from Dispatch Depart.	n2+nl8
01	EAN item number / Issue Dept. Code	n2+nl4
02	EAN item number of products contained another dept.	n2+nl4
10	Batch or consignment number	n2+an..20
11 (a)	Date of manufacture (YYMMDD)	n2+n6
13 (a)	Date packed (YYMMDD)	n2+n6
15 (a)	Minum expiry date (YYMMDD)	n2+n6
17 (a)	Maximum expiry date (YYMMDD)	n2+n6
20	Product variety	n2+n2
21	Number of series	n2+an..20
22	HIBCC – quantity, date, batch and connection	n2+an..29
23 (b)	Consignment number (temporary job)	n3+n..l9
251	Total number	n2 + an..30
30	Variable quantity	n2+n..8
241	Product number assigned by client	n4+n6
310 (c)	Net weight in kilograms	n4+n6
311 (c)	Length or first measurement in metres (commercial)	n4+n6
312 (c)	Width, diameter or second measurement in metres (commercial)	n4+n6
313 (c)	Depth, Thickness, Height or third measurement in metres (commercial)	n4+n6
314 (c)	Area in square metres (Commercial)	n4+n6
315 (c)	Net volume in litres	n4+n6
316 (c)	Net volume in cubic metres	n4+n6
320 (c)	Net weight in pounds	n4+n6
330 (c)	Net weight in kilograms	n4+n6
331 (c)	Length or first measurement in metres (logistics)	n4+n6
332 (c)	Width, diameter or second measurement in metres (logistics)	n4+n6
333 (c)	Depth, Thickness, Height or third measurement in metres (logistics)	n4+n6
334 (c)	Area in square metres (logistics)	n4+n6
335 (c)	Gross volume in litres	n4+n6
336 (c)	Gross volume in cubic metres	n4+n6
340 (c)	Gross weight in pounds	n4+n6
37	Quantity	n2+n..8
400	Customer order number	n3+an..30
410	Dispatch to (delivery to) operational point using EAN-13 or DUNS number (Dun & Bradstroet) with initial zeros	n3+n13
411	Invoice to (charge to account) operational point using EAN-13 or DUNS number (Dun Bradstreet) with initial	n3+n13
412	Purchased from (operational point where purchase was made) using EAN-13 or DUNS number	n3+n13
413	(Dispatch to / Deliver to / Send to) operational point using EAN 13	n3+n13
415	EAN-UCC operational point of invoice line	n3+n13
420	Dispatch to (delivery to) postcode within the same Postal Authority	n3+an..9
421	Dispatch to (delivery to) postcode with 3-digit ISO country prefix	n3+n3+an..9
422	Country of birth of animal	n3+n3
423	Country where fattened	n3+n..15
424	Country of production	n3+n3
425	Country where cut	n3+n3
426	Country of complete process (birth, fattening, slaughtering in same country)	n3+n3
7030	Country of slaughter and slaughterhouse health registration number	n4+n3+an..27
703X	Country of cut and cutting hall health registration number	n4+n3+an..27
8001	Coiled products – width, length, nuclear diameter, direction and joins	n4+n14
8002	Electronic Series Number for Cellular Mobile Phones	n4+an..20
90	Internal Applications	n2+an..30
91	Internal – Raw Material, Packing, Components	n2+an..30
92	Internal – Raw Material, Packing, Components	n2+an..30
93	Internal – Product Manufacturers	n2+an..30
94	Internal – Product Manufacturers	n2+an..30
95	Internal – Carriers	n2+an..30
96	Internal – Carriers	n2+an..30
97	Internal – Wholesalers and retailers	n2+an..30
98	Internal – Wholesalers and retailers	n2+an..30
99	Internal – Mutually defined text	n2+an..30

where:
- (**a**): To indicate year and month alone, DD can be completed with "00",
- (**b**): one extra digit to indicate length,
- (**c**): one extra digit to indicate the decimal point.
- **n**x is a field with x digits
- **ax**. x is an alphanumerical field with a maximum of x characters.

It is not necessary to enter a STOP character. The LS-4000 automatically enters a STOP character when a **space** is found instead of an application identifier.

To pass to the next field press **OK** or ..

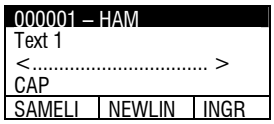
5.1.12 Text Lines (1-10)



OK

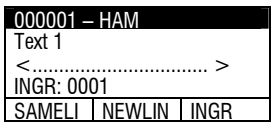
Every article has 10 lines of 24 characters for texts, INGREDIENTS or a combination of both.

Press the key **OK**, then the LS-4000 will enter in texts edition mode.



The text will be entered using the alphamumeric keyboard. In texts editing mode, using the multifunction keys Δ□□ it is possible to enter the characters NEW LINE and Not centering (MISLIN), do not link the next text line with the ingredient (DIFLIN) and delete the comma that accompanies the ingredient (NO COMMA).
It is possible to use multiple fonts in this text for more information look at point 7.4.36

Δ INGR



OK

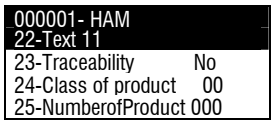
To change between lowcase and capital letters press the key ⇧ (Shift).

To enter ingredients press the key Δ in the position INGR ,enter the 4 digits code of the ingredient and press **OK** The LS-4000 has 4000 programmable ingredients. (See Annex 1). The ingredients file is programable using the RMS software.

OK

Every ingredient of the table will take only 2 characters of the text line, so it is possible to enter up to 12 ingredients on every text line.

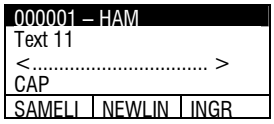
To pass to the next field press **OK** or 🡻



OK

5.1.13 Text 11

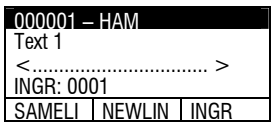
Every article has a line of 1000 characters for texts, ingredients or a combination of both.
Press the key **OK**, then the LS-4000 will enter in text edition mode.



The text will be entered using the alphamumeric keyboard. In texts editing mode, using the multifunction keys Δ□□ it is possible to enter the characters NEW LINE and Not centering (SAME LINE). Do not link the next line of text with the ingredient (DIFLIN) and remove the comma that accompanies the ingredient (NO COMMA).

Δ INGR

To change between lowcase and capital letters press the key ⇧□□□(Shift).

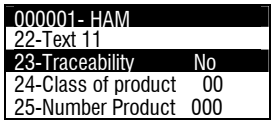


OK

To enter ingredients press the key Δ in the position INGR ,enter the 4 digits code of the ingredient . The codes of 4000 ingredients are listed in annexe 1.

Every ingredient of the table will take only 2 characters of the text line, so it is possible to enter up to 500 ingredients.

To pass to the next field press **OK** or 🡻

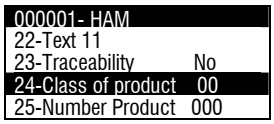


OK

5.1.14 Traceability

This parameter indicates if the product will have or not generic traceability.

To pass to the next field press **OK** or ↓.



OK

5.1.15 Class of product

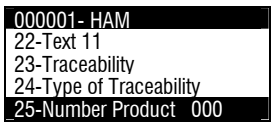
This parameter indicated to which type of traceability, belongs the article. There are 20 Types of Traceability.

The possible values are:

Type=0, Article without Traceability.

Type= 1,…,20, number of the Type of Traceability

To pass to the next field press **OK** or ↓.

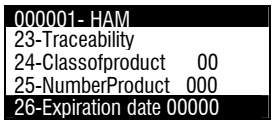


OK

5.1.16 Number of Product with Traceability

If in the previous parameter has been selected a Type of Traceability, in this parameter it is programmed the number of the Product with Traceability from which the article comes from. It can be a number from 1 to 99

To pass to the next field press **OK** or ↓.



OK

ESC

5.1.17 Expiration date

This enables the best before date of the item to be programmed.

Enter up to 6 digits if it is a calendar date, in the format ddmmyy, or up to 4 digits if it represents a number of days. If it is set to 0, the best before date will not be printed on the labels. It is printed in the same format as the expiry date.

Press **OK** to confirm and **ESC** to exit and save the item data.

OK

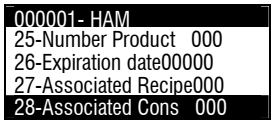
ESC

5.1.18 Associated recipe.

This permits a recipe to be associated with a product.

Enter the recipe number to be associated with the product (see section 4.8 Recipes).

Press **OK** to confirm and **ESC** to exit and save item data.



OK

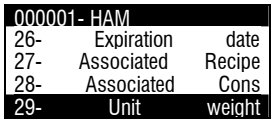
ESC

5.1.19 Associated Conservation

This permits a certain conservation to be associated with a product.

Enter the conservation number to be associated with the product (see section 4.9 Conservation).

Press **OK** to confirm and **ESC** to exit and save item data.



OK

ESC

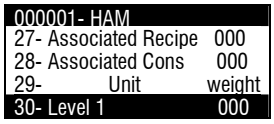
5.1.20 Unit weight

This permits the weight per piece to be entered in order to associate it with an item, so that when it is selected in piece count mode, the scales will display the total number of items being weighed. The weight should be entered in grams. Use "." to enter decimals.

Press **OK** to confirm and **ESC** to exit and save item data.

5.1.21 Level 1

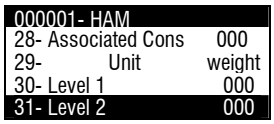
OK
ESC



This is for setting the number of labels that must be printed, so that one level 1 label is printed.
Press **OK** to confirm and **ESC** to exit and save item data.

5.1.22 Level 2

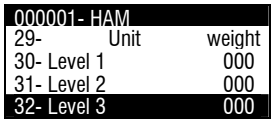
OK
ESC



This is for setting the number of level 1 labels that must be printed, so that one level 2 label is printed.
Press **OK** to confirm and **ESC** to exit and save item data.

5.1.23 Level 3

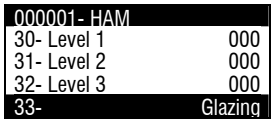
OK
ESC



This is for setting the number of level 2 labels that must be printed, so that one level 3 label is printed.
Press **OK** to confirm and **ESC** to exit and save item data.

5.1.24 Glazing

OK
ESC

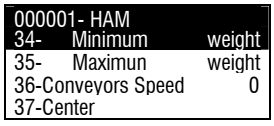


In the articles weighed or the articles with fixed weight, it has the same meaning as the tare in the articles of type Tare by %.
So, an article weighed can have a tare value and a precentage of icing as it is programmed in field 33.
The Icing percentage can be entered with two decimals.
Example
Gross Weight:1010 g. with tare 10g and icing 20%
The Net weight will be =(1010-tare)-%Icing = (1010 –10) –20% = 1000 – 200 = 800 g.
In the articles of type fixed weight, it can also be entered a % of Icing by means of field 33.
Example

Fixed Weight = 1000 gr. -> Program Field 6 (Tare)= 1000 g. and Field 33 (Icing) = 20%
Net weight = 1000 –200 = 800g.
Press **OK** to validate and **ESC** to exit and save the article data.

5.1.25 Minimum Weight

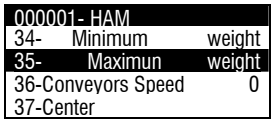
OK
ESC



Enter min. weight in grammes to be accepted for labelling
Press **OK** to validate and pass to the next parameter.

5.1.26 Maximum Weight

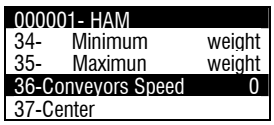
OK



Enter max. weight in grammes to be accepted for labelling.
Press **OK** to validate and pass to the next parameter.

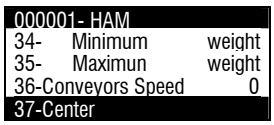
5.1.27 Conveyors Speed

OK



This parameter is used to select the conveyor´s speed for the labelling of the article. It can be a number from 0 to 9.
Press **OK** to validate and pass to the next parameter.

OK
ESC

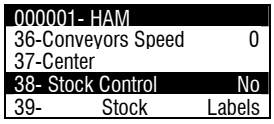


5.1.28 Center

This parameter is used to center the article in the weighing belt.

It can be a number from 000 to 999
Press **OK** to validate and **ESC** to exit and save the article data.

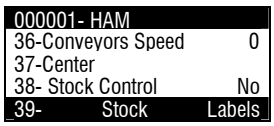
➔ YES
OK
ESC



5.1.29 Stock Control

This parameter is used to enable the stock control of the labels
Press **OK** to validate and **ESC** to exit and save the article data.

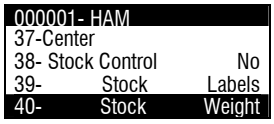
OK
ESC



5.1.30 Stock Labels

This parameter is used to represent the number of labels printed
Press **OK** to validate and **ESC** to exit and save the article data.
Press **ESC** to exit.

OK
ESC



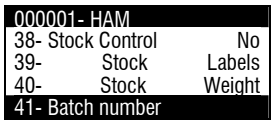
5.1.31 Stock Weight

It indicates the weight of the stock. If it is zero, its limit will not be taken into account.

Press **OK** to validate and **ESC** to exit and save the article data.

> In the event that they are defined in the item's specifications, when either **37** Stock Labels or **38** Stock Weight is exceeded, the machine will display the error message ERROR STOCK and will not allow labelling. In order to resume labelling, clear the item totals to zero (**MENU** **3**) or raise the limit of the stock of the PLU that has been exceeded.

OK
ESC



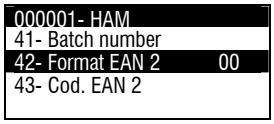
5.1.32 Batch Number

The item's batch number will be printed if it is defined for the item in use. Otherwise the overall batch number will be printed.

> This application is only possible for Compact Flash of over 16Mb.

Press **OK** to validate and **ESC** to exit and save the article data.

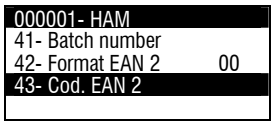
OK
ESC



5.1.33 Format EAN 2

It is possible to enter a 2 digits number between **0** and **90**, it allows to select the bar code format 2 of the labels
(*See 4.1.10 EAN FORMAT*)
Press **OK** to validate and **ESC** to exit and save the article data.

OK
ESC

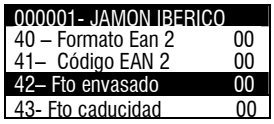


5.1.34 Code EAN 2

Use the numeric keyboard to program the EAN 2 code of the article

(*See 4.1.11 EAN CODE*)
Press **OK** to validate and **ESC** to exit and save the article data.

OK
ESC

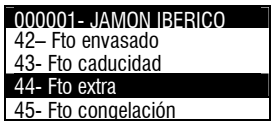


5.1.35 PLU EAN A

It is posible to program a Ean128 barcode of 128 characters. Press **OK** to validate and ⬇ to exit and save the article data.

5.1.36 PLU EAN B

OK
ESC

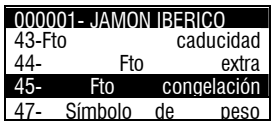


It is posible to program a Ean128 barcode of 128 characters. Press **OK** to validate and ⬇ to exit and save the article data.

5.1.37 Packing Format

Select the format for the parking date following table 6.3.
To go to the next date press **OK** or ⬇

OK
ESC

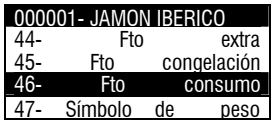


5.1.38 Extra format

Select the format for the extra date following table 6.3. ⓘ To print in the selected format, in the general date formats, MENU-5-3, use format 99.
To go to the next date press **OK** or ⬇

5.1.39 Freezing format

OK
ESC



Select the format for the freezing date, following Table 6.3. ⓘ To print in the selected format, in the general date formats, MENU-5-3, use format 99.
To go to the next date press **OK** or ⬇

5.1.40 Expiry format

OK
ESC

Select the format for the expiry date, following Table 6.3. ⓘ To print in the selected format, in the general date formats, MENU-5-3, use format 99.
To go to the next date press **OK** or ⬇

5.1.41 Classification 1

OK
ESC

LS4000 can have up to 4 exits for product classification. This is the first classification range that goes from 0 grams up to the value you programme.
To go to the next date press **OK** or ⬇

5.1.42 Output 1

This programmes the exit where the product will go out onto the classifying belt.

OK
ESC

To go to the next date press **OK** or ⬇

5.1.43 Classification 2

LS4000 can have up to 4 exits for product classification. This is the second classification range that goes from the value programmed in classification 1 up to the value you programme.

OK
ESC

To go to the next date press **OK** or ⬇

5.1.44 Output 2

This programmes the exit where the product will go out onto the classifying belt.
To go to the next date press **OK** or ⬇

OK
ESC

5.1.45 Classification 3

LS4000 can have up to 4 exits for product classification. This is the third classification range that goes from the value programmed in classification 2 up to the value you programme.
To go to the next date press **OK** or ⬇

OK
ESC

5.1.46 Output 3

This programmes the exit where the product will go out onto the classifying belt.
To go to the next date press **OK** or ⬇

OK
ESC

5.1.47 Classification 4

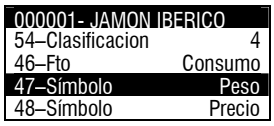
LS4000 can have up to 4 exits for product classification. This is the fourth classification range that goes from the value programmed in classification 3 up to the value you programme.
To go to the next date press **OK** or ⬇

OK
ESC

5.1.48 Output 4

This programmes the exit where the product will go out onto the classifying belt.
To go to the next data press **OK** or ⬇

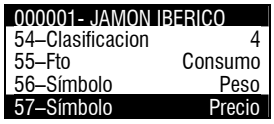
OK
ESC



5.1.49 Weight Symbol

Here you can decide whether or not to print the weight symbol and whether to place it before or after the weight value. Use ➔ to toggle between YES, NO and FRONT.

OK
ESC



5.1.50 Price Symbolt

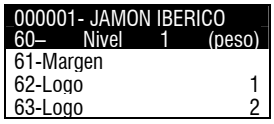
Here you can decide whether or not to print the price symbol and whether to place it before or after the weight value. Use ➔ to toggle between YES, NO and FRONT

OK
ESC

5.1.51 Amount Symbolt

Here you can decide whether or not to print the amount symbol and whether to place it before or after the weight value. Use ➔ to toggle between YES, NO and FRONT.

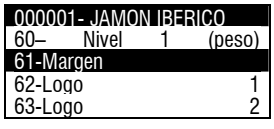
OK
ESC



5.1.52 Level 1 (Weight)

Enter the value of the total weight for which you want to get a label for the level 1 total.
To go to the next data press **OK** or ⬇

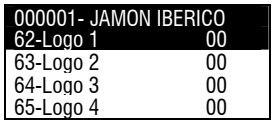
OK
ESC



5.1.53 Margen

With LP-4000 you can enter a tolerance margin for the total weight for which you want to get a label for the level 1 total. If the total weight exceeds what has been programmed in level 1 (weight) ± margin, the labeller will display the message: **WEIGHT OUT OF MARGIN**
To go to the next data press **OK** or ⬇
.

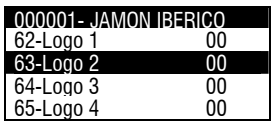
OK
ESC



5.1.54 Logo 1

You can assign up to 5 logos per item. Logo 1 corresponds to logo type 95 in label format.
To go to the next data press **OK** or ⬇

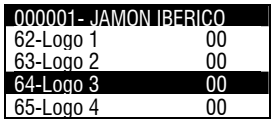
OK
ESC



5.1.55 Logo 2

You can assign up to 5 logos per item. Logo 2 corresponds to logo type 96 in label format
To go to the next data press **OK** or ⬇

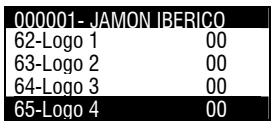
OK
ESC



5.1.56 Logo 3

You can assign up to 5 logos per item. Logo 3 corresponds to logo type 97 in label format
To go to the next data press **OK** or ⬇

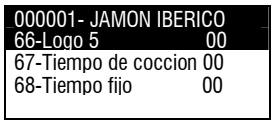
OK
ESC



5.1.57 Logo 14

You can assign up to 5 logos per item. Logo 4 corresponds to logo type 98 in label format
To go to the next data press **OK** or ⬇

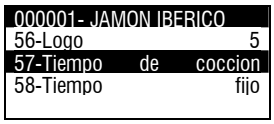
OK
ESC



5.1.58 Logo 5

You can assign up to 5 logos per item. Logo 5 corresponds to logo type 99 in label format.
To go to the next data press **OK** or ⬇

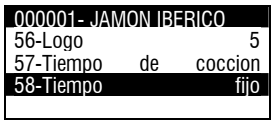
OK
ESC



5.1.59 CookingTime/Kg

This time varies according to the weight of the item. The heavier the item, longer is the cooking time. If you want, this time can be printed and shown on the display. The time is expressed in hours and minutes using the formula CT = UT x W + FT; it is printed in the form " 2hr 35min".
To go to the next data press **OK** or ⬇

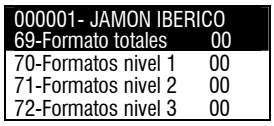
OK
ESC



5.1.60 Fixed time

This is a fixed time (FT) required to cook the item. It is added to the cooking time.
To go to the next date press **OK** or ⬇

5.1.61 Totals label format

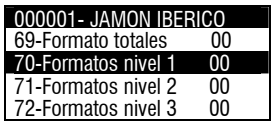


With this parameter, you can decide in which format the articles total labels format will be printed. If the value is 0 the total label format will be the one on general parameters.

Press **OK** to store the data and pass to the next parameter.

OK
ESC

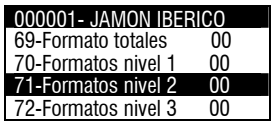
5.1.62 Format level 1



With this parameter, whose value goes from 0 to 50, you can decide in which format by default the total labels of level 1 will be printed
If the value is 0 the total labels will have the same format as the normal labels.

Press **OK** to store the data an pass to the next parameter.

OK
ESC



5.1.63 Format level 2

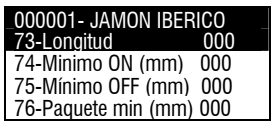
OK
ESC

With this parameter, whose value goes from 0 to 50, you can decide in which format by default the total labels of level 2 will be printed.
If the value is 0 the total labels will have the same format as the normal labels.
Press **OK** to store the data and pass to the next parameter.

5.1.64 Format level 3

OK
ESC

With this parameter, whose value goes from 0 to 50, you can decide in which format by default the total labels of level 3 will be printed.
If the value is 0 the total labels will have the same format as the normal labels.
Press **OK** to store the data and pass to the next parameter.



5.1.65 Length

This parameter is not applicable in the LS4000. Use the Package min. see 5.1.69

OK
ESC

Press **OK** to validate and **ESC** to exit and save the article data.

5.1.66 Minimum ON (mm)

OK
ESC

Minimum distance that the detector must be active to be considered the beginning of product. Any detection below this value will not be taken in consideration by the machine. Enter the value in mm.
Press **OK** to store te data and pass the next parameter

5.1.67 Minimum OFF (mm)

OK
ESC

Minimum distance that the detector must be NOT active to be considered the end of product. Any detection below this value will not be taken as the end of the product. Enter the value in mm.
Press **OK** to store te data and pass the next parameter

5.1.68 Paquete min. (mm)

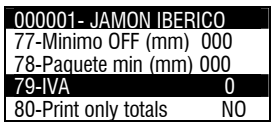
OK
ESC

Enter the length in mm so once the beginning of product has been detected the detector wont send any signal till programmed length has elapsed. During this length it doesn't take into account the detection of the product. Used to prevent multiple detections in the product.

Press **OK** to store the data and pass to the next parameter

5.1.69 VAT

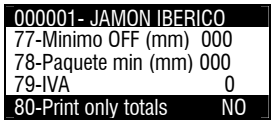
OK
ESC



This parameter assigns the VAT rate that is associated to the article. The types of VATs are programmed in the MENU - 4 -13.
Press **OK** to store the data.

5.1.70 Print only totals

OK
ESC



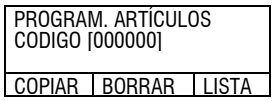
By selecting the option YES the equipment will print only the total labels of the artilcle. The normal lables are accumulated to the totals but not printed.
With the key ➔ is possible to switch between YES and NO.
..
Pulsar **OK** para validar y **ESC** para salir y guardar los datos del artículo

5.1.71 Copy Item

MENU
4
1

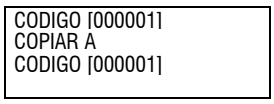
From the home screen, press MENU, and the main menu will appear. Select 4 Programming, select 1 Items and then press OK again.

Δ COPIAR



The item programming menu will appear on the screen.
Enter the item code that you want to copy (6 digits)
Press the multifunction key Δ COPY, and the device will show the message COPY TO. Enter the code of the target item.

OK



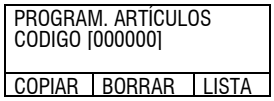
Press OK, and the device will show the message ITEM COPIED.

5.1.72 Delete Item

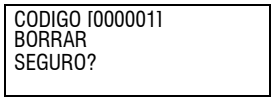
MENU
4
1

From the home screen, press MENU, and the main menu will appear. Select 4 Programming, press OK, select 1 Items and then press OK again.

Δ BORRAR
OK



The item programming menu will appear on the screen.
Enter the item code that you want to delete (6 digits)
Press the multifunction key Δ DELETE, and the device will show the message SURE?. Press OK to confirm.



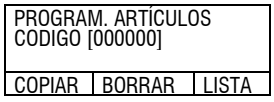
5.1.73 Item list

MENU
4
1

From the home screen, press MENU, and the main menu will appear. Select 4 Programming, press OK, select 1 Items and then press OK again.

The item programming menu will appear on the screen.

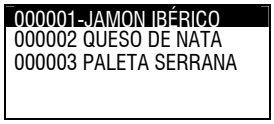
Δ LISTA



Press the multifunction key Δ LIST to view an on-screen list of items that have been programmed on the labeller, sorted in increasing order according to their code number.

↓ ↑

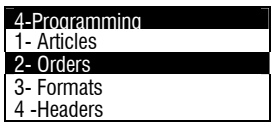
OK



To edit an item, select it using ↓ ↑ and then press OK.

5.2 ORDERS (4 2)

An order comprises a series of operations covering various articles which are all assigned to the same client.
The LS-4000 allows to program 100 orders.

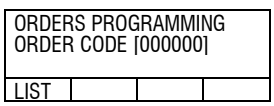


From the main page, press MENU to access programming. Press 4 Programming and select 2 **Orders** programming.

MENU
4
2

Insert the appropriate order code when prompted and press OK. If the code refers to an order which is already programmed, the relevant data will appear. If the code refers to a new order all fields will be set at zero. The following data are required:

OK

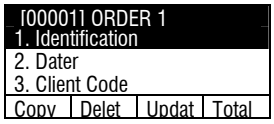


1. Order identification.
2. Date of order.
3. Customer´s code.
4. Order Lines

Δ LIST

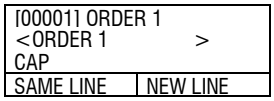
Press the multifunction key Δ LIST to show in the display the list of orders programmed in the LS-4000, listed by its code.

To edit an order it is necessary to select it by pressing the keys ↓ ↑ and then pressing the key **OK**.



5.3.1 Identification

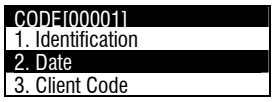
It is the name of the order (20 characters), normally it will be the customer name. Press the key **OK**. to enter in text mode edition and press **OK**. again once the text has been entered.



To pass to the next field press **OK** or ↓.

5.3.2 Date

Enter six digits for the date in format ddmmyy. The default value will be the current date.

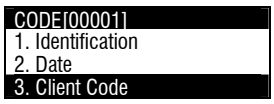


It acts as a reference to the date of a pending order, etc.

To pass to the next field press **OK** or ↓.

5.3.3 Client Code

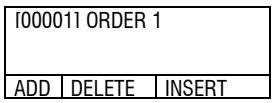
Enter a numeric field which must be the code of a Client already programmed.
It is possible to program 1000 clients.



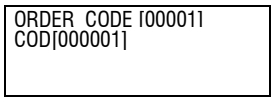
To pass to the next field press **OK** or ↓.

5.3.4 Line edition

Program the number of articles that will be in the order which is being programmed.. It is possible to add new articles, delete articles and insert articles.
An order can include up to 100 lines. Pressing the key **OK** it will appear the menu for order lines edition.



The multifunction keys Δ have assigned the functions: ADD, DELETE and INSERT, for adding, deleting or inserting a new order line.
If we select ADD, the procedure is the following:

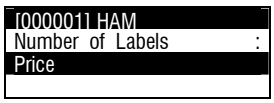


Enter the **code of the article** (6 digits) and press **OK**.

The article will be add to the order line and its name will be shown, pressing again **OK** is possible to edit the data of the order line. To enter the data use the numeric keys. The data to be entered will be the following:

Number of labels, amount or weight.

To pass from one to another press the key ↓



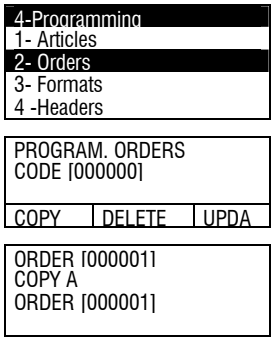
Once the data of the line have been entered press the key **ESC**
Make the same for every one of the articles of the order.
Once the data of the order have been entered press the key **ESC**

5.3.5 Copy Orders

MENU
4
2

Δ COPY

OK



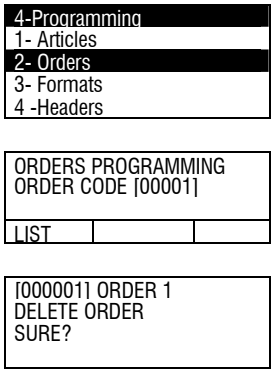
From the main page, press **MENU** to access programming. Press **4** Programming and select **2** Orders programming.
The display will show the Orders Programming Menu.
Enter the code of the order to be copied (5 digits) and press **OK**..
Press the multifunction key **Δ** COPY, the LS-4000 will show message COPY TO and the code of the target order must be entered.
Press **OK**.
Once the order has been copied, the LS-4000 will show the message ORDER COPIED.

5.3.6 Delete Orders

MENU
4
2

Δ DELETE

OK

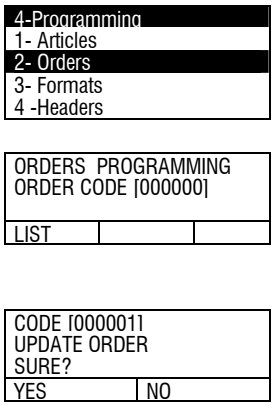


This function allows to delete an order.
From the main page, press **MENU** to access programming. Press **4** Programming and select **2** Orders programming.
Insert the appropriate order code when prompted and press **OK**., press the multifunction key **Δ** DELETE, the LS-4000 will show a message DELETE ORDER, SURE?, then press the multifunction key **Δ**YES to delete the order. The LS-4000 will show a message ORDER DELETED.enter the codes of the orders origin and target, press **OK**. The LS-4000 will show the message ORDER DELETED.

5.3.7 Update Order

MENU
4
2
Δ
UPDATE

Δ YES



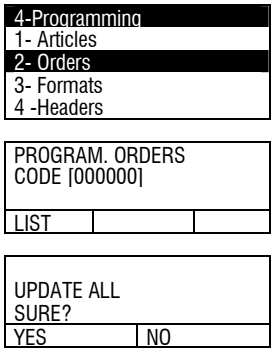
This function allows to update an order.
From the main page, press **MENU** to access programming., press **4** Programming and select **2** Orders programming.
Insert the appropriate order code when prompted and press **OK**., press the multifunction key **Δ** UPDATE, the LS-4000 will show a message UPDATE ORDER, SURE?, then press the multifunction key **Δ**YES to update the order. The LS-4000 will show a message ORDER UPDATED.
The procedure to update an order is the following:
The number of labels programmed originally in the order is substitued by the number of labels programmed minus the number of labels labelled and the number of labels pending is set to zero.

5.3.8 Update all Orders

MENU
4
2

Δ
UPDATE ALL

Δ YES



From the main page, press **MENU** to access programming., press **4** Programming and select **2** Orders programming.
Press the multifunction key **Δ** UPDATE ALL, the LS-4000 will show the message ARE YOU SURE?. To confirm the deletion press the multifunction key **Δ** YES. The LS-4000 will show the message ORDERS UPDATED.

5.3.9 TOTALS

Press the multifunction key **Δ** TOTALS,to print a label with the total number of operations, weight and amount of the article selected.

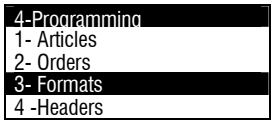
5.3 LABEL FORMATS (4 3)

In the LS-4000 there are 79 possible label formats programmable by the user (from 21 to 99). This paragraph shows the procedure for making the programming of these label formats. The possible fields to be printed in the label (79 maximum) are shown in the following table:

Apartado	Description	Apartado	Description	Apartado	
1	Bar Code	51		101	Text 11 product
2	Amount	52	Price in Euros	102	Text 12 product
3	Weight	53		103	Text 13 product
4	Time	54		104	Text 14 product
5	Counter	55	Euro Exchange	105	Text 15 product
6	Price	56	Amount in Euros	106	Text 16 product
7	Current Date	57	Order totals	107	Text 17 product
8	Best Before	58	Total sum of orders	108	Text 18 product
9	Extra Date	59	Total weight of order	109	Text 19 product
10	Department	60	Total order op.	110	Text 20 product
11	Quantity	61	Net weight	111	Text 21 product
12	Name of article	62	Gross price	112	Text 22 product
13	Text Line 1	63	% glazed	113	Text 23 product
14	Text Line 2	64		114	Text 24 product
15	Text Line 3	65	Code Product	115	Text 25 product
16	Code of article	66	Animal weight control	116	Text 26 product
17	Heading line 1	67	NRA weight	117	Text 27 product
18	Heading line 2	68	Units IA 37.	118	Text 28 product
19	Heading line 3	69	Text classific. Per weight	119	Text 29 product
20	Heading line 4	70	Class Product	120	Text 30 product
21	Heading line 5	71	Int.lin Txt9,10	121	Text 31 product
22	Heading line 6	72	Weight in pounds	122	Text 32 product
23	Heading line 7	73	Text 8 interpreted	123	Text 33 product
24	Heading line 8	74	Text 9 interpreted	124	Text 34 product
25	Tare	75	Text 10 interpreted	125	Text 35 product
26	Gross Weight	76	Amount Gross	126	Text 36 product
27	Worker	77		127	Text 37 product
28	Manufacturer	78		128	Text 38 product
29	Order no.	79		129	Text 39 product
30	Bundle no.	80		130	Text 40 product
31	Total bundles	81	Text 1 product	131	Text 41 product
32	Name 2	82	Text 2 product	132	Text 42 product
33	Bar Code Article	83	Text 3 product	133	Text 43 product
34	Amount 2	84	Text 4 product	134	Text 44 product
35	Text Line 4	85	Text 5 product	135	Text 45 product
36	Text Line 5	86	Counter 2	136	Text 46 product
37	Text Line 6	87	Batch Number	137	Text 47 product
38	Text Line 7	88		138	Text 48 product
39	Text Line 8	89		139	Text 49 product
40		90		140	Text 50 product
41	Text Line 9	91		141	Header 9
42	Text Line 10	92		142	Header 10
43	Text Line 11	93		143	Header 11
44	Logo	94		144	Header 12
45	Weight per item	95	Weight in grams	145	Header 13
46	No. of items	96	Text 6 product	146	Header 14
47		97	Text 7 product	147	Header 15
48	Best before date	98	Text 8 product	148	Order Identification
49	Date of freezing	99	Text 9 product	149	Order date
50	Lower level label	100	Text 10 product	150	Order Code

151	Trays ordered	211	Weight client
152	Trays labelled	212	Counter client
153		213	Route
154	Type of VAT	214	Zip Code
155	VAT	215	Amount without VAT
156	Customer Code	216	EAN Client
157	Graphic Line	217	Recipe
158	Rectangle	218	Preservation
159	Line in negative	219	Heading 16
160	Línea in grey	220	Heading 17
161	“WEIGHT”	221	Heading 18
162	“PRICE”	222	Heading 19
163	“AMOUNT”	223	Heading 20
164	“kg”	224	Heading 21
165	“Pta/kg”	225	Heading 22
166	“Pta”	226	Heading 23
167	“UNITS”	227	Heading 24
168	“Pta/Unit”	228	Heading 25
169	“PACKING DATE”	229	Heading 26
170	“BEST BEFORE”	230	Heading 27
171	“CONSUME PREFERABLY”	231	Heading 28
172	“REGISTER VOUCHER”	232	Heading 29
173	“TOTAL”	233	Heading 30
174	“Weight kg”	234	Heading 31
175	“Total Pta”	235	Heading 32
176	“Pack Date.”	236	Heading 33
177	“Best Before”	237	Heading 34
178	“TARE”	238	Heading 35
179	“Batch Number”	239	Heading 36
180	“Preserver”	240	Heading 37
181	“at –18ºC”	241	Heading 38
182	“cold”	242	Heading 39
183	“Offer”	243	Heading 40
184	“Saving”	244	Heading 41
185	“Discount”	245	Heading 42
186	“€”	246	Heading 43
187	“€/kg”	247	Heading 44
188	“€/Unit”	248	Heading 45
189	“Between 0/5C”	249	Heading 46
190	“in a place”	250	Heading 47
191		251	Heading 48
192		252	Heading 49
193		253	Heading 50
194		254	Amount not drained
195		255	Nº of Pieces without Rounding
196		256	
197		257	
198		258	
199		259	
200		260	Order number N1
201	Customer Name	261	Cont 1/ Cont 2
202	Address	262	
203	City	263	
204	Province	264	
205	Country	265	
206	Tellephone	266	
207	Fax	267	
208	Person in charge	268	
209	Text client	269	
210	Amount client	270	

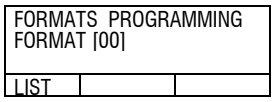
MENU
4
3



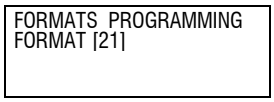
Press **MENU** to access programming press **4** Programming,and press the key **3** Formats to access the programming of label formats.

To pass from one option to another, are used the keys ↓ to go down in the menu and ↑ to go up in the menu.

Press multifunction key LIST to view on screen a list of formats that have been programmed with the labelling machine, ordered in successive order according to their format number.

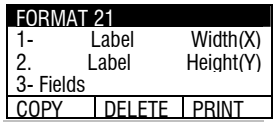


The labeller will show every step in the programming of the labels.



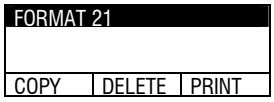
OK

1. Enter the format number to be programmed (21 to 99).
2. Press the key **OK**
3. Enter the dimensions of the label, with the equivalence 1mm=8 dots.



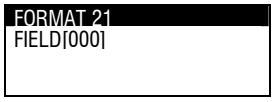
The maximum programmable value for the X dimension is:

Width Thermal Head (inches)	Maximum value (dots)
3	640
4	832

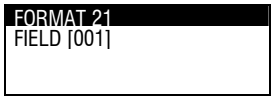


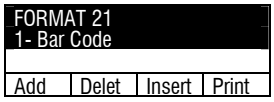
Normally the value of the Y axis must be increased in 25.

OK

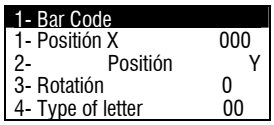


4. Press the key **OK** to select the fields to be printed on the label.
5. During the selection of fields, the multifunction keys Δ have the values:
   - Δ Add- To add a new field.
   - Δ Delete- To delete a field.
   - Δ Insert: To insert a new field.
   - Δ Print: To print a sample of the format





Δ ADD



6. Press Δ ADD, enter the code of the field to be included and press **OK**.
   Once the field has been selected, press **OK** again to start programming the data of the field.
   - X Position.
   - Y Position
   - Rotation
   - Type of letter, thickness of line, size of the Bar code or number of logotype, depending of the type of field..

OK

To pass from one parameter to another press **OK** or ↓ ↑

OK
ESC

Press **ESC** to save and exit to the main Menu

The positions X and Y can have a value between 0 and the maximum dimension of the label.

The possible values of the parameter ROTATION are:

'0' – No rotation.
'1' – Rotation 90º.
'2' – Rotation 180º.
'3' – Rotation 270º.

THE TYPE OF LETTER is programmed entering a value between 0 and 89, this value indicates the type and size of the letter. The types of letter are:

LETTER	SIZE (width x height)
0	12 x 17
20	16 x 28
40	9 x 14
60	16 x 32
80	6 x 9

To magnify these types of letter, it is necessary to add a quantity to these values. See the following table:

NUMBER MAGNIFICATION	MAGNIFICATION
0	Width x 1, Height x 1
1	Width x 2, Height x 2
2	Width x 3, Height x 3
3	Width x 4, Height x 4
4	Width x 5, Height x 5
5	Width x 1, Height x 2
6	Width x 2, Height x 1
7	Width x 2, Height x 3
8	Width x 3, Height x 2
9	Width x 4, Height x 3
10	Width x 3, Height x 4
11	Width x 5, Height x 4
12	Width x 4, Height x 5
13	Width x 2, Height x 4
14	Width x 2, Height x 5
15	Width x 1, Height x 1
16	Width x 1, Height x 1
17	Width x 1, Height x 1
18	Width x 1, Height x 1
19	Width x 1, Height x 1

When an item text line is entered as a field (for texts 1 to 11), it is possible to programme the text width.

Note: If an item with a fixed price is entered, the fixed text fields that refer to "Kg" are automatically replaced by "units".
e.g. field 161 "weight" for field 167 "units".

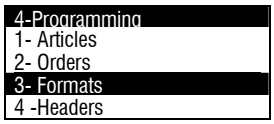
6. LOGOTYPES LOADING

The LS4000 allow logotypes to be printed on both the receipt and label.

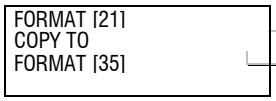
The machines come with 10 fixed logotypes and another 10 logotypes which the customer can load with the aid of the **RMS** program.

6.1 PRINTING LOGOTYPES

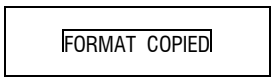
MENU
4
3
21



OK



C O P Y



- Print a LOGO ON A LABEL:

Δ Access field no. 44. In TL field (type of logo) you must choose the number of the logo type you wish to represent (from 1 to 10 for fixed ones, and 11 and 20 for the programmable ones).

If the type of logo is set at 0, none will be printed. (See paragraph 5.3 PROGRAMMING LABEL FORMATS).

6.2 PROGRAMMABLE LOGOTYPES

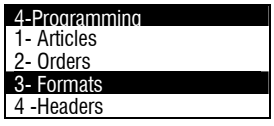
The LS-4000 affords the possibility to incorporate 10 logos from an image the user may have or develop. The following are the specifications to be met:

- The maximum size of these images is 64K and black and white. The image may be square or rectangular. Remember that the larger the image, the longer it will take to print it on the receipt and the label.

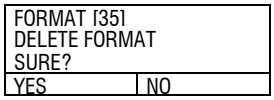
  The size in pixels must be, in both width and length, a multiple of 8, and, as a ratio, you are informed that 1 cm is approximately 80 pixels.

- The format of the image must be of the BMP and monochrome bit map type. To this end, you are recommended to make the drawing using Windows "Paint" program.

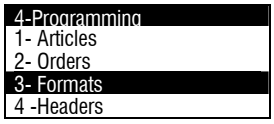
OK

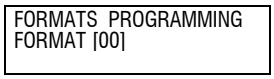


MENU
4
3
35



OK
Δ DELETE
Δ YES





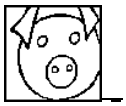
MENU
4
3
35

OK
Δ PRINT

6.3 FIXED LOGOTYPES

As already mentioned, there are 10 fixed logotypes:

LOGO-1 BUTCHER'S **LOGO-2 COLD MEAT COUNTER**



LOGO-3 POULTRY **LOGO-4 FISH COUNTER**

LOGO-5 FRUIT COUNTER **LOGO-6 FREE**

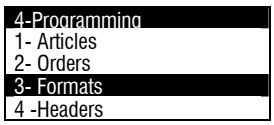
LOGO-7 GREEN POINT **LOGO-8 HEALTH REGISTER**

LOGO-9 GREEN POINT **LOGO-10 'E'**

e

6.3.1 Copy Format

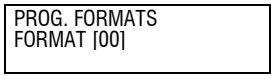
MENU
4
3
21



It is possible to copy a label format in another , the procedure is the following:

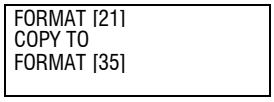
Press the key **MENU** to access the menu, press the key **4** to access programming.
Press the key **3** Formats to access the programming of label formats.

OK
Δ COPY



Enter the code of the format to be copied.
Press **OK**.
Press the multifunction key Δ COPY.

OK

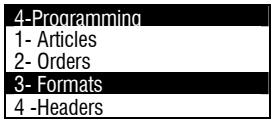


Enter the value of the target format.
Press **OK**.

The labeller will show the message FORMAT COPIED.

6.3.2 Delete Format

MENU
4
3
35

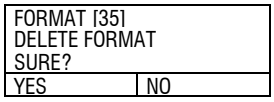


It is possible to delete a label format , the procedure is the following:

Press the key **MENU** to access the menu, press the key **4** to access programming.
Press the key **3** Formats to access the programming of label formats.

OK
Δ DELETE
Δ YES

Enter the code of the format to be deleted.
Press **OK**.

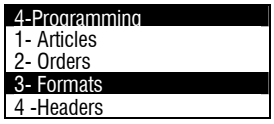


Press the multifunction key Δ DELETE.
The labeller will show the message ARE YOU SURE?
Press Δ **YES**.

The labeller will show the message FORMAT DELETED.

6.3.3 Print Format

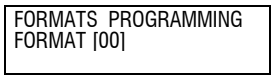
MENU
4
3
35



It is possible to print a sample of a format, the procedure is the following:

Press the key **MENU** to access the menu, press the key **4** to access programming.
Press the key **3** Formats to access the programming of label formats.

OK
Δ PRINT

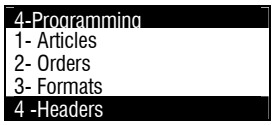


Enter the code of the format to be printed.
Press **OK**.
Press the multifunction key Δ PRINT.
The labeller will print a sample of the label format.

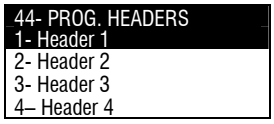
6.4 HEADING LINES (4 4)

It is possible to program 50 lines of text comprising 24 characters each to appear on labels, the format and font can be set independently for each line.

MENU
4
4

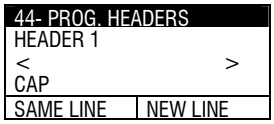


To program the headers the procedure is the following:
Press the key **MENU**, select **4** Programming and select **4** Headers.



It will appear the menu Header Selection, with the key ↓ select the number of header to be programmed and press the key **OK** to edit the header.
In the edition of the headers, the text will be entered using the alphamumeric keyboard. In texts editing mode, using the multifunction keys Δ, it is possible to enter the characters (NEW LINE) and Not centering (SAME LINE).

OK



To change between lowcase and capital letters press the key ⇧ (Shift).

To pass to the next header press **OK** or ↓

6.5 TRACEABILITY (4 5)

Items that are defined with traceability belong to a class or type, such as meat, fish, fruit ...
A general text table has to be created for these classes in order to define the text that is common to each class. For example, *slaughtered in:, caught in: produced in:.*

Every labeller has a table with 200 text lines, which will be referred to as a *Text table*, with lines of 32 characters.

The properties or characteristics of the product are then entered, and up to 30 text lines:

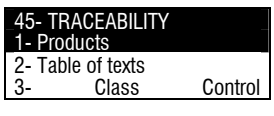
- Lines 1 to 10: 20 characters
- Lines 11 to 30: 32 characters.

Depending on the animal class, 20 indices can also be programmed for the texts in the text table.

Last of all, the printing order of all the previous lines of text, up to a maximum of 62 lines of text per receipt, has to be assigned.

Press the key **MENU**, select **4** Programming and select **5** Traceability, press the key **OK**

MENU
4
5
OK

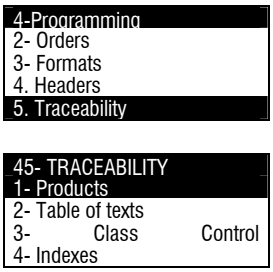


The scale will show the menu of Traceability programming, showing the programming of Products, Texts table and Classes control.
Use the arrows and the key **OK** to select the programming of each one of them.

6.5.1 Products

The product code, type (product class) product texts nra weight and nra residual weight are programmed in the products submenu.

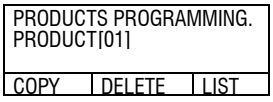
MENU
4
5
1
01
OK



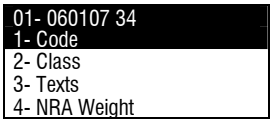
To program a product the procedure is the following:
Press the key **MENU**l, select **4** Programming and select **5** Traceability, press the key **OK**
Using the arrows, select the option **1** Products .

Enter the Product Number and press **OK**.
Then the data of the product will be programmed.

OK
. . .
OK

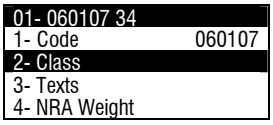


Select the CODE with the arrows and then press the key **OK**. Use the alfanumeric keyboard to enter the product code (14 characters). To go to the next field, press **OK** or ↓



Programme the CLASS field as a two-digit number. This field calls up the product class from the index table (1-20). To go to the next field, press **OK** or ↓

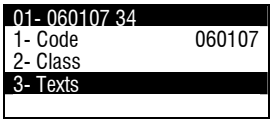
↓



Select the TEXTS field to access programming of product texts, press **OK** to access programming of product texts, press ↑ or ↓ to select the text to be edited, and press **OK** to edit each of the 30 texts (1 a 30). These texts can be used as answers to the questions asked in texts 31 to 50.

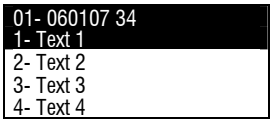
OK

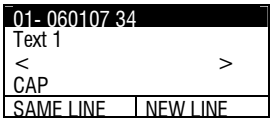
OK



In editing mode, using the multifunction keys **Δ**, it is possible to enter the characters (NEW LINE) and Not centering (SAME LINE). To change between lowcase and capital letters press the key ⇧ (Shift).
To pass to the next field press ↓ and to exit press **ESC**

ESC



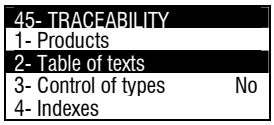


The NRA WEIGHT field can be programmed by entering the total weight to be labelled for each animal or product, using the number keys.
Press **OK** to save.

This field is updated as item labels are printed with the traced product, and therefore the NRA WEIGHT value decreases on the weight on each label.
The difference between the NRA total and the amount discounted on the label can be observed in "product" pt. 5, "NRA Residual Weight".

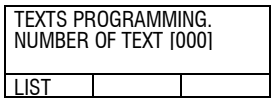
The machine can be configured to issue a message before labelling if the sale will exceed the total weight of the NRA, and an option is then provided whether labelling should proceed or not (see pt. 4.5.6 NRA weight exceeded)

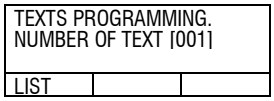
6.5.2 Table of texts



MENU
4
5
2
OK

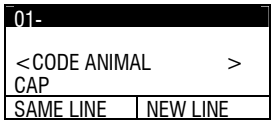
The *text table* is defined below, and it also can be used as a legend to define the item characteristics.
In this table, 200 texts of up to 32 characters each can be programmed. These texts will be associated to the product through the INDEX submenu (Section. 4.5.4).
From the main page, press **MENU**, then press **4** to access programming, select option **5** Traceability . The labeller will show the Traceability submenus. Select Table of Texts **2** and press **OK**.





Enter the number of texts that is going to be programmed and pres the key **OK**..

OK

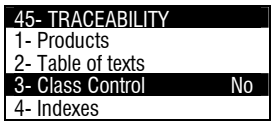


Once the text is entered, press the key **OK**.
Do the same with all the texts.
Once all the texts have been programmed, press **ESC** for leaving programming mode.

ESC

6.5.3 Control of Traceability Type

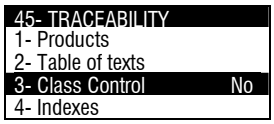
This parameter determines the way of making the control of the Traceability classes



MENU
4
5
3

This parameter is used to differentiate a product with type X traceability from a product with type Y traceability.

From the main page, press **MENU**, then press **4** to access programming, select option **5** Traceability . The LS-4000 will show the Traceability submenus. Select Control of Traceability Type **3** and press **OK**.



← →

With the keys ← → it is possible to select YES or NO.
Press **OK** to validate the data.

ESC

Once all the data are programmed, press **ESC** for leaving programming mode.

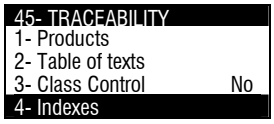
6.5.4 Indexes

This parameter associates texts 31 to 50 with the texts in the text table.

A maximum of 20 indexes can be programmed for the texts in the text table.

MENU
4
5
4

Press **MENU** to access the main menu, press **4** to access programming, select option **5** Traceability. The traceability submenus will appear. Select index **4**



OK

In this parameter, enter the product class or type (Section 4.5.1, parameter TYPE) to associate it with the index that is to be programmed, and then press **OK**.

Enter the numbers of the text tables (0-200) that are to be associated with the selected indexes from the text table.

OK or ↓

To go to the next index, press **OK** or ↓ .

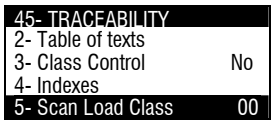
ESC.

After programming the indexes, press **ESC**.

6.5.5 Scan load class

This parameter permits a scanned product to be associated with an index number (see sect. 4.5.4 index) where the texts are associated with the text table.

MENU
4
5
5

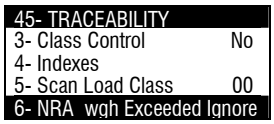


To do this, press **MENU** to go to the main menu, then press **4** to go to programming, then select option **5**, traceability. The traceability submenus will appear. Press ↓ to reach point **5** and then use the number keys to enter the index number that is to be associated with the scanned product.

6.5.6 NRA weight exceeded

This function offers the option of configuring the machine so that it will issue a message if the sale exceeds the total NRA weight.

MENU
4
5
6



Press **MENU** to go to the main menu, then press **4** to go to programming mode, then select option **5**, traceability. The traceability submenus will appear. Select section **6**. The following options are provided:

-Warn (message informs if the weight has been exceeded and provides the option for printing the label or not printing it).
-Prevent (message informs that the NRA weight has been exceeded and label printing is not permitted).
-Ignore (the NRA weight can be exceeded and no warning is issued).

ESC

Press **ESC** to exit.

6.5.7 EXAMPLE of PLU with traceability

We will now define a PLU with traceability, specifically, one that belongs to a *type* of traceability.

This *type* refers to the fact that our PLU may belong to a certain class, such as: beef, fish, fruit, etc.

Series LS-4000 permits 20 different types to be created. We will now define a *Type* 01 PLU.

To start with, when defining a PLU, we must provide the scales the following details:

-That it is an item with traceability (see section 4.1.14. *Traceability*).
-Type of traceability (see section 4.1.15. *Type of traceability).*
-Number of traced product (see section 4.1.16. *Number of traced product).*

The PLU that we will create is BEEF class, and the TYPE refers to an animal with a certain set of characteristics, i.e. origin, age, breed, etc.

We will assume that the animal to be programmed has the following characteristics:

- ⇨ *Animal code:* *123456*
- ⇨ *Country of slaughterhouse:* *Spain*
- ⇨ *Country of birth:* *Spain*
- ⇨ *Breed:* *Not specified*
- ⇨ *Age:* *3 years*
- ⇨ *Slaughtered in.:* *Spain*

First, in the texts table we will enter the texts to be used as a key in order to determine the item characteristics.

These texts are entered on the Texts Table as follows:

001	Animal Code:
002	Country of slaughterhouse:
003	Country of birth:
004	Breed:
005	Age:
006	Slaughtered in:

. **MENU** **4** **5** **2** .

2. Enter the text code (001, 002,…) and press **OK** .
3. Write the text and press **OK** .
4. To define the next line press **OK** and repeat the process from point 2. When the table has been programmed, press **ESC** to exit.

Then, select the desired order of the texts in the index table (see section 4.7.4 *Indexes*). To do this:

INDEX TABLE 01	
1 – Text 31	001
2 – Text 32	002
3 – Text 33	003
4 – Text 34	004
5 – Text 35	005

1. **MENU** **4** **5** **4** .
2. In this parameter, enter the product class or type to which the index to be programmed is to be associated (in this case *Type* 01). Press **OK** .
3. Enter the numbers of the text table to be associated with the product texts. To go to the next text, press **OK** .
4. To exit, press **ESC** .

Finally, enter the animal characteristics as follows:

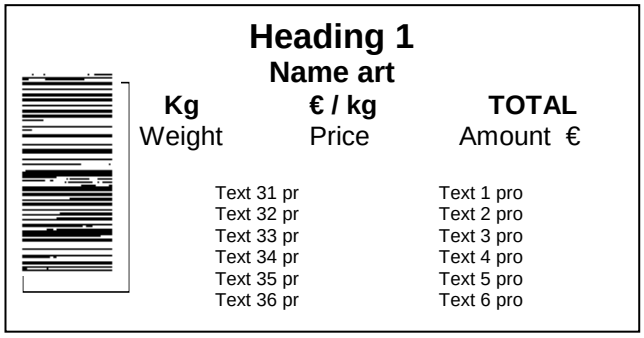
22 BEEF	
1 – Animal Code:	123456
2 – Country of slaughterhouse:	Spain
3 – Country of birth:	Spain
4 – Breed:	Not spec.
5 – Age:	3 years

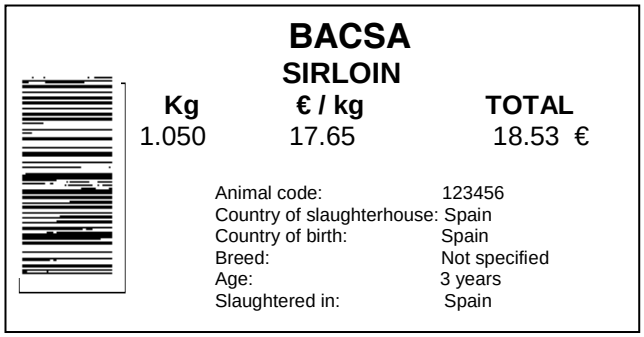
1. **MENU** **4** **5** **1** .
2. Enter the code no. (1-99) and press **OK**.
3. Programme the *code* field (max 14 characters). To do this: press **1** , enter the code and press **OK**.
4. With the **🡻** key, select the *Type* field, enter the type as a two-digit number (In this case, *Type* 01) and press **OK**.
5. Press **OK** to enter the characteristics of the PLU with *Type* 01 traceability.

This set-up applies to all PLUs that belong to the same class.

NOTE: To ensure that these texts are printed on the label, the fields corresponding to the product texts used must be edited in label format.

Example:



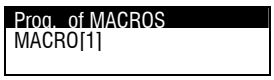


6.6 MACROS PROGRAMMING (4 6)

Series LS-4000 allows to program 16 macros.
A macro is a sequence of keys that are assigned to a function key **F1**,...,**F8**. Macro 1 is assigned to **F1**, macro 2 is assigned to **F2** ,.....,. nº 9 press **Shift** + **F1** and so on.

MENU
4
6
OK

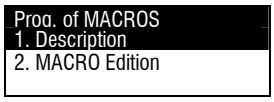
To access the macros programming, it is necessary to press the key **MENU**, to access the main menu, then press **4**,to access the programming menu and **6** to access Macros Programming.



It is necessary to enter the macro number (1 to 8) and press **OK** , the LS-4000 will show the menu of Macro Programming (description and edition).

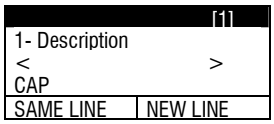
6.6.1 Description

OK

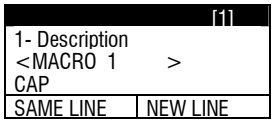


Select the parameter description using the keys ↑ ↓ and pressing the key **OK** .

OK
↓



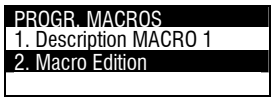
It is possible to enter a 24 characters description by using the alphanumeric keyboard.
Once the description text has been pentered, it is necessary to press the key **OK** .



To pass to the Macro edition, press the key ↓

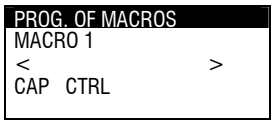
6.6.2 Edition of Macro

OK



The sequence of keys of the macro is programmed in this parameter.
To gain access to the edition of the macro it is necessary to select the parameter Macro Edition by means of the keys ↑ ↓ and press the key **OK** .

CTRL

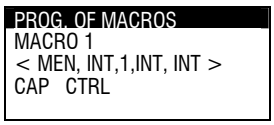


In the display it will be shown the sequence of keys of the macro.
Ejxample: Macro for labelling the article 000001.
Press **CTRL** until remove the indication CTRL from the display.

MENU,
OK, **1**,
OK, **OK**.
CTRL

In the edition line it is necessary to press the keys: **MENU**, **OK**, **1**, **OK**, **OK**.
Press **CTRL** again.

OK



Once the whole sequence has been entered, press **OK** to save it.

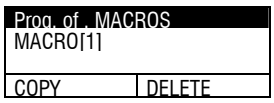
> To edit the keys **OK** and **ESC** in the macro, it is necessary to press previously the key **CTRL** (the indication CTRL dissappears from the display, because if not the key **OK** records the macro and the key **ESC** leaves the Programming

6.6.3 Copy Macro

MENU
4
6

From the initial display, press **MENU**, and the main menu will appear on screen. Select **4** Programming, press **OK**, select **6** Prog. MACROS and press **OK** again.

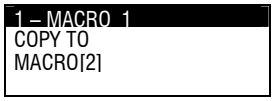
Δ



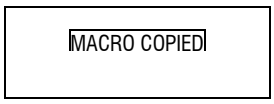
The Macro programming menu will appear on screen.
Enter the Macro code to be copied (1 digit)

Press multifunction key **Δ** COPY, and the labelling machine will display the message COPY TO. Enter the destination item code.

OK

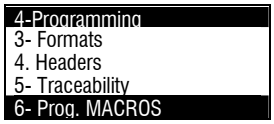


Press **OK**, and the labelling machine will display the message MACRO COPIED.



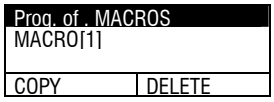
6.6.4 Delete Macro

MENU
4
6



From the initial display, press **MENU**, and the main menu will appear on screen. Select **4** Programming, press **OK**, select **6** Prog. MACROS and press **OK** again.
The Macro programming menu will appear on screen.

Δ



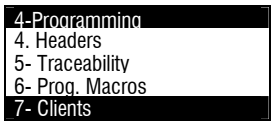
Enter the Macro code to be deleted (1 digit)
Press multifunction key **Δ** DELETE, and the labelling machine will display the message MACRO DELETED.

6.7 CLIENTS PROGRAMMING (4 7)

The LS-4000 allows to program up to 1000 clients, which data can be printed in the labesl

The procedure for clients programming is the following:
Press the key **MENU**, to access the Main Menu, then press the key **4**,to access the rogramming menu and the key **7** to access the Clients Programming.
Enter the client code and press **OK**.

MENU
4
7
OK



The fields to be programmed are:
Client Name.
Adress
City.
Province.
Country
Telephone.
Fax.
ZIP Code.
Person in charge.
Route
Text.
Format Label Client.
EAN of Client.
Cancel End of Order

OK

The procedure for entering the text is the following: Press the key **OK**, then the LS-4000 will enter in texts edition mode. The text will be entered using the alphamumeric keyboard.

In texts editing mode, using the multifunction keys [Δ], it is possible to enter the characters NEW LINE and Not centering SAME LINE).
To change between lowcase and capital letters press the key tecla [⇧] (Shift).

[OK]

To pass to the next field press [OK] or [🡻].

6.7.1 Client name

Text of 24 alphanumeric characters.

6.7.2 Address

Text of 24 alphanumeric characters.

6.7.3 City

Text of 24 alphanumeric characters.

6.7.4 Province

Text of 24 alphanumeric characters.

6.7.5 Country

Text of 20 alphanumeric characters.

6.7.6 Telephone

Text of 12 alphanumeric characters.

6.7.7 Fax

Text of 12 alphanumeric characters.

6.7.8 ZIP Code

Text of 8 alphanumeric characters.

6.7.9 Person in charge

Text of 24 alphanumeric characters.

6.7.10 Route

Text of 2 alphanumeric characters.

6.7.11 Text

Text of 24 alphanumeric characters.

6.7.12 Client´s label format

Number of 2 characters.

6.7.13 Client´s EAN Code

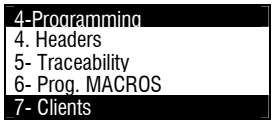
Text of 12 alphanumeric characters. (*See 4.1.11 EAN Code*).

6.7.14 CANCEL END OF ORDER

This option allows to cancel the message of End of order sent when an order is finished. Select YES or NOT.

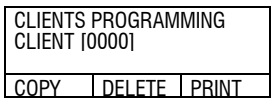
6.7.15 Copy Client

MENU
4



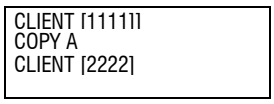
From the main page, press **MENU** to access programming. Press **4** Programming and select **7** Clients programming.

7



The display will show the Clients Programming Menu.
Enter the code of the client to be copied (5 digits).

1111
OK
Δ COPY



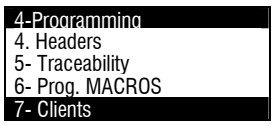
Press the multifunction key **Δ** COPY, the LS-4000 will show message COPY TO and the code of the target client must be entered.
Press **OK**

OK

Once the client has been copied, the LS-4000 will show the message CLIENT COPIED.

6.7.16 Delete Client

MENU
4
7

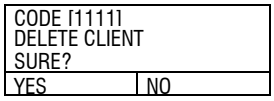


From the main page, press **MENU** to access programming. Press **4** Programming and select **7** Clients programming.
The display will show the Clients Programming Menu.
Enter the code of the client to be deleted (5 digits).

1111

Press the multifunction key **Δ** DELETE, the LS-4000 will show the message ARE YOU SURE? and the multifunction key **Δ** YES must be pressed.

OK

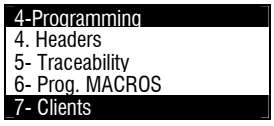


Δ DELETE
Δ YES

Once the client has been deleted, the LS-4000 will show the message CLIENT DELETED.

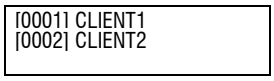
6.7.17 Clients List

MENU
4
7



From the main page, press **MENU** to access programming. Press **4** Programming and select **7** Clients programming.
The display will show the Clients Programming Menu.

Δ LIST

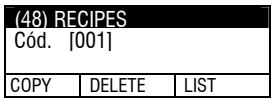


Press the multifunction key **Δ** LIST, the LS-4000 will show the list of clients stored in the memory of the LS-4000.

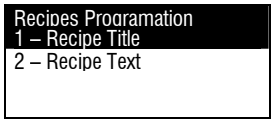
6.8 RECIPES (4 8)

The LS-4000 permits a maximum of 100 recipes to be programmed with a length of up to 1000 characters, that can be printed on a label.

MENU
4
8



These recipes may consist of text, ingredients, or a combination of text and ingredients.
The procedure for programming recipes is as follows:
To access recipe programming, first press **MENU** to access the main menu, and then press **4**,to access the programming menu, and **8** to access recipe programming.

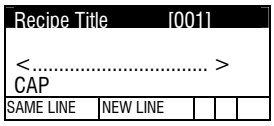


OK

First, enter the recipe code and press **OK** to go to the recipe programming menu: Recipe title and Recipe text.

6.8.1 Recipe Title

↑ ↓
OK



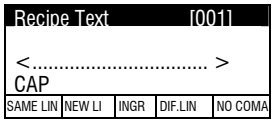
To edit the recipe title, select the parameter **Recipe Title** using ↑ ↓ keys and press **OK** .
A description of 24 characters may be entered, using the alphanumerical keys.
When the text of the Recipe Title has been programmed, press **OK** .

OK
↓

To proceed with editing the recipe text, press ↓

6.8.2 Recipe Text

↑ ↓
OK



To access recipe text editing, select the parameter **Recipe Text** using ↑ ↓ and press **OK** .
A text of up to 1000 characters may be entered, using the alphanumerical keys.

Δ

When editing texts, if multifunction keys Δ are used in the corresponding position for each one, it is also possible to add characters for: line change (NEWLIN), non-centring (MISLIN), do not link next text line with ingredient (DIFLIN) and delete comma that accompanies the ingredient (NO COMMA).
It is possible to use multiple fonts in this text for more information look at point 7.4.36

Δ

To toggle between capital letters and small letters, press ⇧ (Shift)

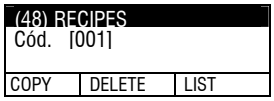
To enter ingredients, press Δ, and in the INGR position, enter the 4-character code for the ingredient. There are codes for 4000 ingredients listed in annexe 1.
Each ingredient only occupies two characters of the text line, and therefore up to 500 ingredients can be entered, regardless of their length.

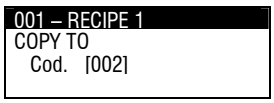
OK
ESC

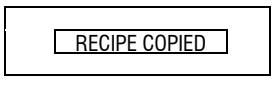
To save, press **OK**.
To exit, press **ESC**.

6.8.3 Copy recipe

MENU
4
8
Δ COPY
OK







The details of one recipe can be copied to another. To do so, proceed as follows:
Press **MENU** to access the menu. Press **4** to access programming.
Press **8** Recipes to access recipe programming.
Enter the recipe code to be copied
Press the multifunction key Δ COPY
Enter the destination recipe code
Press **OK**
The LS-4000 machine will display the message RECIPE COPIED.
If the destination recipe code is already in use, the labelling machine will display the message RECIPE ALREADY EXISTS

6.8.4 Delete Recipe

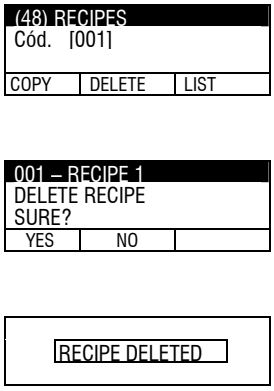
MENU

4

8

Δ DELETE

Δ YES



It is possible to delete recipes. To do this, proceed as follows:

Press **MENU** to access the menu. Press **4** to access programming.

Press **8** Recipes to access recipe programming.

Enter the recipe code to be deleted

Press the multifunction key **Δ** DELETE

Press **Δ** YES.

The LS-4000 machine will display the message RECIPE DELETED.

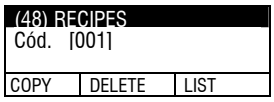
6.8.5 Recipe list

MENU

4

8

Δ LIST



It is possible to view on-screen the list of recipes programmed on the machine. To do this, proceed as follows:

Press **MENU** to access the menu. Press **4** to access programming.

Press **8** Recipes to access recipe programming.

Press the multifunction key **Δ** LIST.

The Recipe List will be displayed on screen.

6.9 CONSERVATION (4 9)

Automatic Weighing and Labelling System machine LS-4000 permits the programming of a maximum of 100 texts on conservation of up to 1000 characters in length, for printing on the label.

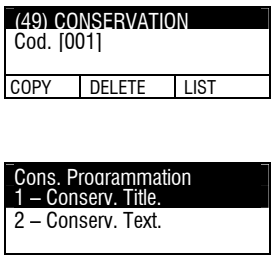
These conservation texts may consist of text, ingredients or a combination of texts and ingredients.
It is also possible to use multiple fonts in this text for more information look at point 7.4.36
The procedure for programming conservation texts is as follows:

MENU

4

9

OK



To access conservation text programming, first press **MENU** to access the main menu, and then press **4**,to access the programming menu, and **9** to access conservation text programming.

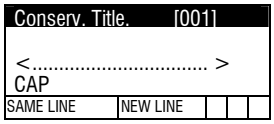
First, enter the conservation text code and press **OK** to go to the conservation text programming menu: conservation Title and conservation Text.

6.9.1 Conservation Title

↑ ↓

To edit the conservation text title, select the parameter **Conservation Title** using ↑ ↓ keys and press **OK**.

OK



A description of 24 characters may be entered, using the alphanumerical keys.

When the text of the Conservation Text Title has been programmed, press **OK** .

OK

↓

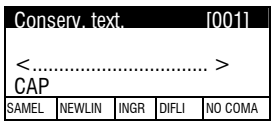
To proceed with editing the Conservation text, press ↓

6.9.2 Conservation Text

↑ ↓

To edit the preservation text, select the parameter **Conservation Text** using ↑ ↓ keys and press **OK**.

OK



A text of 1000 characters may be entered, using the alphanumerical keys.

When editing texts, if multifunction keys Δ are used in the corresponding position for each one, it is also possible to add characters for: line change (NEWLIN), non-centring (MISLIN), do not link next text line with ingredient (DIFLIN) and delete comma that accompanies the ingredient (NO COMMA).

To toggle between capital letters and small letters, press ⇧ (Shift)

To enter ingredients, press Δ, and in the INGR position, enter the 4-character code for the ingredient. There are codes for 4000 ingredients listed in annexe 1.

Each ingredient only occupies two characters of the text line, and therefore up to 500 ingredients can be entered, regardless of their length.

OK

To save, press **OK** and to exit, press **ESC** .

ESC

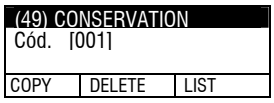
6.9.3 Copy Conservation

The details of one conservation text can be copied to another. To do so, proceed as follows:

MENU

Press **MENU** to access the menu. Press **4** to access programming.

4



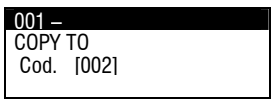
9

Press **9** Conservation to access conservation text programming.

Enter the Conservation text code to be copied

Δ COPY

Press the multifunction key Δ COPY



Enter the destination Conservation text code

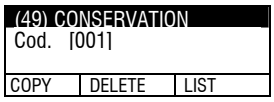
OK

Press **OK**

The labelling machine will display the message CONSERV. COPIED.

If the destination preservation text code is already in use, the labelling machine will display the message CONSERV. ALREADY EXISTS

6.9.4 Delete Conservation



It is possible to delete a conservation. To do this, proceed as follows:

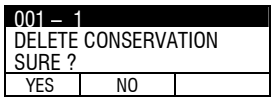
MENU

Press **MENU** to access the menu. Press **4** to access programming.

4

9

Press **9** conservation to access preservation text programming.



Enter the conservation text code to be deleted

Δ DELETE

Press the multifunction key **Δ** DELETE

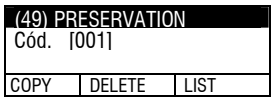
Δ YES

Press **Δ** YES.

The labelling machine will display the message CONSERV. DELETED.

6.9.5 Conservation list

It is possible to view on-screen the list of conservation texts programmed on the labelling machine. To do this, proceed as follows:



MENU

Press **MENU** to access the menu. Press **4** to access programming.

4

9

Press **9** conservation to access conservation text programming.

Δ LIST

Press the multifunction key **Δ** LIST.

The List of conservation Texts will be displayed on screen.

6.10 QUARTERINGS (4 10)

This is designed to automate the labelling of the parts of an animal. Up to 100 cuts with up to 100 lines (parts) each can be programmed.

MENU

From the initial display, press **MENU**. To enter programming mode press **4** and search for parameter **10** using **🡻** **🡹** in order to enter programming of cuts. The display will request the order code to be programmed.

4

10

There are two options:

-Press multifunction key **Δ** READY in order to view an on-screen list of programmed orders on the LS-4000, ordered in ascending order per code number.

Δ

To edit an order, select it using **🡻** **🡹** and press **OK**.

🡻 **🡹**

OK

-Enter the code and press **OK**. If the order exists, data that have already been programmed will be shown. If it is a new order, all data will be set to zero or blank.

After selecting the code, a menu appears for programming the following:

1. Identification of cut.
2. Date of cut.
3. Customer code.
4. Line editing.

After programming all fields, press **ESC** to exit programming mode.

ESC

6.10.1 Identification

This works the same way as order identifications (see pt.4.2.1).

6.10.2 Date

This works the same way as order identifications (see pt.4.2.2).

6.10.3 Customer code.

This works the same way as order identifications (see pt.4.2.3).

6.10.4 Lines

This works the same way as order identifications (see pt.4.2.4).

6.10.5 Copy cut

This works the same way as order identifications (see pt.4.2.5).

6.10.6 Delete cut

This works the same way as order identifications (see pt.4.2.6).

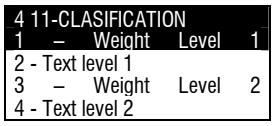
6.11 CLASSIFICATION (4 11)

This parameter permits the classification of different weight ranges, associating a text with each weight interval.
Up to 6 weight levels can be programmed.
The text will be printed in field 69 and in label format, according to the weight interval to which the item belongs.

MENU
4
11

OK

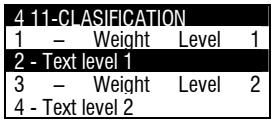
To programme the classification per weight, press **MENU** **4** and select parameter **11**.



Enter weight level 1 with the number keys and press **OK**

Go on to edit the text associated with level 1 by pressing **OK**.

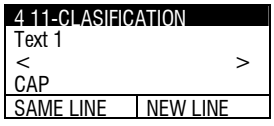
Δ NEWLIN
OK



When editing the texts, use the multifunction key **Δ**, in each corresponding location, and it will then be possible to add line change characters (NEWLIN) and non-centring (MISLIN). After writing the text, press **OK** to exit.

If less than 6 levels are required, enter 0 kg weight in the next level after finishing.

ESC



Press **ESC** to exit to the main menu.

Example:

Level 1: 1.000kg	Level 4: 4.000kg
Level 2: 2.000kg	Level 5: 0.000kg
Level 3: 3.000kg	Level 6: 0.000kg

A PLU with a weight of 2,500 kg prints the text associated with level 3 in field 69. A weight of 3 kg will print text 4 and a PLU of 4 kg or more will print level 5.

6.12 FAMILIES (4 12)

This type of programming selects and prints one item or another depending on its weight.

MENU
4
12

To program an item's families:
Press the **MENU** key to access the menu. Press **4** to access programming.
Press the **12** families key to access programming of families:

In order to program the families, enter the following data:

Code: from 01 to 60

Name: 24-character text to identify the family.

PLU 0: Initial item code of the family.

Weight 1: If this weight is exceeded, you are moved onto the next item.

PLU 1: Item code for when the weight exceeds the previous data.
Up to 10 pairs of Weight – PLU.

ESC

Press **ESC** to exit to the main menu.

(See 5.4.26 families mode)

Example:

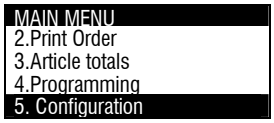
Code	10
Name	Family 10
PLU 0:	000001
Weight 1:	00.100
PLU 1:	000003
Weight 2:	01.500
PLU 2:	000010
Weight 3:	000000
PLU 3:	00.000
.....	.....
.....	.....

If the weight is between 0 and 100 gr., it selects and prints the PLU 0 (cod. 000001). If the weight is between 100 and 1500 gr., it prints PLU 1 (cod. 000003) and so on.

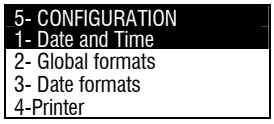
7. CONFIGURATION (5)

MENU

5



In this paragraph are programmed all the configuration parameters of the section where the LS-4000 is installed.
From the initial screen, press the key **MENU**, the LS-4000 will show the main menu. Select **5** Configuration.



The screen will show the menu of Configuration of the LS-4000.

↓ **↑**

To pass from one option to another use the keys **↓** and **↑**.
To select an option press **OK** when this option is highlighted.

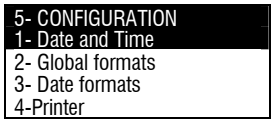
OK

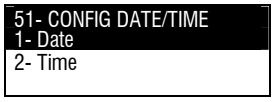
7.1 DATE AND TIME (5 1)

This operation allows to adjust the date and time of the internal clock of the machine.

7.1.1 DATE

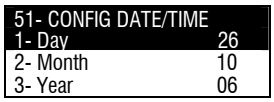
MENU
5
1
1





OK

ESC



The programming procedure is the following:

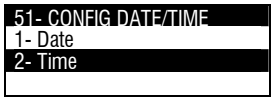
Press **MENU**
Press **5** to select Configuration, press **1** to select Date and Time.
Select **1** Date.

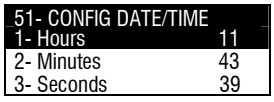
Enter the data of day, month and year and press **OK** to validate the data and the arrows **↑** **↓** to pass from one to another.
Press **ESC** to exit.

7.1.2 TIME

The programming procedure is the following:

MENU
5
1
2





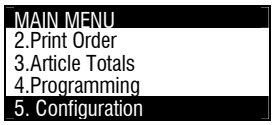
OK

ESC

Press **MENU**
Press **5** to select Configuration, press **1** to select Date and Time.
Select **2** Time.

Enter the data of hour, minutes and seconds and press **OK** to validate the data and the arrows **↑** **↓** to pass from one to another.
Press **ESC** to exit.

7.2 GLOBAL FORMATS (5 2)

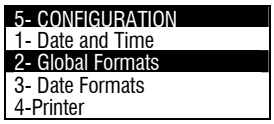


In this programming are stablished the parameters used for the labels printing.

To access this programming the procedure is the following:

MENU

Press **MENU**.



5

Press **5** Configuration.

2

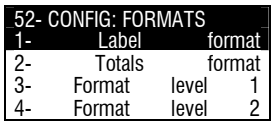
Press **2** Global Formats

OK

To pass from one to the next, press **OK** or 🡻

7.2.1 Label format

With this parameter, whose value goes from **0** to **99**, you can decide in which format by default the labels will be printed, in such a way that if it is set at:



'**0**' ⇒ then the label will be printed in the format assigned to each item.

> If the PLU label format field has been assigned an '**0**' then the printing format will by default be '**1**'.

From '**1**' to '**20**' ⇒ then the format in which all item labels will be printed will be the one selected from among the existing pre-designed ones, regardless of the one assigned to each PLU when creating the items.

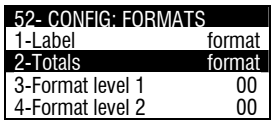
From '**21**' to '**99**' ⇒ then the format in which all item labels will be printed will be one of those designed, regardless of that assigned to each PLU at the creation stage of the items.

Press **OK** to store the data an pass to the next.

OK

7.2.2 Totals labels format

With this parameter, you can decide in which format by default the total labels will be printed. If the value is 0 the total labels will have the same format as the normal labels.



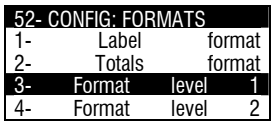
Press **OK** to store the data an pass to the next.

OK

7.2.3 Format level 1

With this parameter, whose value goes from 0 to 50, you can decide in which format by default the total labels of level 1 will be printed. these totals label formats are associated with the cash register chit formats

If the value is 0 the total labels will have the same format as the normal labels.



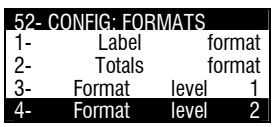
Press **OK** to store the data an pass to the next.

7.2.4 Format level 2

OK

With this parameter, whose value goes from 0 to 50, you can decide in which format by default the total labels of level 2 will be printed. these totals label formats are associated with the cash register chit formats.

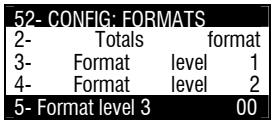
If the value is 0 the total labels will have the same format as the normal labels.



Press **OK** to store the data an pass to the next.

OK

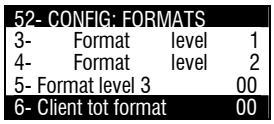
7.2.5 Format level 3



With this parameter, you can decide in which format by default the total labels of level 3 will be printed. If the value is 0 the total labels will have the same format as the normal labels.
Press **OK** to store the data an pass to the next.

OK

7.2.6 Format total client



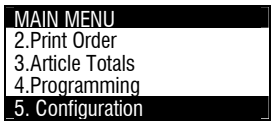
This parameter indicates the number of the total label format associated with a client.
Press **OK** to store the data an pass to the next.

7.3 DATE FORMATS (5 3)

OK

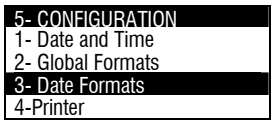
In this parameter is selected the format to be used in the printing of the dates.

To program these formats:



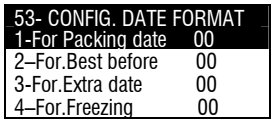
Press **MENU**.
Press **5** Configuration.
Press **3** Date Formats
To pass from one parameter to the next one, Press **OK** or ↓

MENU
5
3



For all of these parameters the possible values are:

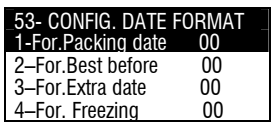
OK



0	**DD.MM.YY**
1	**DD.MMM.YY**
2	**MMM.YY**
3	**MM.DD.YY**
4	**DD.MMM**
5	**WW D**
6	**DD-MM-YYYY**
7	**DD MMM YYYY**
8	**DDD**
9	**YY MM DD**
10	**DDD/YYYY**
11	**WW**
12	**YYYY.MM.DD**
13	**YYYY/MM/DD**
14	**YYYY.MMMM.DD**
15	**YYYY.MMM.DD**
16	**DD**
17	**MM./YYYY**
18	**MMM YY**
19	**DD.MM.YY**
20	**DD MMM YYYY**
21	**DD-MMM-YYYY**
22	**DDMM**
23	**MM.DD.YYYY**
24	**DD.MMM.YYYYY**

D	Day of the week (4)
DD	Day of the month (19)
DDD	Day of the year (325)
MM	Month (11)
MMM	Month in letter (NOV)
MMMM	Month (November)
YY	Year (01)
YYYY	Year (2001)
SS	Week (25)
WW	Week of the year(52)

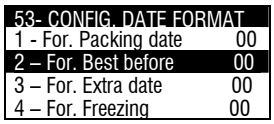
Table 6.3



OK or ↓

7.3.1 Format Packing date

Select the format for packing date according to table 5.3.
To pass to the next parameter press **OK** or ↓



OK or ↓

7.3.2 Format Best Before

Select the format for best before date according to table 5.3.
To pass to the next parameter press **OK** or ↓

OK or ↓

7.3.3 Format Extra Date

Select the format for extra date according to table 5.3.
To pass to the next parameter press **OK** or ↓

OK or ↓

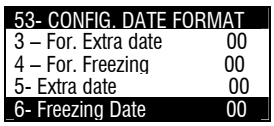
7.3.4 Format of Date of freezing

Select the format of the freezing date using Table 5.3.
To go on to the next date, press **OK** or ↓

7.3.5 Extra Date

Field available to programme according to need; enter number of days following date of packaging and this will be updated automatically, or insert fixed date. Up to 6 digits can be used for fixed date, as ddmmyy, or 4 digits as number of days. If set to zero the Extra date will not be printed on the label.
Press **OK** to validate.

OK



7.3.6 Date of freezing

This parameter is for programming the Date of freezing (it can be programmed as a specific date (ddmmyy), e.g., 190206, or as a number of days from the present date (5 means 5 days from today).
Press **OK** to confirm
Press **ESC** to exit.

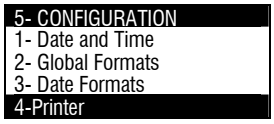
OK
ESC

7.4 PRINTER (5 4)

In this paragraph is shown the procedure for programming all the parameters related to the printer configuration.
To program these parameters:

Press **MENU**.

MENU



Press **5** Configuration.

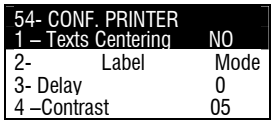
5

Press **4** Printer.

4

To pass from one parameter to the next one, Press **OK** or ↓

7.4.1 CENTER TEXTS



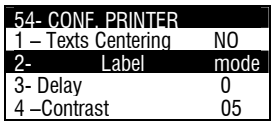
If set to centre automatically, all lines which are not numerical fields ie: names and headers will be centred horizontally. If the letter type is too big for the entire text to fit in the space available, it will be reduced automatically to fit and the article name will be automatically centred whatever the number of characters it may contain. If the automatic centring option is not chosen, long article names will be cut short at the end of the label.
With the key → is possible to change between Centering Yes or No.

→

Press **OK** to pass to the next parameter.

OK

7.4.2 LABEL MODE



This parameter allows to select the labelling mode. It is possible to select mode: Manual, Automatic, Continuous and Dinamic.
Pressing the key ➔ it is possible to select the desired mode.
Press **OK** to pass to the next parameter.

7.4.3 DINAMIC

This labelling procedure is applicable to all types of articles. The weighing will be dynamic

7.4.4 MANUAL

This labelling procedure is applicable to all types of articles. The label will be printed by pressing the key **OK**

7.4.5 AUTOMATIC=STATIC WEIGHING

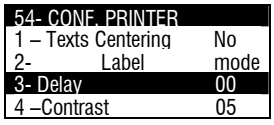
Ths labelling procedure is applicable only to weighed articles. The label will be printed only when the weight is stable.

7.4.6 CONTINUOUS

This labelling procedure is applicable only to non weighed articles. It is possible to printer a number of labels programmable with a programmable delay between them. (see paragraph 5.4.3 Delay).

7.4.7 DELAY

This parameter determines the delay in seconds between one label and the next one in case of printing orders or series of labels.

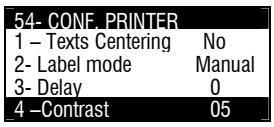


- **0.** Without delay
- **1.** Number of seconds of delay.

Press **OK** to pass to the next parameter.

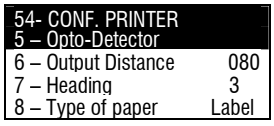
7.4.8 CONTRAST

The value of this parameter (00 to 19)determines the level of contrast of the printing.
Enter the desired value (the default value is 5).
A maximum speed value is established depending on the contrast value, i.e, depending on the contrast value that is entered, the machine calculates the print speed for the selected speed value (See SECTION 5.4.19 SPEED).



Press **OK** to pass to the next parameter.

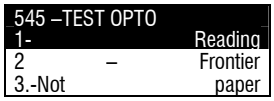
7.4.9 OPTO



With this adjust is possible to indicate to the scale the value from which the labeller consider label or back paper of labels.

Pressing the key **OK** is possible to see the data of reading, Frontier and not paper.

7.4.10 READING



Is the value of the current reading of the opto-detector.
Press ➔ to program the frontier.

7.4.11 FRONTIER

It must be programmed, using the numeric keys, the average value between the reading of label and the reading of back paper.

OK

Press **OK** to pass to the next parameter

7.4.12 NOT PAPER

This parameter is used to enter a value. When the labelling machine gives a reading that is lower than this value, it indicates that there is no paper.

OK

Press **OK** to pass to the next parameter

7.4.13 MODE

This parameter is used to detect the label opto by the paper medium or black line (mode: normal or inverse)

Press ➔ to choose between NORMAL and INVERSE mode.

Normal: The reading above the boundary is the detection of the label, and below the boundary above no paper is paper medium

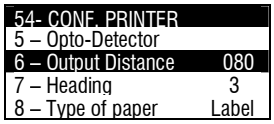
Inverse: the reading above the boundary is the separation of labels (paper medium), and below the boundary and above no paper is the detection of the label.

Press **ESC** to exit.

ESC

7.4.14 OUTPUT DISTANCE

With this parameter you can adjust the printout of the label so that on printing, it does not remain inside the printer and can be easily removed. To change the value of this parameter:



Enter the printout distance as a number between 0 and 100. Printer units with a 4'' mechanism (In general between 0 and 20 is a good value).

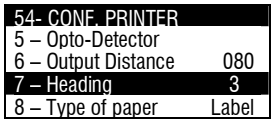
Printer units with a 3'' mechanism (In general between 75 and 90 is a good value).

OK

.Press **OK** to pass to the next parameter

7.4.15 HEADING

This parameter affects the printing mode of both the labels and the receipts, and can have a value of between 0 and 3 with the meanings:



'**0**' -backspaces and does not print the header.

'**1**' -It leaves the header blank.

'**2**' -It backspaces and prints the header.

'**3**' -On printing the label, it prints the PLU's header on the following label.

'**4**' -Same as 3 and also prints a blank label every time a PLU is selected.

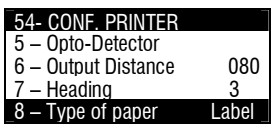
OK

Enter the required value and press **OK** to pass to the next parameter.

In case of use Type of Header 2

Disable the control of label in output. (see *5.4.14*)

Do not use transfer, use thermal paper. (*see 5.4.12*)



➔

7.4.16 TYPE OF PAPER

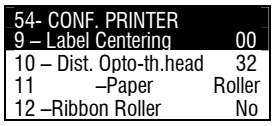
OK

With this parameter, you choose the type of paper with which the label printer is going to work, that is:

Pressing the key ➔ is possible to select continuous paper or labels.

Pres **OK** to pass to the next parameter.

7.4.17 LABEL CENTERING

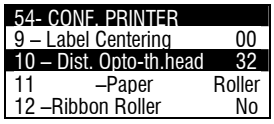


By adjusting the value of this parameter, you can shift the label's printing field vertically downwards, with very little variation. It can be programmed at a value between 0 and 63, with between 20 and 30 as default value.
Enter the required value between 0 and 63.

OK

Press **OK** to pass to the next parameter.

7.4.18 DISTANCE OPTO-THERMAL HEAD



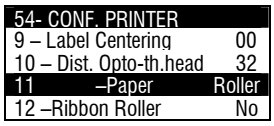
By varying the value of this parameter you can centre the printing field of the labels in a vertical sense both upwards and downwards achieving greater efficacy than with the previous CENTRE LABEL parameter.

You can enter a value between 0 and 90.

OK

Printer units with a 4'' mechanism (In general between 75 and 90 is a good value).
Printer units with a 3'' mechanism (In general between 0 and 15 is a good value). To do so: Enter the required.
Press **OK** to pass to the next parameter.

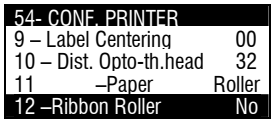
➔



7.4.19 PAPER ROLLER

OK

This parameter enables or disables the functioning of the paper roller for the back paper of the labels.
By pressing the key **➔** it is possible to select the functioning (YES or NO).
Press **OK** to pass to the next parameter.



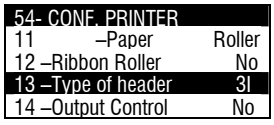
7.4.20 RIBBON ROLLER

➔

This parameter enables or disables the functioning of the ribbon roller.

OK

By pressing the key **➔** it is possible to select the functioning (YES or NO).
Press **OK** to pass to the next parameter



7.4.21 TYPE OF THERMAL HEAD

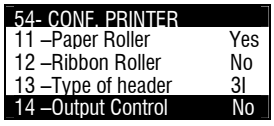
This parameter allows to select the width of the thermal head. The possible values are the following:

2 Inches
3 Inches
4 Inches

➔

OK

By pressing the key **➔** it is possible to select the desired width.
Press **OK** to pass to the next parameter



7.4.22 OUTPUT CONTROL

This parameter is not enable in the LS4000.

➔

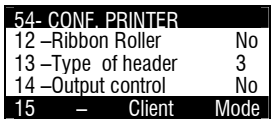
.

OK

Press **OK** to pass to the next parameter

7.4.23 CLIENTS MODE

This parameter enables or disables the functioning in clients mode.



➔

Pressing the key ➔ it is possible to select Clients Mode YES or NOT.

If it is selected YES, it is necessary to select a client from the clients list and then all the articles labelled will be accumulated to the selected client, so it will be possible to print a total label for this Client. To change the customer, press **F7** from the printing display.

OK

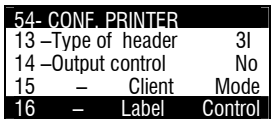
Press **OK** to validate and pass to the next parameter.

7.4.24 CONTROL OF LABELS

➔

This parameter enables or disables the control of the roll of labels.

By pressing the key ➔ it is possible to select control of labels YES or NO.



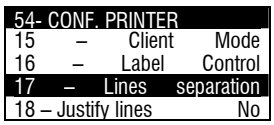
If the user selects YES, when a new roll of labels is placed in the labeller, it is necessary to enter the number of labels of the roll, so it is possible to know the number of labels available.

OK

Press **OK** to validate and pass to the next parameter.

7.4.25 LINE SEPARATION

By adjusting the value of this parameter it is possible to separate text lines with ingredients using syllables or using words. In order to separate using syllables it is necessary to load the ingredients from the RMS with the syllable-separator character.



➔

Press ➔ to select one of the following:

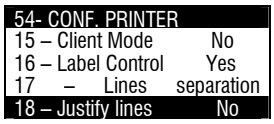
-*Normal*: No line separations.
-*Syllables*: Separation using syllables.
-*Words*: Separation using words.

OK

Press **OK** to confirm and pass to the next parameter.

7.4.26 LINE JUSTIFICATION

By adjusting the value of this parameter it is possible to justify text lines with ingredients. The lines may already be separated using syllables or words. Justification will expand the line across the whole width that is provided in the label format.



➔

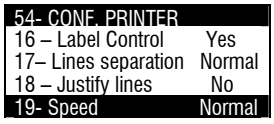
Press ➔ to select line justification YES or NO.

OK

Press **OK** to confirm and pass to the next parameter.

7.4.27 SPEED

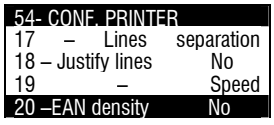
This parameter is for selecting print speed. Select Normal, High, Medium or Low



OK

Press **OK** to validate and pass to the next parameter.

7.4.28 EAN DENSITY



This permits the density of the EAN 13 barcode to be modified:

0 – Normal density.
1 – Density X1.5.
2 – Double Density.

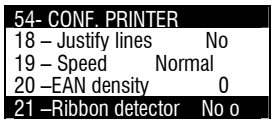
OK

Press **OK** to validate and pass to the next parameter

.

7.4.29 RIBBON DETECTOR

OK

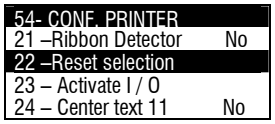


This permits the "No RIBBON" warning mode to be enabled/disabled.
Press **OK** to validate and pass to the next parameter.

➔

7.4.30 RESET SELECTION

Press ➔ to reset selection YES or NO.

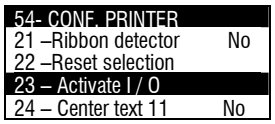


OK

If YES is selected, the message "selection complete" will be shown. The selection will be reset and the operation can continue without exiting the item. If NO is selected, the message "selection complete" will be shown, and the operation cannot be continued.
Press **OK** to validate and pass to the next parameter.

OK

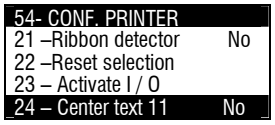
7.4.31 ACTIVATE INPUTS / OUTPUTS



Allow to enable or disable the digital Inputs/Outputs.Is not used in the LS4000.
Press **OK** to validate and pass to the next parameter.

➔
OK

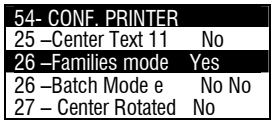
7.4.32 CENTRING TEXT 11



It allows you to centre text 11.
Press ➔ to select YES or NO.
Press **OK** to confirm.

7.4.33 FAMILIES MODE

Allow to enable or disable the families mode:



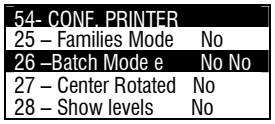
If "Yes" is selected, the families working mode is chosen. Press the direct PLU key that coincides with the family code to obtain a message indicating that you are going to work in family mode and the name of the family selected. The item whose code has been programmed in the PLU0 option is activated. From now on, whenever a label is printed, depending on the weight, the item will change, the one corresponding to the programming carried out being selected.

ESC

Press **ESC** to leave the printing parameters programming.

OK
ESC

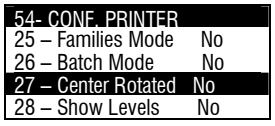
7.4.34 BATCH MODE



This parameter enables or disables the functioning Batch Mode.
If it is selected YES, the equipment will request a Batch Number before labelling the articles.
With the key ➔ is possible to switch between YES and NO.
Press **OK** to pass to the next parameter.

OK
ESC

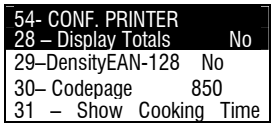
7.4.35 CENTER ROTATED



This function allows to center all the rotated texts. It has the same function as the Texts Centering but it affects only to the rotated fields.
With the key ➔ is possible to switch between YES and NO.
Press **OK** to pass to the next parameter.

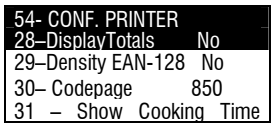
OK
ESC

7.4.36 DISPLAY TOTALS



This function allows to see on the screen the three levels of totals.
With the key ➔ is possible to switch between YES, NO,QUANTITY or GROSS.
Press **OK** to pass to the next parameter.

OK
ESC

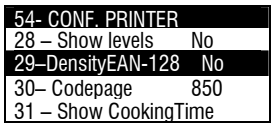


7.4.37 DENSITY EAN-128

This parameter allows to select the density of the EAN128 barcode. The posible values are:

0 – Standard Density

1 – Density X1.5.



7.4.38 DOUBLE DENSITY.

Press **OK** to validate.

Press **ESC** to leave the printing parameters programming.

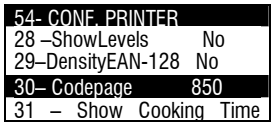
OK
ESC

7.4.39 CODEPAGE

This function is only valid for some countries. It allows to switch between two types of codepages.

Use the key ➔ to switch between the different codepages.

Press **OK** to pass to the next parameter.



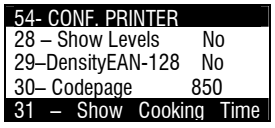
OK
ESC

7.4.40 SHOW COOKING TIME

When this parameter is enabled, the equipment shows on the screen the Cooking Time of the selected article. It is shown in the format: Hours: Minutes.

With the key ➔ is possible to switch between YES and NO.

Press **OK** to pass to the next parameter



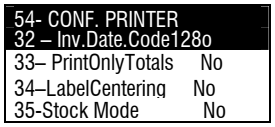
7.4.41 CHANGE DATE CODE 128

OK
ESC

When the option YES is selected, this parameter changes the date format in Code 128 barcode, from YYMMDD to DDMMYY.

With the key ➔ is possible to switch between YES and NO.

Press **OK** to pass to the next parameter



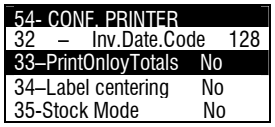
7.4.42 PRINT ONLY TOTALS

OK
ESC

When the option YES is selected the equipment will print only the total labels. The normal lables are accumulated to the totals but not printed.

With the key ➔ is possible to switch between YES and NO.

Press **OK** to pass to the next parameter



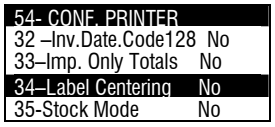
7.4.43 LABEL CENTERING

OK
ESC

This parameter centers the printing according to the type of thermal head. I.e. in a 4" thermal head mechanism the label is guided in the center.

With the key ➔ is possible to switch between YES and NO.

Press **OK** to pass to the next parameter



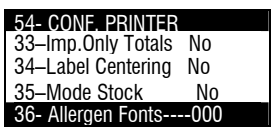
7.4.44 STOCK MODE

OK
ESC

When this parameter is enabled , the labels ent to the computer (RMS) will be considered as reception of godos and will be added to the stock

With the key ➔ is possible to switch between YES and NO.

Press **OK** to pass to the next parameter

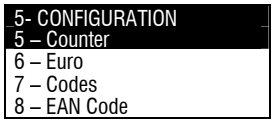


7.4.45 ALLERGEN FONTS

Allows changing the type of font in the same text line. Is used in Text 11 , recipe and conservation.

Select the type of font used to highlight the text. I.e. Font 100 ,→ 100

In each text where is possible to use this function use <FNC1> character to indicate the beginning and the ending of the highlighted text. Press F1 to show the soft keys for Ean128.



It is also possible to used more than one highlighted text, to do this use the character <START A> follow by 3 digits that represents the number of font finishing again with the character <START A>.
In text edition using CTRL + Left or Right arrow key will present us in screen the type of fonts used.
In NOT possible to mix fix fonts with Windows fonts.

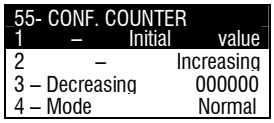
7.5 COUNTER (5 5)

MENU
5
5

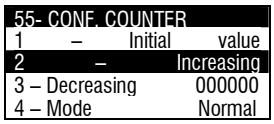
A numerical field of up to six digits can be printed on labels and included in bar-codes, in a stand-alone capacity if required. The counter can be preset to print different values in the numerical order and increment rate designated in this field.

From the main page, press **MENU** followed by **5** to call up the Configuration, and then press **5** again, to program the Counter.

ESC



Insert the start value of the counter (the value to be printed on the first label) and the increase or decrease to be effected between each. (The counter is not reset when the machine is switched on; its value is maintained)
Once the parameters have been programmed, press the key **ESC** to leave the programming of the counter.

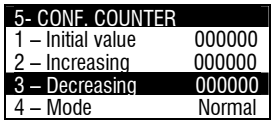


7.5.1 Initial value

OK

It will be shown a screen to enter the initial value of the counter
Press **OK** to program the next parameter.

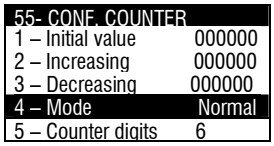
7.5.2 Increasing



OK

It will be shown the increasing value of the counter from one label to the next.
Press **OK** to program the next parameter.

7.5.3 Decreasing



It will be shown the increasing value of the counter from one label to the next.
Press **OK** to program the next parameter.

OK

7.5.4 Mode

Use this parameter to select the working mode of the counter.
The possible modes are the following:

➔

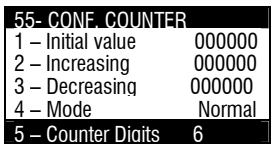
NORMAL: the counter increases/decreases with each of the item's labels
TOTALS: the counter increases/decreases on printing a totals label

OK

CHANGE PLU: the counter increases/decreases each time a PLU is changed.
N2: The counter increases/decreases on printing a totals label level 2.
N3: The counter increases/decreases on printing a totals label level 3.
N1: The counter increases/decreases on printing a totals label level 1.
Press **➔** to select the working mode of the counter

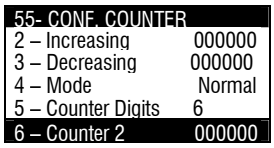
Press **OK** to validate and pass to the next parameter.

7.5.5 Counter digits



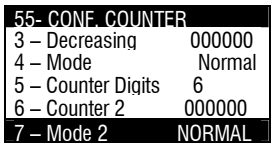
This parameter is to select whether the counter is to have 6 or 9 digits.
Press ➔ to select the desired number of digits, and press **OK** to confirm.

7.5.6 Counter 2



The counter can be preset to print different values in the numerical order and increment rate designated in field 86.
After programming the parameter, press **ESC** to exit counter data programming mode.

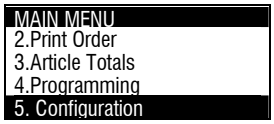
7.5.7 Mode 2

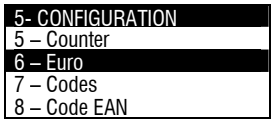


Use this parameter to select the working mode of the Counter 2.
The possible modes are the following:
NORMAL: the counter increases/decreases with each of the item's labels
TOTALS: the counter increases/decreases on printing a totals label
CHANGE PLU: the counter increases/decreases each time a PLU is changed.
N2: the counter increases/decreases on printing a totals label level 2.
N3: the counter increases/decreases on printing a totals label level 3.
N1: the counter increases/decreases on printing a totals label level 1.
Press ➔ to select the working mode of the counter

Press **OK** to validate and pass to the next parameter.

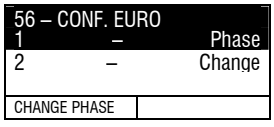
7.6 EURO (5 6)



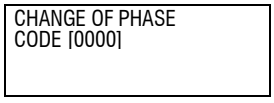


From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key **6** to enter in the Euro programming.
It will be shown in the display the Euro phase and the Euro exchange.

7.6.1 Phase



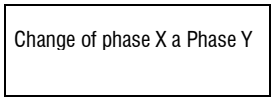
The different stages of the euro are programmed.
PHASE 0: The exchange rate for the Euro is programmable. The main currency will be that of each member country with the EURO as a SECONDARY currency.
PHASE 1: The exchange rate for the Euro is fixed. The main currency will be that of each member country with the EURO as a SECONDARY currency.
PHASE 2: The main currency of each country will become the secondary one while the EURO will become the MAIN one in all countries.
PHASE 3: The EURO will be the SINGLE CURRENCY.



Δ CHANGE PHASE
OK:

Once the scale has been set up in the correct phase of the EURO, it will be capable of working and issuing receipts and/or self-adhesive labels with the amounts in EURO.
To pass from one phase to another, it is necessary to press the multifunction key Δ CHANGE PHASE, and then enter the change code and press the key **OK**.

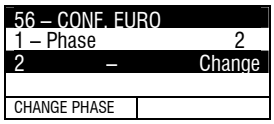
Phase 0 – Phase1 ⇒ **0 7 8 1**
Phase 1 – Phase2 ⇒ **6 0 2 2**
Phase 2 – Phase 3 ⇒ **9 8 0 8**



Once the phase has been programmed, press ➔ to program the EURO exchange.

7.6.2 Change

In phase 0 it is possible to program the exchange of the Euro with the currency of the country, to do it , select the position Change, press **OK** and enter the value of the exchange, once the value has been entered, press **OK** again.



OK

ESC

Press **ESC** to exit Configuration programming.

7.7 CODES (5 7)

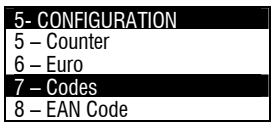
These codes can be printed in the labels as numeric field and also in the bar code. The codes to be programmed are: Worker, Manufacturer and Batch Number.

MENU

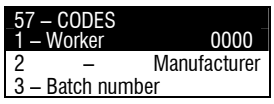
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key **7** to enter in the Codes programming. The codes to be programmed are:

5

7



7.8.1 Worker

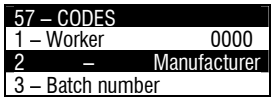


The code of the worker (4 digits) must be entered .

OK

Press **OK** to pass to the next parameter.

7.7.1 Manufacturer

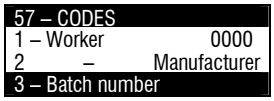


OK

The code of the manufacturer (6 digits) must be entered.

Press **OK** to pass to the next parameter.

7.7.2 Batch Number



Enter the batch number as an alphanumeric code of 24 characters.

OK

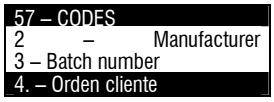
To enter the text press **OK**, the machine will enter the text edition mode.

ESC

Press **ESC** to exit

7.7.3 Code Customer

OK



This parameter allows to enter a Customer Code as an alphanumeric text of 24 characters. To print it use the field number 92 in label format.

ESC

7.7.4 Adjust Even Batch

OK

This parameter enables or disables the request of entering and even number of characters in the parameter Batch Number. It enters a zero on the left if necessary.

With the key **➔** is possible to switch between YES and NO.

Press **OK** to pass to the next parameter.

ESC

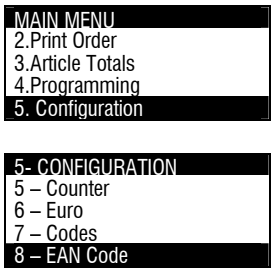
Press **ESC** to exit.

7.8 EAN CODE (5 8)

MENU

5

8



This parameter allows to program the Bar Code format, this is the way in which the information of the bar code of the labels will be printed.
They must be programmed the formats of the bar code for the labels and total labels.

From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key **8** to enter in the EAN Code programming

It is possible to enter a number between **0** and **99**,to select the bar code of the labels, with the characteristics shown in the following table.
The possible formats are shown in the next page:

Cód.	Content	Cód.	Content
0	No EAN	52	ABBBBBB
1	AABBBBBCCCCC	53	AABBBBB
2	AABBBBBDDDDD	54	ITF-14 Framed from Text3 of PLU
3	AABBBBBEEEEE	55	ITF-14 Framed from EAN PLU
4	AABBBBBFFFFF	56	ITF-14 Framed from ITF 14 A
5	AABBBBBGGGGG	57	ITF-14 Framed from ITF 14 B
6	AAGGGGGBBBBB	58	ITF-14 Framed from ITF 14 C
7	ABBBBBBCCCCC	59	ITF-14 Framed from PLU EAN 2
8	ABBBBBBDDDDD	60	ITF 14 from Text 3 of PLU
9	ABBBBBBEEEEE	61	ITF 14 from Text EAN of PLU
10	ABBBBBBFFFFF	62	ITF14 A Programable
11	AHHBBBBCCCCC	63	ITF 14 B Programable
12	AHHBBBBDDDDD	64	ITF 14 C Programable
13	AHHBBBBEEEEE	65	2D5 from Text3 of PLU
14	AHHBBBBFFFFF	66	2D5 from EAN of PLU
15	AHHIIIICCCCC	67	2D5 from ITF-14 A
16	AHHIIIIDDDDD	68	2D5 from ITF-14 B
17	AHHIIIIEEEEE	69	2D5 from ITF-14 C
18	AHHIIIIFFFFF	70	EAN 128 from Text EAN of PLU
19	AAHBBBBCCCCC	71	2D5 + CTRL from EAN of PLU
20	AABBBBQCCCCC	72	EAN 128 (Text 2 of PLU)
21	AABBBBQDDDDD	73	EAN 128 (Texts 2+3 PLU)
22	AABBBBQEEEEE	74	EAN 128 (Texts 2+3+4 PLU)
23	AABBBBQFFFFF	75	EAN 128 (Texts 2+3+4+5 PLU)
24	AAJJJJJBBBBBB	76	EAN 128 (Texts 2+3+4+5+6 PLU)
25	AAJJJJJCCCCC	77	EAN 128 (Texts 2+3+4+5+6+7 PLU)
26	EAN 13 from PLU EAN 2	78	EAN 128 (Texts 2+3+4+5+6+7+8 PLU)
27	EAN 128 from Text 3 of PLU	80	EAN 128 A Programable
28	ITF from PLU EAN 2	81	EAN 128 B Programable
30	EAN 13 from Text 3 of PLU	82	EAN 128 C Programable
31	EAN 13 from Text EAN of PLU	83	EAN 128 from texts 9 and 10 of item
32	EAN 13 A Programable	84	EAN 128 D Programable
33	EAN 13 B Programable	85	EAN 128 E Programable
34	EAN 13 C Programable	86	EAN 128 F Programable
36	EAN 13 D Programable	87	EAN 128 G Programable
37	EAN 13 E Programable	88	EAN 128 H Programable
38	EAN 13 F Programable	89	EAN 128 I Programable
39	EAN 13 G Programable	90	EAN 128 J Programable
40	UPC from Text 3 of PLU	91	RSS-14 Databar from EAN 128 A
41	UPC from Text EAN of PLU	92	RSS-14 from EAN PLU
42	EAN 13 H Programable	93	RSS-14 stacked EAN 128 A
43	EAN 13 I Programable	94	RSS-14 stacked EAN PLU
44	EAN 13 J Programable	95	RSS-14 stacked omnidirectional 128 A
45	EAN 128 From PLU EAN A	96	RSS-14 stackedomnidirectional 128 A
46	EAN 128 From PLU EAN B	97	Databar Expanded
50	EAN 8 from Text 3 of PLU	98	RSS-14 stacked omnidirectional128 A
51	EAN 8 from Text EAN of PLU	99	EAN 13 Read Scanner

The representation of the data in the bar code are the following:

A	EAN Header	**a**	Net non-drained weight
B	Article code	**b**	Price/Kg net non-drained weight
C	Amount	**c**	Date of freezing
D	Weight	**d**	Identification number
E	Price	**e**	Batch number in code 128
F	Unit weight	**f**	ADDD format in code 128
G	Quantity	**g**	Current date as day
H	Department	**h**	Expiry date as Julian Day
I	Number of sales	**i**	Text 8 as EAN 128
J	Manufacturer code	**j**	Text 9 as EAN 128
K	Group number	**k**	Text 10 as EAN 128
L	Worker code	**l**	Client code as EAN 128
M	Counter	**m**	EAN-13 of client in EAN-128
N	Batch Number	**n**	Date in day of the week, week of the year and year (ddwwyy) format.
O	PLU's fast key number	**r**	To replace text 2 of the traced product. (EAN 128)
Q	Check price		
R	Tare	**o**	Expiry date (days)
S	Gross weight	**p**	Packing year
T	Weight / 10	**q**	hhmm
U	Packing date	**s**	Amount in Francs
V	Best before	**u**	Weight with 2 decimals not rounding
W	Extra date	**v**	Amount in the second currency
X	Price in secondary currency	**w**	Gross amount
Y	Amount in secondary currency	**y**	Batch number programmed in plu from behind
[	Net non-drained weight/10	**x**	Terminal mode
]	Weigh in Pounds	**z**	Counter 2
:	Amount Digits number	**;**	Amount in 4 digits
!	Weigh non drained in lb	**<**	Amount non drained
$	Amount calculated with weigh in lb.		
Z	Control digit for all that requires a control digit, without limit on the length of data involved in the calculation. Valid for 00, 01, 02, 410, 411, 412, 413, 414,	**txx**	To replace the texts of the item. (EAN 128) where xx is the number of the text of the PLU that will be fully printed until the maximum number of characters allowed by the IA or until the end of text characters

OK

58 – CONF. EAN CODE
1 - For EAN Label 00
2 – For EAN Totals 00
3 – For. EAN Level 1 00
4 – For EAN Levell 2 00

OK

7.8.2 EAN format for label

Enter the EAN Format for the labels, press **OK** to validate and pass to the next parameter.

OK

58 – CONF. EAN CODE
1 - For EAN Label 00
2 – For EAN Totals 00
3 – For. EAN Level 1 00
4 – For EAN Level 2 00

OK

7.8.3 EAN format for total labels

Enter the EAN Format for the total labels, press **OK** to validate and pass to the next parameter.

58 – CONF. EAN CODE
1 - For EAN Label 00
2 – For EAN Totals 00
3 – For. EAN Level 1 00
4 – For EAN Level 2 00

OK

7.8.4 Format EAN level 1

Enter the EAN Format for the total level 1 labels, press **OK** to validate and pass to the next parameter.

58 – CONF. EAN CODE
1 - For EAN Label 00
2 – For EAN Totals 00
3 – For. EAN Level 1 00
4 – For EAN Level 2 00

OK

7.8.5 Format EAN level 2

Enter the EAN Format for the total level 2 labels, press **OK** to validate and pass to the next parameter.

58 – CONF. EAN CODE
5 - For EAN Level 3 00
6 – HEADER EAN 00
7- EAN 13-A1
8 – EAN 13 B

OK
↓

7.8.6 Format EAN level 3

Enter the EAN Format for the total level 3 labels, press **OK** to validate and pass to the next parameter.

58 – CONF. EAN CODE
5 - For EAN Level 3
6 –EAN Header 00
7- EAN 13-A
8 – EAN 13 B

OK
↓

7.8.7 EAN Header

Enter the data of the EAN Header, press **OK** to validate and pass to the next parameter.

58 – CONF. EAN CODE
5 - For EAN Level 3
6 –EAN Header
7- EAN 13-A
8 – EAN 13 B

OK
↓

7.8.8 EAN 13 A

Enter the data of the EAN 13 A. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

58 – CONF. EAN CODE
5 - For EAN Level 3
6 –EAN Header 00
7- EAN 13-A
8 – EAN 13 B

OK
↓

7.8.9 EAN 13 B

Enter the data of the EAN 13 B. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

58 – CONF. EAN CODE
9 – EAN 13 C
10 –EAN 128 global A
11 - EAN 128 global B
12 – EAN 128 global C

OK
↓

7.8.10 EAN 13 C

Enter the data of the EAN 13 C. Press **OK** again to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

58 – CONF. EAN CODE
9 – EAN 13 C
10 –EAN 128 global A
11 - EAN 128 global B
12 – EAN 128 global C

OK

7.8.11 EAN-128 Global A

Enter the data of the EAN 128 Global A. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

58 – CONF. EAN CODE
9 – EAN 13 C
10 –EAN 128 global A
11 - EAN 128 global B
12 – EAN 128 global C

7.8.12 EAN-128 Global B

Enter the data of the EAN 128 Global B. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

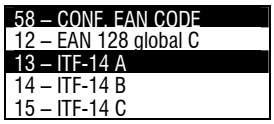
58 – CONF. EAN CODE
9 – EAN 13 C
10 –EAN 128 global A
11 - EAN 128 global B
12 – EAN 128 global C

7.8.13 EAN-128 Global C

Enter the data of the EAN 128 Global C. Press **OK** again to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.14 ITF-14 A

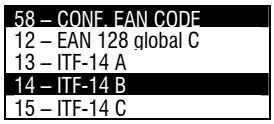
OK
↓



Enter the data of the ITF 14 A. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.15 ITF-14 B

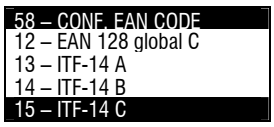
OK
↓



Enter the data of the ITF 14 B Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

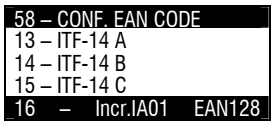
7.8.16 ITF-14 C

OK
↓



Enter the data of the ITF 14 C. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.17 Incr. IA01 EAN128



In the application identifier 01(n2+n14) of the EAN128 the numeric value entered in this IA can be raised by 1. This is possible only in the case of the totals labels.

E.g.: bar code on the item's label

(01)12345678900000(10)LOT

For the item's total it will be

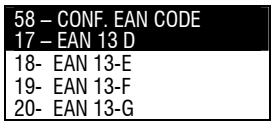
(01)12345678900001(10)LOT

OK

Press **OK** to validate and pass to the next parameter.

7.8.18 EAN-13 d

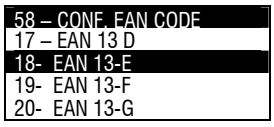
OK
↓



Enter the data of the EAN 13 D. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.19 EAN-13 E

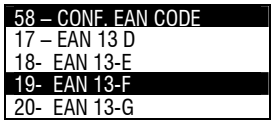
OK
↓



Enter the data of the EAN 13 E. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.20 EAN-13 F

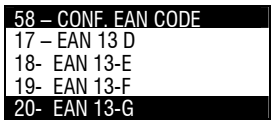
OK
↓



Enter the data of the EAN 13 F. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.21 EAN-13 G

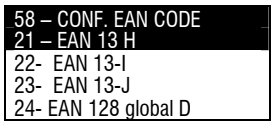
OK
↓



Enter the data of the EAN 13 G. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.22 EAN-13 H

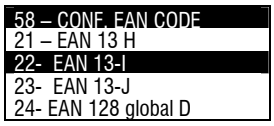
OK
↓



Enter the data of the EAN 13 H. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.23 EAN-13 I

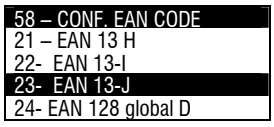
OK
↓



Enter the data of the EAN 13 I. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.24 EAN-13 J

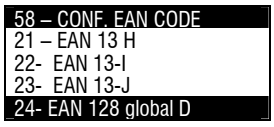
OK
↓



Enter the data of the EAN 13 J. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.25 EAN-128 Global D

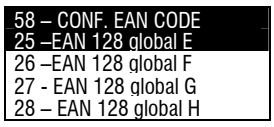
OK
↓



Enter the data of the EAN 128 Global D. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.26 EAN-128 Global E

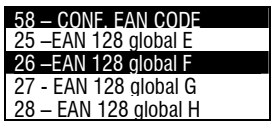
OK
↓



Enter the data of the EAN 128 Global E. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.27 EAN-128 Global F

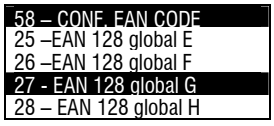
OK
↓



Enter the data of the EAN 128 Global F. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.28 EAN-128 Global G

OK
↓



Enter the data of the EAN 128 Global G. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

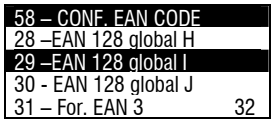
7.8.29 EAN-128 Global H

OK
↓

Enter the data of the EAN 128 Global H. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.30 EAN-128 Global I

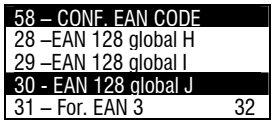
OK
↓



Enter the data of the EAN 128 Global I. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.31 EAN-128 Global J

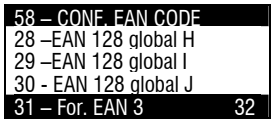
OK
↓



Enter the data of the EAN 128 Global J. Press **OK** to validate and pass to the next parameter.
Press the key ↓ to pass to the next parameter.

7.8.32 Format EAN 3

OK
↓



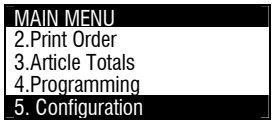
Select the EAN 3 format. Use the numeric keyboard to enter the value (an EAN that is represented with labels field 40 is chosen).
Press **OK** to validate

Press **ESC** to exit to the Configuration Programming.

OK
ESC

7.9 AUTOMATIC TOTALS (5 9)

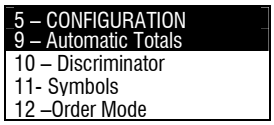
Allows automatic printing of level 1, 2 or 3 totals labels. To programme the level whose totals are required, insert the number of totals labels of the previous level.



MENU

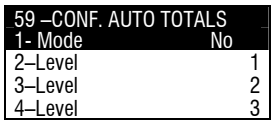
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key **9** to enter in the Automatic Totals programming.
The parameters to be programmed are:

5



9

7.9.1 Mode

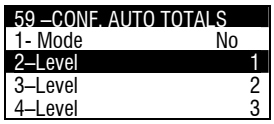


This parameter enables or disables the functioning of the automatic totals. With the key **➔** . is possible to change between YES and NO.
Press **OK** to validate and pass to the next parameter.

➔

OK

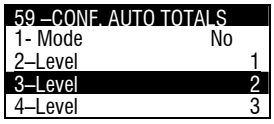
7.9.2 Level 1



Number of labels required to prompt printing of totals label of level 1.Press **OK** to validate and pass to the next parameter.

OK

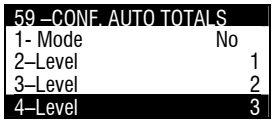
7.9.3 Level 2



Number of labels required to prompt printing of totals label of level 2.Press **OK** to validate and pass to the next parameter.

OK

7.9.4 Level 3

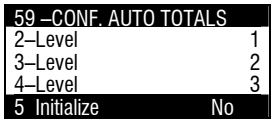


Number of labels required to prompt printing of totals label of level 3.Press **OK** to validate and pass to the next parameter.

OK

7.9.5 Initialize

This parameter determines whether or not to reset the value of item total levels when the same item is opened again.

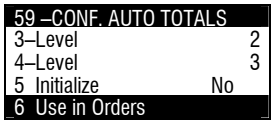


Select YES to obtain overall total levels. Select NO to obtain the levels of the totals of each item. (See section.5.1.21 Programming items level 1)

To change reset from YES to NO, or viceversa, use **➔**

➔

7.9.6 Use in orders

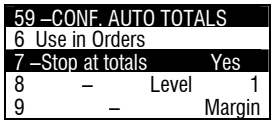


This parameter automatically prints order total labels.
To switch between YES and NO, press **➔**

➔

7.9.7 Stop at totals

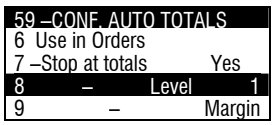
This parameter is used to stop the equipment's belts if the total weight indicated in LEVEL 1 (weight) is exceeded.



> ! The MESSAGE option is not used in the LS 4000 device

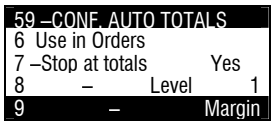
➔
To switch between YES, NO and MESSAGE press ➔
OK
Press **OK** to validate and pass to the next parameter.

7.9.8 Level 1



OK
Enter the total weight value for which the level 1 totals label is required.
Press **OK** to validate and pass to the next parameter.

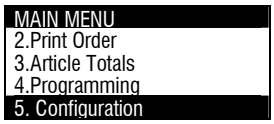
7.9.9 Margin



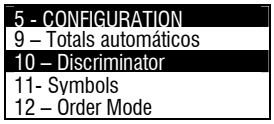
The LS-4000 allows a tolerance margin to be entered for the total weight for which a level 1 totals label is required.
ESC
Press **OK** to validate and **ESC** to exit to configuration programming.

7.10 WEIGHT DISCRIMINATOR (5 10)

The weight discriminator controls the minimum and maximum weights accepted by the machine for processing and any package whose weight does not fall within these margins will not be labelled.



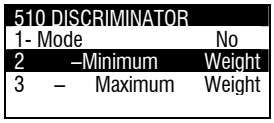
MENU
5
🡻
10
OK



From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key **🡻** until reach Configuration 10, (it is also possible by pressing the key **➔** to pass to the second screen of the menu and pressing **🡻** until reach Configuration 10) Weight Discriminator and pressing the key **OK**.

7.10.1 Mode

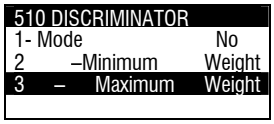
➔
OK
This parameter enables or disables the functioning of the Weight Discriminator. With the key ➔ is possible to change between YES, NO, Percentage and INVERSE.
YES – Activate the Discriminator in global mode, every item outside the values of the minimum and maximum weight will be discriminated.
NO – Discriminator mode deactivated
Percentage – NOT used in the LS4000.



OK
Inverse - every item <u>inside</u> the values of the minimum and maximum weight will be discriminated.

Press **OK** to validate and pass to the next parameter.

7.10.2 Minimum Weight



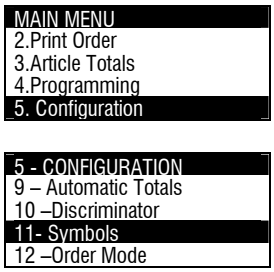
OK
ESC
Enter min. weight in grammes to be accepted for labelling
Press **OK** to validate and pass to the next parameter.

7.10.3 Maximum Weight

Enter max. weight in grammes to be accepted for labelling.
Press **OK** to validate, and **ESC** to exit.

7.11 SYMBOLS (5 11)

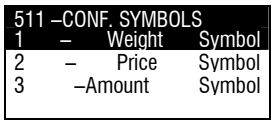
MENU
5
↓
11
OK



The printing and position of symbols of weight, price and amount are programmed in these parameters.
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key ↓ until reach Configuration 11, (it is also possible by pressing the key → to pass to the second screen of the menu and pressing ↓ until reach Configuration 11) Symbols and pressing the key **OK**.
The parameters to be programmed are:

7.11.1 Weight

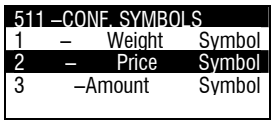
→
OK



This parameter allows to select the printing of the symbol of weight. By pressing the key → it is possible to select between printing: YES, NO or printing the symbol BEFORE the data of weight.
Press the key **OK** to program the next parameter.

7.11.2 Price

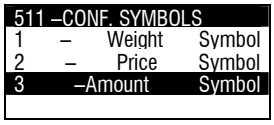
→
OK



This parameter allows to select the printing of the symbol of price. By pressing the key → it is possible to select between printing: YES, NO or printing the symbol BEFORE the data of price.
Press the key **OK** to program the next parameter.

7.11.3 Amount

→
OK
ESC

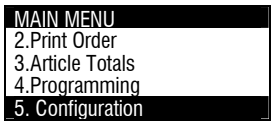


This parameter allows to select the printing of the symbol of amount. By pressing the key → it is possible to select between printing: YES, NO or printing the symbol BEFORE the data of amount.
Press the key **OK** to validate and **ESC** to exit.

7.12 ORDERS MODE (5 12)

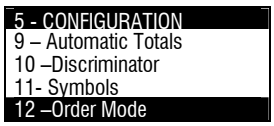
An order is considered to refer to a selection of articles for a specific client.
These parameters define the operative for orders labelling.

MENU
5



From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key ↓ until reach Configuration 12, (it is also possible by pressing the key → to pass to the second screen of the menu and pressing ↓ until reach Configuration 12) Orders mode and pressing the key **OK**.

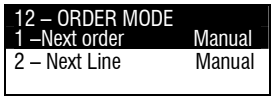
↓
12
OK



The parameters to be programmed are:

7.12.1 Next order

→



This parameter defines the way of labelling the articles of an order.

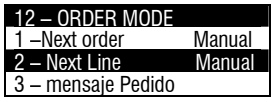
With the key → it is possible to select mode MANUAL, AUTOMATIC or PLU.

OK

If AUTOMATIC Mode is selected, when an order is being labelled, and the labelling of an article is finished, the labeller will start automatically to label the same article in another order.
Press **OK** to pass to the next parameter.

7.12.2 Next line

→



This parameter defines the way of labelling the articles of an order.

With the key → it is possible to select mode MANUAL or AUTOMATIC.

OK
ESC

If AUTOMATIC Mode is selected, when an order is being labelled, and the labelling of an article is finished, the labeller will start automatically to label the next article of the same order.
Press **OK** to pass to the next parameter.
Press **ESC** to exit the programming.

7.12.3 MESSAGE ORDER

OK
ESC

Once the order is finished, the equipment sends a message to the computer which erases the order from the memory.
borra su memoria.
With the key → it is possible to choose YES or NO.
Press **OK** to pass to the next parameter.
Press **ESC** to exit the programming.

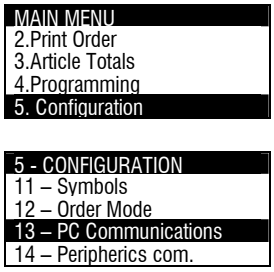
7.13 PC COMMUNICATIONS (5 13)

The Automatic Weighing and Labelling System LS-4000 allow the PC connection for programming and sending and reception of data.

MENU

5

↓
13
OK



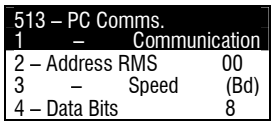
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key ↓ until reach Configuration 13, (it is also possible by pressing the key → to pass to the second screen of the menu and pressing ↓ until reach Configuration 13) PC Communications and pressing the key **OK**.

The parameters to be programmed are:

7.13.1 Type of Communication

→

OK



There are two possible types of communication with PC.

-Serial

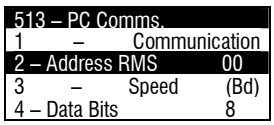
-Ethernet

Use the keys ←.→ to select the type of communication.

Once it is programmed press the key **OK** or the key ↓ to pass to the next parameter.

7.13.2 RMS Address

OK
↓

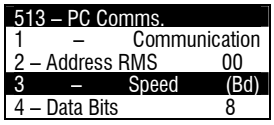


Enter the address of the label using the numeric keyboard. The address is an even number from 00 to 50:

Once it is programmed press the key **OK** or the key ↓ to pass to the next parameter.

7.13.3 Baud Rate

→
OK
↓



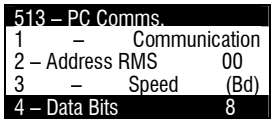
Enter the baudrate.

Use the keys ←.→ to select the right value.

Once it is programmed press the key **OK** or the key ↓ to pass to the next parameter.

7.13.4 Data Bits

→
OK
↓



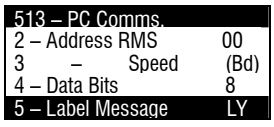
Select the number of data bits (7 or 8).

Use the keys ←.→ to select the right value.

Once it is programmed press the key **OK** or the key ↓ to pass to the next parameter.

7.13.5 Label message

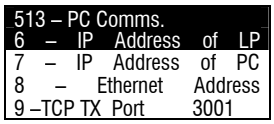
→



The LS-4000 can send the label message to the PC. To do this use ←.→ to select:

1. **No**
2. **Normal** (Register 53, sends PLU code, weight, amount, no. of labels, customer code).
3. **APL1** (Register 2P, sends PLU code, weight, operator no., quantity no.).
4. **LY** (Register LY, sends PLU code, weight, price, animal code, date).
5. **LE** (Register LE, customer code, batch no., amount, animal code, date).
6. **MH** (Register MH, batch Nr, sends code PLU, Operator Nr, Nr labels).
7. **MK**(Register MK, Client code, sends code PLU, Batch Nr, weight, Amount, Ticket No).
8. **MS** (Register MS, sends PLU code, weight, Batch Nr).
9. **L4 Extend** (Register L4 with ingredients for LBS Backup).
10. **ML** (RegisterML, sends PLU code, Operator Nr, Label Nr).
11. **LE Todos** (Sends the register LE even for the articles where the label has not been printed for being out of the weight limits)

OK
ESC



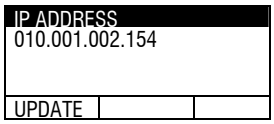
OK

010.OK

001.OK

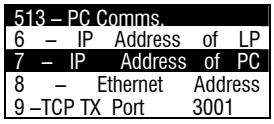
002.OK

154OK



Δ UPDATE

OK



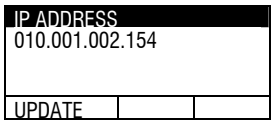
OK

010.OK

001.OK

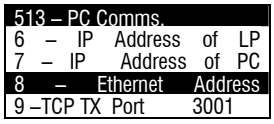
002.OK

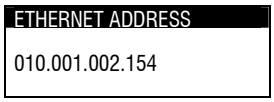
153OK

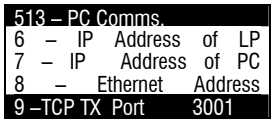


Δ UPDATE

OK

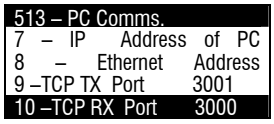






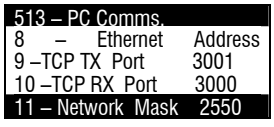
3001

OK



3000

OK



➔

OK

Note: in case that the transmission to the PC cannot be carried out the messages are stored in a buffer with capacity for 20000 messages, it will give warning when it is to 80% 90 % and 100% of the capacity.

Press **OK** to save, press **ESC** to exit.

7.13.6 LS 4000 IP Address

In this parameter it is programmed the IP address of the labeller.
Once the parameter IP address has been selected, press the key **OK**, the labeller will show the screen of IP Address programming.
Enter the IP address in groups of three characters, pressing the key **OK** after the third character.
Ex: 010.**OK** 001.**OK** 002.**OK** 154
Press the multifunction key Δ UPDATE to record the IP address and return to Menu. The labeller will show the message UPDATED.
Press the key **OK** or 🡻 to pass to the next parameter.

7.13.7 PC IP Address

Enter the IP address of the computer where the Automatic Weighing and Labelling System is connected.
Once the parameter IP address PC has been selected, press the key **OK**, the labeller will show the screen of IP Address PC programming.
Enter the IP address of the PC in groups of three characters, pressing the key **OK** after the third character.
Ex: 010.**OK** 001.**OK** 002.**OK** 153
Press the multifunction key Δ UPDATE to record the IP address of the PC and return to Menu. The labeller will show the message UPDATED.
Press the key **OK** or 🡻 to pass to the next parameter.

7.13.8 Ethernet Address

The MAC address of the machine is shown.

Press the key 🡻 to pass to the next parameter.

7.13.9 Port TX TCP

Program the TCP Transmision Port, using the numeric keyboard. The value must be always 3001.

Press **OK** to record and pass to the next parameter.

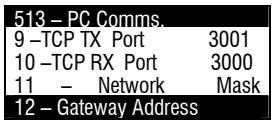
7.13.10 Port RX TCP

Program the TCP Reception Port, using the numeric keyboard. The value must be always 3000.
Press **OK** to record and pass to the next parameter.

7.13.11 Network mask

Enter the network mask.
Press **OK** to modify values.
Use the number keypad to assign values in groups of three.
Press ➔ or **OK** to change column and **softkey 1** to refresh and exit.

7.13.12 Gateway address



➔
OK

Enter the gateway address.
Press **OK** to modify values.
Use the number keypad to assign values in groups of three.
Press ➔ or **OK** to change column and **softkey 1** to refresh and exit.

7.13.13 EAN message

This parameter is for selecting the type of register to be sent to the PC for, when working in terminal mode, we read an EAN:

1 **Normal** (ME code, the ME register indicates the group and the EAN 13)
2 **D4** (D4 code, the D4 register indicates the group, the number of characters of the EAN, and the EAN itself.)

OK
ESC

Press **OK** to save, press **ESC** to exit.

7.14 PERIPHERALS COMMUNICATION(5 14)

The LS-4000 can be connected to different peripherals like Indicators or Scanner, to receive the weight or select PLUs.
Communication with these peripherals can be RS-232, RS 422, and RS 485, depending on the communications channel required.

MENU
5
🡻
14
OK
➔
ESC

From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key 🡻 until reach Configuration 14, Peripherals Communications and pressing the key **OK**.
Use the keys 🡸.➔ to select the peripheral to be connected.
Press **ESC** to exit.
The possible peripherals are:

Any:
This is the default value, any peripheral is connected.

Scanner:
This mode will be selected to select articles from the scanner.

- ***Connection***

It is an RS-232 connection. The connector used will be the connector marked as RS232.

The communications cable is the following:

LS4000 (RJ45)		**Scanner (DB9)**
7 Rx	⟶	Tx
6 Tx	⟶	Rx
8 GND	⟶	GND

- ***Scanner Operative***

The scanner is used to select an item that you wish to print. To do so, with the LS-4000 at the initial screen or at the item printing screen, an EAN13 or EAN8 bar code is read. With the data provided by the scanner, the LS-4000 will seek the first item with the same code programmed in its EAN code field and it will select it for its labelling.

During the search for the item, two chains of characters are therefore compared, one provided by the scanner and the other programmed in the item's EAN code field. For the comparison of the chains, only the numbers are taken into account and not the letters.

Consequently, in the event that the item's EAN is programmed with substitution characters, these characters will not be compared.
Example:

Chain provided by the scanner	251234567890
EAN code of item 1	259876543210
EAN code of item 2	25BBBBB567890
EAN code of item 3	251234567890

The item selected would be the second because it is the first whose numbers coincide. The substitution characters are not compared. If there is an item whose EAN code is made up entirely of substitution characters, it can be selected from the EAN code which is read with the scanner, provided the search has not concluded with a previous item.

Indicator VD:

The labeller LS-4000 can receive the weight from an external indicator. The external indicator can be a indicator with TISA protocol. The labeller must be configured in the following way:

- ***Connection***

The communication is RS-232. The characteristics of the cable are the following.

LS4000 (RJ45)		**Indicator**
7 Rx	⟶	Tx
6 Tx	⟶	Rx
8 GND	⟶	GND

- ***Configuration of the Indicator***

It is necessary to select in the indicator, PC communication. There are two types of PC communication
0.- The indicator sends the weight under request.
1.- The indicator send the weight at each weight conversion.

- ***Decimals on the display***

If Display communication has been selected in peripherals' communication, the number of decimals shown on the display must be selected.

To do this, go to the peripherals display (**MENU** **5** **14**), and in section **2 – Decimals on Display** enter the number of decimals.

Indicator VD + Internal

The LS-4000 can work either receiving the weight from the indicator or receiving the weight from the internal weighing CPU.
To switch from one to another, from the main screen or from the PLU labelling screen, it is necessary to press the key **Q**.

- ***Decimals on the display***

If Display+Internal communication has been selected in peripherals' communication, the number of decimals shown on the display must be selected.

To do this, go to the peripherals display (**MENU** **5** **14**), and in section **2 – Decimals on Display** enter the number of decimals.

Scanner Traceability

The LS-4000 allows to connect a scanner for beef traceability data reading. If the animal does not exist in the LS-4000, it is created and if it already exists, it is selected for printing

Master

The total labels are sent to a second LS-4000, which functions as slave

Axiohm 630 series printer

The LS-4000 can be connected to an Axiohm 630 series printer.

After selecting the customer, a heading is automatically printed with the following fields: customer's name, address, town, and present date.
There are 3 operational modes for the series printer:

Totals mode: From the item printing window, each level 1 totals label that the machine issues is assigned 2 lines with the name and level 1 accumulated total of the item.
Per Line Mode: From the item printing window, each label that the machine issues is assigned 1 line with the item name, weight and amount, and each level 1 total label is assigned 1 line with total operations, weight and amount.
Line 2 Mode: On the item printing display, 1 line of each label printed by the machine will correspond to the item code, manufacturer's code, counter and weight.

CCCCC FFFMMMMMMMMMM PPP.PPP

C – Item code.

F – Manufacturer's code.

M – Counter*.

P - Weight.

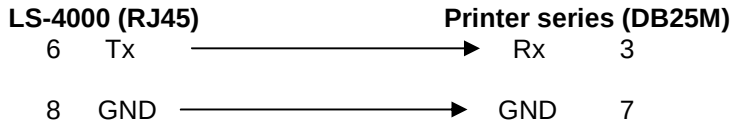
*Counter field: This field must be included in the label format (see section 5.3 Label format field number 5) in order for the counter to function. The counter increase must also be correctly configured (see section 6.5 counter). The counter value is reset when the LS-4000 is restarted.

BNT Mode: On the item printing display, 1 line of each label printed by the machine will correspond to the number of weight operations, gross weight and net weight

To select an operation mode, go to the peripheral window (**MENU** **5** **14**), and in section **4 – Series printer mode,** enter the desired operation mode.

The order printing display functions similarly, printing a heading with the order name.

Cable characteristics are as follows:



- ***Printing of level 1 totals***

If the series printer has been selected for peripherals communication, it is possible to choose between the level 1 totals label being printed by the series printer only, or by the series printer and the labelling machine printer head.
To do this, go to the peripherals display (**MENU** **5** **14**), and section **3 – Print Level 1** . Press ➔ to select:

- **YES** for the label to be printed by the series printer and the labelling machine.

- **NO** for the label to be printed by the series printer alone.

Remote Display RD-3
The LS-4000 may be connected to a remote display RD-3.
The display will provide weight information that the LS-4000 sends it.

Scan Apl1: This is a special application.
When this mode is enabled, and an EAN13 is read, the first 4 digits are associated with the operator, the next 3 to the counter field and the next 2 to the amount field.

PC
This mode should be selected for communication with the PC.

- ***Connection***

This is a RS-232 connection. The labeller connector marked RS-232 should be used

F501
1-Peripheral ⟶ LS-4000
[STX] [ENQ] [ETX]

2- Peripheral ⟵ LS-4000
[STX] [status] [data] [ETX]

Status: It is made up of just one character that indicates the weight status.
The possible characters are:
a) "+" : Positive weight.
b) "-" : Negative weight
c) "?" : Unstable weight
Data: the weight value is sent in 7 digits, with 6 digits plus the decimal point. (123.456)
Protocol: 9600 bauds, without parity; 8 data bits, 1 stop bit.

SICK
The LS-4000 can be connected to a SICK scanner to select the PLU item.

Batch Scan
Select the batch number in the scanned EAN 128.

AWTX: Application specifically developped for a customer. Contact Technical Support for Information.

MATUTANO: Application specifically developped for a customer. Contact Technical Support for Information**.**

SAUSAGE FILLER: Application specifically developped for a customer. Contact Technical Support for Information

PLC-TAG: This application sends the information for recording in aTAG.

SCAN_TR_LO: This application enters in the batch number the eartag read with the scanner.

PHANTER: Communication with Panther device.

DÓLLAR: Communication with Dollar ($) protocol.

RFID: Reception of information by radio-frequency. Contact Technical Support for more information

SCAN APL2: Specific applcation for Reading CODE128. Activation of the article which code is in the barcode , selection of the batch number and printing a CODE128 with the data read.

SCAN APL3: Special scanner connection for reading of boxes barcode and article selection.

OPTIMIZE: Reduction of the time for changing the article.

SCAN APL4: Special scanner connection for reading of boxes barcode and article selection.

SCAN APL5: Special scanner selection for reading EAN 128 with format:

(01)98435303700671(3102)001500(10)109000279SQE
Selects the article indicated in the IA 01 and the batch number indicated in IA10.

DATAMAX: Connection with Datamax labeller for printing otal labels.

SCAN APL6: Special scanner selection for reading EAN 128 with format:
(01)98435303700671(3102)001500(17)091220(10)109000es

STAR: Connection with STAR printer. The printer must be in PAGE MODE(SW1-1=OFF). When a Total Level 3 label is printed, the STAR printer prints a label with the data of the customer.

RD-4: Remote indicator RD-4.

SCAN TR1: When a Traceability Product is automatically created, the batch number is selected.

DEPART: Prints in the total labels , in the fields Department the multiplication of the Department Number by the number of labels.

SCANNER CF: Application specifically developped for a customer. Contact Technical Support for Information.

F02412: For every label printed the equipment sends a message with: Date, Worker, manufacturer and weight to the PC.

TAG JB: Reading of RFID TAG and data capture.

SCAN APL 7: Connection to a scanner and programming of the read CODE 128 barcode in EAN 128 Global A.

SICK RFH62: Lector RFID for CW4000.

SICK CLV63: Connection to Scanner SICK (I/O).

SCAN OSBOR: Application specifically developped for a customer. Contact Technical Support for Information.

PLC CW: Application specifically developped for a customer. Contact Technical Support for Information.

SCAN TEST: Communication RS-232 with scanner and reception of the Reading while the detector of Belt 4 is active.

PLACA PLC: Connection of PLC board for inputs and outputs.

CS LOT + LP: Connection of scanner for EAN128 reading and Batch number capture. In addition connection to LP-3000 for totals.

ZPLII: Connection to a labeller with ZPL protocol for Total labels.

RAVENWOOD. Connection with a Ravenwood labeller for labels in C rap.

RD-5: Remote indicator RD-5

IMAGE: Connection to a Image printer

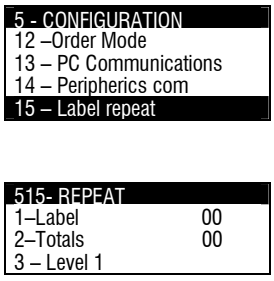
CODE LOTE: Possibility to connect a scanner 9600,8,N,1) to read a barcode (code 128), and write it in the field batch number.

7.15 LABELS REPETITION (5 15)

The LS-4000 allows to repeat article labels and total labels.

MENU
5
↓
15
→
↓
OK

ESC

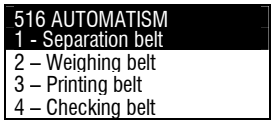


From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming and the key ↓ until reach Configuration 15, (it is also possible by pressing the key → to pass to the second screen of the menu and pressing ↓ until reach Configuration 15) Labels Repetition and pressing the key **OK**.
When this parameter is selected, the LS-4000 shows a submenu to select the number of labels that will be printed automatically after printing an article label or a total label of level 1, 2, or 3.
Press **ESC** to exit.

7.16 AUTOMATISM (5 16)

7.16.1 Separation belt

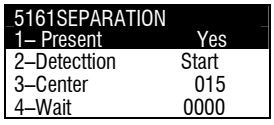
MENU
5
16
OK
OK



From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, PLU key **16** and press **OK** , and then press **OK** to pass to 1 – Separation belt.
The parameters to be programmed are:

7.16.2 Present

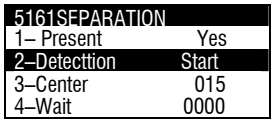
→
OK



To program if the belt number one is present.
With the key → is possible to change between YES and NO.
Press **OK** to record and pass to the next parameter.

7.16.3 Detection

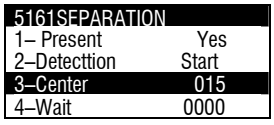
→
OK



This parameter is used to program the way of detection of the trays by the begin or by the end.(It mus be selected START**)**
With the key → is possible to change between START and END
Press **OK** to record and pass to the next parameter.

7.16.4 Center

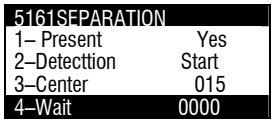
OK



This parameter is used to program the number of encoder pulses from the detection of the tray to the stop of the belt.
Use the number keypad to assign value.
Enter the required value between 0 and 999.
Press **OK** to record and pass to the next parameter.

7.16.5 Wait

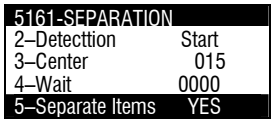
OK
ESC



It is programmed the waiting time in ms, it is used to delay the activation of the rejectors.
Use the number keypad to assign values (ms).
Press **OK** to record and pass to the next parameter.

7.16.6 Separate Items

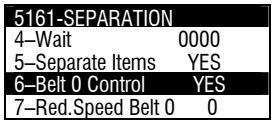
OK
ESC



There is the option to separate or not the trays on belt 1. If the trays are coming in too close, it will dispaly on screen a "P"
By using the key ➔ changes between YES or NO.
Press **OK** to record and pass to the next parameter.

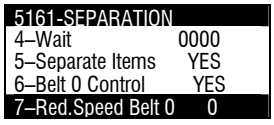
7.16.7 Belt 0 Control

OK
ESC



If there is a belt before the separation belt (called belt 0) this option will allow to control belt 0 the same way as the separation belt. By using the key ➔ changes between YES or NO.
Press **OK** to record and pass to the next parameter.

4.1.9 Red. Speed Belt 0

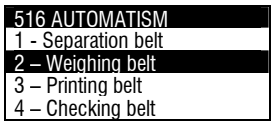


In case of controlling belt 0 , this parameter is use to reduce the speed on belt 0 respect the belt 1.
For example: - If the speed of the belts is 5 and belt 0 reduction speed is 2 , then the speed of belt 0 would be 3. This parameter is used to separate the trays that are coming onto separation belt.
The parameter number must be between 0 and 9
Press **OK** to validate, and **ESC** to exit.

OK
ESC

7.16.8 Weighing belt

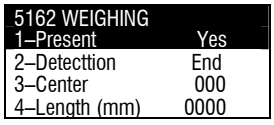
MENU
5
16
🡻
OK



From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, PLU key **16** and press **OK** , and then press 🡻 until reach to 2 – Weighing belt and pressing the key **OK**.
The parameters to be programmed are:

4.1.10 Present

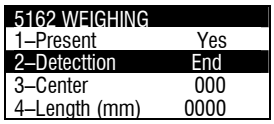
➔
OK



To program if the weighing belt is present.
With the key ➔ is possible to change between YES and NO.
Press **OK** to record and pass to the next parameter.

4.1.11 Detecttion

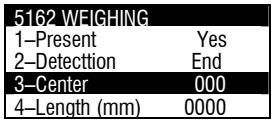
➔
OK



This parameter is used to progrsam the way of detection of the trays by the begin or by the end. (It mus be selected End).
With the key ➔ is possible to change between START and END
Press **OK** to record and pass to the next parameter.

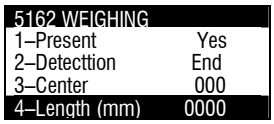
4.1.12 Center

OK



This parameter is used to program the number of encoder pulses from the detection of the tray to the stop of the belt.
Use the number keypad to assign values.
Enter the required value between 000 and 999
Press **OK** to record and pass to the next parameter.

4.1.13 Length



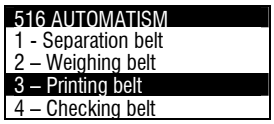
This parameter does not apply in the LS4000.
Press **OK** to validate, and **ESC** to exit.

OK
ESC

7.16.9 Printing Belt

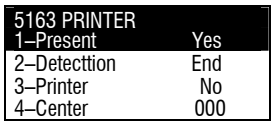
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, PLU key **16** and press **OK** , and then press **🡻** until reach to 3 – Printing belt and pressing the key **OK**.
The parameters to be programmed are:

MENU
5
16
🡻
OK



4.1.14 Present

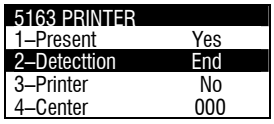
To program if the weighing belt is present.
With the key **➔** is possible to change between YES and NO.
Press **OK** to record and pass to the next parameter.



➔
OK

4.1.15 Detecttion

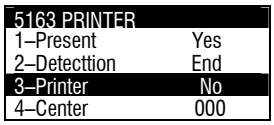
This parameter is used to program the way of detection of the trays by the begin or by the end., (It mus be selected End**)**.
With the key **➔** is possible to change between START and END
Press **OK** to record and pass to the next parameter.



➔
OK

4.1.16 Printer

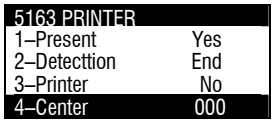
Program Presence Yes or Not of the labelling header.
With the key **➔** is possible to change between YES and NO.
Press **OK** to record and pass to the next parameter.



➔
OK

4.1.17 Center

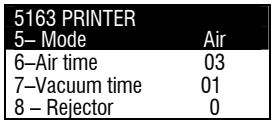
This parameter is used to program the number of encoder pulses from the detection of the tray to the stop of the belt.
Use the number keypad to assign values
Enter the required value between 0 and 999
Press **OK** to record and pass to the next parameter.



OK

4.1.18 Mode

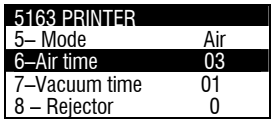
Type of application.
With the key **➔** is possible to change between Air , Air stoping, Piston, Piston continuos, Electric piston, Electric piston continuos and Underlabelling.
Press **OK** to record and pass to the next parameter.



➔
OK

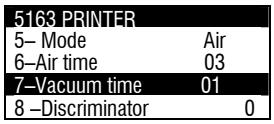
4.1.19 Label blowing time

Label blowing time in units of 10ms
Use the number keypad to assign values.
Enter the required value between 0 and 99. Default value is 03.
Press **OK** to record and pass to the next parameter.



OK

4.1.20 Vacuum time

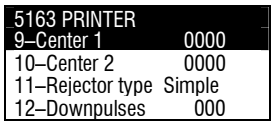


Vacuum time in units of 10ms (values from 0 to 99). Default value is 01.
Use the number keypad to assign values
Press **OK** to record and pass to the next parameter.

4.1.21 Discriminatorr

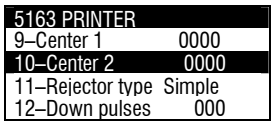
Number of rejectors in the labelling belt. (0 ,1 , or 2).
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

4.1.22 Center1



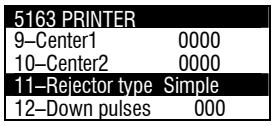
Number of encoder pulses until the first rejector.
Use the number keypad to assign values , and press **OK** to record and pass to the next parameter.

4.1.23 Center 2



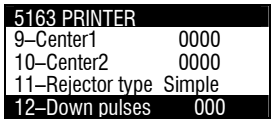
Number of encoder pulses until the second rejector.
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

4.1.24 Rejector Type



This allows to choose if the piston is to discriminate once or twice whenever it is enabled.
With the key ➔ is possible to change between Simple and Double
Press **OK** to record and pass to the next parameter.

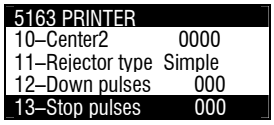
4.1.25 Down Pulses



Steps of the encoder of the labelling piston (1step=1,5mm)

Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

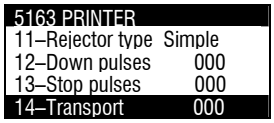
4.1.26 Stop Pulses



Steps up of the encoder after the activation of the pneumatic brake.(1step=1,5mm)
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

.

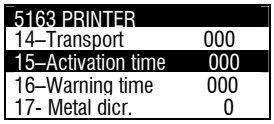
4.1.27 Transport



This paramerter is not in use yet.
Use the number keypad to assign values, and press **OK** to record and **ESC** to exit

4.1.28 Activation time

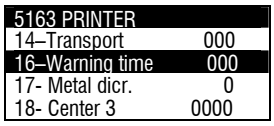
OK



Is the time in ms x10 that the reyector is going to be activated.
Use the number keypad to assign values, and press **OK** to record and **ESC** to exit

4.1.29 Warning timer

OK



Is the time in ms x10 that the signal for warning is going to be activated, I.e. activate a sound device
Use the number keypad to assign values, and press **OK** to record and **ESC** to exit

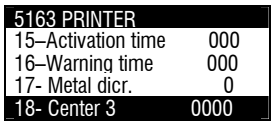
4.1.30 Metal discriminator

OK

Activate the discriminator for metal. Look at the chart below to configurate the discriminators.
Use the number keypad to assign values, and press **OK** to record and **ESC** to exit

4.1.31 Center 3

OK
ESC



Number of encoder pulses until the third rejector.
Use the number keypad to assign values, and press OK to record and pass to the next parameter.

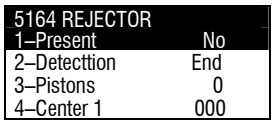
WEIGHT AND METAL REJECTOR CONFIGURATION

Discriminator	Metal Discrim.	Configuración	Resultado
0	0	-	No discrimination
0	1	M	Metal
1	0	MAB	All use same rejector
1	1	M / AB	1º Metal, 2º Above & Bellow
1	2	AB / M	1º Above & Bellow, 2º Metal
1	3	-	Not Valid
2	0	BM / A	1º Below & Metal, 2º Above
2	1	M / B / A	1º Metal, 2º Below, 3º Above
2	2	B / M / A	1º Below, 2º Metal, 3º Above
2	3	B / A / M	1º Below, 2º Above, 3º Metal

7.16.10 Checking belt

MENU
5
16
↓
OK

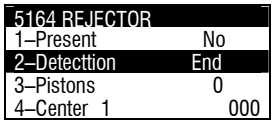
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, PLU key **16** and press **OK** , and then press ↓ until reach to 4 – Checking belt and pressing the key **OK**.
The parameters to be programmed are:



➔
OK

4.1.32 Present

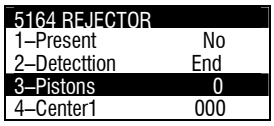
To program if the weighing belt is present.
With the key ➔ is possible to change between YES and NO.
Press **OK** to record and pass to the next parameter.



➔
OK

4.1.33 Detecttion

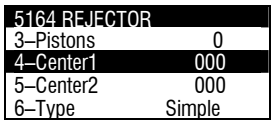
This parameter is used to program the way of detection of the trays by the start or by the end.
With the key ➔ is possible to change between START and END.
Press **OK** to record and pass to the next parameter.



OK

4.1.34 Pistons

Number of rejectors in the labelling belt. (0 ,1 , or 2).
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

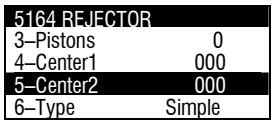


4.1.35 Center 1

Number of encoder pulses until the first rejector.
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

OK

4.1.36 Center 2

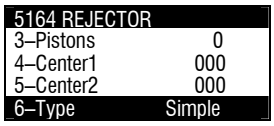


Number of encoder pulses until the second rejector.
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

OK

4.1.37 Type

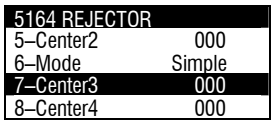
This allows to choose if the piston is to discriminate once or twice whenever it is enabled.



With the key ➔ is possible to change between Simple and Double
Press **OK** to validate, and **ESC** to exit.

➔
OK
ESC

4.1.38 Centering 3

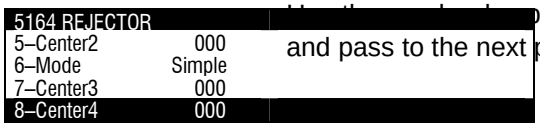


Number of encoder pulses until the third rejector.
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter

OK

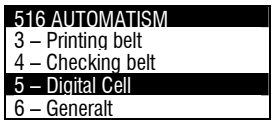
4.1.39 Centering 4

Number of encoder pulses until the fourth rejector.
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter



OK

7.16.11 Digital cell

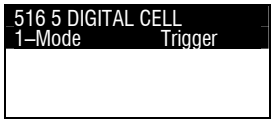


From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, PLU key **16** and press **OK** , and then press ⬇ until reach to 5 – Digital cell belt and pressing the key **OK**.
The parameters to be programmed are:

MENU
5
16
⬇
OK

4.1.40 Mode

Indicate if you wish the load cell to be sounded continuously, (if continuous is selected, it will take longer to weigh).



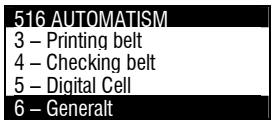
With the key ➔ is possible to change between Trigger and Continue.
Press **OK** to record and pass to the next parameter.

➔

OK

7.16.12 General

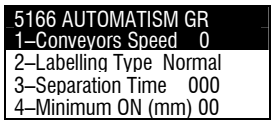
MENU
5
16
↓
OK



From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, PLU key **16** and press **OK** , and then press ↓ until reach to 6 General and pressing the key **OK**.
The parameters to be programmed are:

4.1.41 Conveyors Speed

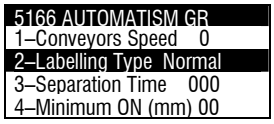
OK



Belts Speed
Enter the required value between 0 and 9.
Use the number keypad to assign values, and press **OK** to record and pass to the next parameter.

4.1.42 Labelling Type

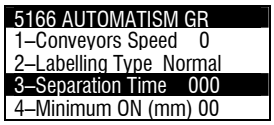
→
OK



With the key → is possible to change between NORMAL, NOT MOVING, MANUAL or SEMIAUTOMATIC.
Press **OK** to record and pass to the next parameter.

4.1.43 Separation Time

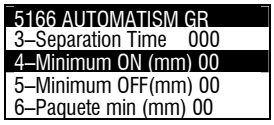
OK



This parameter does not apply in the LS4000.
Press **OK** to validate, and **ESC** to exit.

4.1.44 Minimum ON (mm)

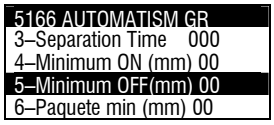
OK



Minimum distance that the detector must be active to be considered the beginning of product. Any detection below this value will not be taken in consideration by the machine. Enter the value in mm.
Press **OK** to store te data and pass the next parameter

4.1.45 Minimum OFF (mm)

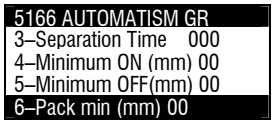
OK



Minimum distance that the detector must be NOT active to be considered the end of product. Any detection below this value will not be taken as the end of the product. Enter the value in mm.
Press **OK** to store te data and pass the next parameter

4.1.46 Pack min (mm)

OK



Enter the length in mm so once the beginning of product has been detected the detector wont send any signal till programmed length has elapsed. During this length it doesn't take into account the detection of the product. Used to prevent multiple detections in the product.

OK
ESC

Press **OK** to store the data and pass to the next parameter

4.1.47 Input Next Equipment

➔

OK

Connection to Input 24 of the equipment. The options are:

- NO: The equipment don´t consider the signal from the next equipment
- LOW LEVEL: Allows the sending of packages from the BACSA equipment to the next equipment when the input is at low level (0 V).
- HIGH LEVEL Allows the sending of packages from the BACSA equipment to the next equipment when the input is at high level (24 V).

Press **OK** to store the data and pass to the next parameter

➔

OK

4.1.48 Exit Previous Equipment

for LS/CW) or 16 (for GW/LW) of the BACSA equipment is connected to other equipment. The posible values are:

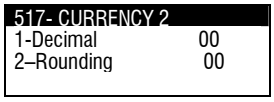
- NO The equipment don´t consider the signal from the next equipment
- LOW LEVEL Indicates to the previous equipment that it can feed the DIBALequipment when the signal is at low level (0 V).
- HIGH LEVEL Indicates to the previous equipment that it can feed the DIBALequipment when the signal is at high level (24 V).
- OCUP. BAJO Indicates to the previous equipment that it can feed the DIBALequipment when the signal is at low level (0 V) while the equipment is weighing.
- OCUP. ALTO Indicates to the previous equipment that it can feed the DIBALequipment when the signal is at low level (24 V) while the equipment is weighing.

Press **OK** to store the data and pass to the next parameter

MENU

5

🡻



4.1.49 Brake

Use this parameter to stop the conveyor belts gradually to avoid the product skiding on the belts. The possible values are 0, to 2. Where 0 means without gradually stop effect and 2 the highest stop effect possible.

OK

ESC

Press OK to store the data and pass to the next parameter

7.17 CURRENCY 2 (5 17)

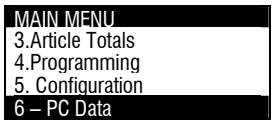
From the initial screen, Press **MENU** to enter in the main menu, press the key **5** to enter in the Configuration programming, and the key 🡻 until reach Configuration 17, (it is also possible by pressing the key ➔ to pass to the second screen of the menu and pressing 🡻 until reach Configuration 17) Currency 2 and pressing the key **OK**.

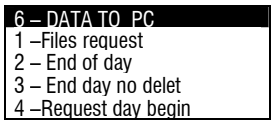
It allows the configuration of the number of decimals and the rounding off of sum 2 and price 2.

Press **ESC** to exit

8. PC DATA (6)

MENU
6





↑ ↓

OK

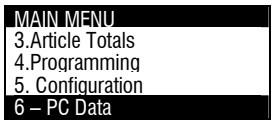
Using one of the scales' communication programs for working under commonly used operating systems (MS-DOS, MS-WINDOWS, UNIX,...), you can use the PC to do all the tasks related to set-up as well as obtain all the data concerning the transactions carried out by the scales for their subsequent computer processing.

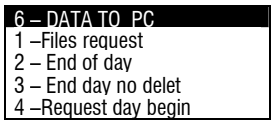
Back-up copies of the data of the labelling machine (backup) and the loading of the data (restore) can be made with the LBS program
The available programs are:

The following are the programs available:

	UTILITY	SCALE TYPE	OPERATING SYSTEM
COM	Communications Driver	All	Windows 9X, NT, XP
RMS	Scale configuration Store management	All	Windows 9X, NT, XP, Me
LBS	Backup	All	Windows 9X, NT, XP, Me

MENU
6





↑ ↓

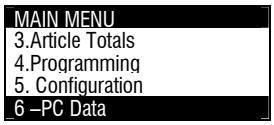
OK

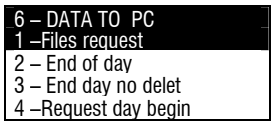
When operating, the RMS program must always be accompanied by the application COM, as the latter provides the computer with the necessary resources to enable the communications port (COM1 or COM2 or COMX) and set up communication with the scale.
From the initial screen, press the key **MENU**, the LS-4000 will show the main menu, then select **6** PC Data.

The LS-4000 will show the menu of sending and reception of data from/to PC.
To pass from an option to another use the keys ↓ to go down and ↑ to go up.
To select an option press **OK** when this option is highlighted.

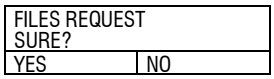
8.1 FILES REQUEST (6 1)

MENU
6
1





Δ YES



This operation allows you to send the all the from the computer to the scale by means of a suitable program like **RMS**.
To do so:
From the initial screen, Press **MENU** to enter in the main menu, press the key **6** to enter in the PC Data programming, the key **1** to enter in the Files Request.
The scale will show in the display the message FILES REQUEST, SURE?.
With the multifuction keys Δ YES

8.2 END OF DAY WITH DELETION (6 2)

This operation allows you to forward the data stored in the scale to the computer for their subsequent processing by a suitable program like **RMS**.
In addition, the totals accumulated in the different memories throughout the day will be cleared to zero.

MENU
6

MAIN MENU
3.Article totals
4.Programming
5. Configuration
6 – PC Data

2

6 – DATA TO PC PC
1 –Files request
2 – End of day
3 – End day no delet
4 –Request day begin

To do so:
From the initial screen, Press **MENU** to enter in the main menu, press the key **6** to enter in the PC Data programming, the key **2** to enter in the Send end of day with totals clearance.

Δ YES

END DAY WITH DELETION
SURE?
YES | NO

With the multifuction keys **Δ** YES

8.3 END OF DAY WITHOUT DELETION (6 3)

MENU
6

MAIN MENU
3.Article totals
4.Programming
5. Configuration
6 – PC Data

This operation allows you to forward the data stored in the scale to the computer for their subsequent processing by a suitable program like **RMS.**
The totals accumulated will NOT be cleared to zero.

3

6 – DATA TO PC PC
1 –Files request
2 – End of day
3 – End day no delet
4 –Request day begin

From the initial screen, Press **MENU** to enter in the main menu, press the key **6** to enter in the PC Data programming, the key **3** to enter in the Send end of day with totals clearance.

Δ YES

END DAY WITHOUT DEL.ET
SURE?
YES | NO

With the multifuction keys **Δ** YES

8.4 REQUEST FOR DAY BEGINNING (6 4)

MENU
6

MAIN MENU
3.Article totals
4.Programming
5. Configuration
6 – PC Data

This operation allows you to send the data on receipt text, the registering of sales assistants, section and department names, etc. from the computer to the scale by means of a suitable program like **RMS**.

4

6 – DATA TO PC PC
1 –Files request
2 – End of day
3 – End day no del
4 –Request day begin

From the initial screen, Press **MENU** to enter in the main menu, press the key **6** to enter in the PC Data programming, the key **4** to enter in the Send end of day with totals clearance.

Δ YES

REQUEST DAY BEGINNING
SURE?
YES | NO

With the multifuction keys **Δ** YES

8.5 L.B.S. (6 5)

MENU
6

MAIN MENU
3.Article Totals
4.Programming
5. Configuration
6 –Data PC

From the initial screen, Press **MENU** to enter in the main menu, press the key **6** to enter in the PC Data programming, the key **5** to enter in the LBS.

5

6 – DATA TO PC
2 – End of day
3 – End of day no delet
4 –Request day begin
5 –LBS

This option allows you to store all the machine's parameters and settings so that they can subsequently be processed in the PC and recovered by downloading the same.

With the multifuction keys **Δ** YES

Δ

LBS SELECTION
RECEIVE / SEND
SURE?
YES | NO

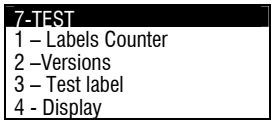
Once the operation has been done, press the key **ESC** to leave the programming.

ESC

9. TEST (7)

MENU

7
↓
OK



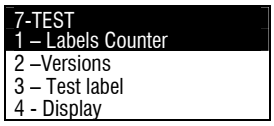
This operative allows to select the Test Mode in the LS-4000

From the initial screen, Press MENU to enter in the main menu, press the key 7 to enter in Test Mode.
Press ↓ to pass to the next parameter. After entering the value, press OK

The parameters to be programmed are the following:

9.1 LABELS COUNTER

MENU
7
1

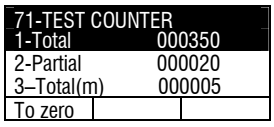


This parameters allows to see the total and partial counters of the labels printed.
From the initial screen, Press MENU to enter in the main menu, press the key 7 to enter in Test Mode, then press 1 to select Labels Counter.

To pass from one to another press the keys ↓ ↑ and to exit press the key ESC

9.1.1 Total Counter

↓

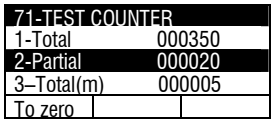


The LS-4000 machine will display the label printed since it was last initiated.

Press ↓ to pass to the partial counter.

9.1.2 Partial Counter

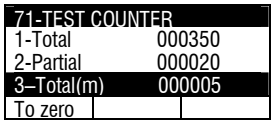
Δ TO ZERO
↓



The LS-4000 machine will display the label printed since the last time the partial counter was reset.

The partial counter can be set to zero pressing the multifunction key in the position Δ "TO ZERO".
Press ↓ to go on to total meter counter.

↓

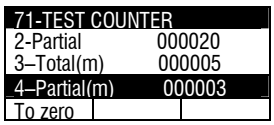


9.1.3 Total Metre Counter

The LS-4000 machine will display the metres of label printed since it was last initiated.

Press ↓ to go on to partial meter counter.

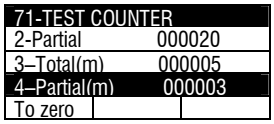
Δ TO ZERO
↓



9.1.4 Partial Metre Counter

The LS-4000 machine will display the metres of label printed since the last time the partial counter was reset.
The partial label metre counter can be reset by pressing the multifunction key on the partial counter Δ , marked TO ZERO.
Press ↓ to go on to the number of labels available.

ESC



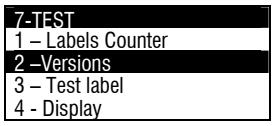
9.1.5 Available labels

This indicates the number of labels available in the labelling machine, providing the number of labels contained on the roll is inserted when the label roll is changed.
Press ESC to exit to initial Test mode.

9.2 VERSIONS

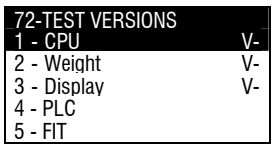
This parameter allows to see the versions of the CPU´s of the LS-4000.

MENU
7
2



From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **2** to select Versions.

The software versions of the different CPU´s are shown:



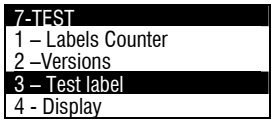
- **1** - CPU
- **2** – Weight
- **3** – Display
- 4 – Compact Flash
- **5** – PLC
- **6** – FIT

ESC

To exit press the key **ESC**

9.3 TEST LABEL

MENU
7
3



This parameter allows to print a test label to verify the functioning of the LS-4000 and verify the state of the thermal head.

From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **3** to select Test Label, the labeller will print the test label. Pressing the key **OK** it is possible to print more test labels.

ESC

Press **🡻** to pass to the next parameter or press **ESC** to exit.

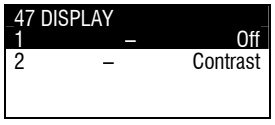
9.4 DISPLAY

MENU
7
4

From the main screen, press **MENU** to enter programming mode, key **7** to enter Test mode and then key **4** to access the Display parameter.

9.4.1 Switch-off

🡻

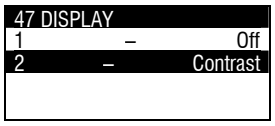


The time (in minutes) before the machine switches off after the last operation can be programmed.

Press **🡻** to go on to programme contrast.

9.4.2 Display contrast

OK
ESC



This parameter is for programming display contrast. After entering the value, press **OK**

Press **ESC** to exit the initial Test situation.

9.4.3 Decimal Symbol

In this parameter the decimal symbol is programmed. Once selected "." o "," press **OK**

Press **ESC** in order to exit the inicial Test situation para salir a la situación inicial de Test.

9.4.4 Motors Control

When the option YES is selected, this parameter allows to show on the screen test messages of the control board.

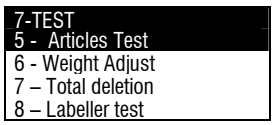
9.4.5 Speed

When the option YES is selected the equipment shows on the screen the number of packages per minute.

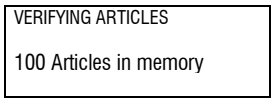
9.4.6 High precision

When the option YES is selected the equipment shows the weight with an additional digit.

9.5 ARTICLES TEST



MENU
7
5



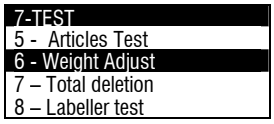
This parameter allows to make a test of the articles programmed in the labeller.
From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **5** to select Articles Test. The LS-4000 will show a message: VERIFYING ARTICLES, XX ARTICLES IN MEMORY.

Press **OK**.
Press **🡻** to pass to the next parameter or press **ESC** to exit.

OK
🡻
ESC

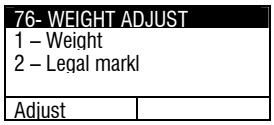
9.6 WEIGHT ADJUST

This operation must only be done by qualified staff, because the metrologic characteristics of the instrument will be modified.



From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **6** to select Weight Adjust.
The scale will show the data of weight in internal divisions and the value of the Legal for Trade Parameter.

MENU
7
6



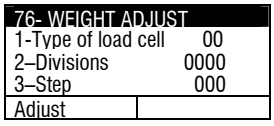
When the calibration procedure is done, the value of the parameter Legal Mark is increased.

It is possible also to show the internal weight adjust data of the labeller by pressing the multifunction key **Δ** ADJUST DATA. To return to the screen of weight adjust, press **OK**.

Δ ADJUST DATA

The procedure for weight adjust is the following:

With the labeller in the position of Weight Adjust, press the adjust button placed on the weighing CPU.



The labeller will show the following messages, to pass from one to another press **OK** or **🡻**

OK

9.6.1 Type of LoadCell

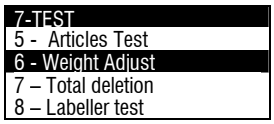
The type of load cell must be programmed as:0
Once the value has been entered press **OK**

OK

9.6.2 Divisions

Divisions of the loadcell
Once the value has been entered press **OK**

9.6.3 Step

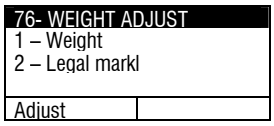


Step of the load cell in grams.
Select the value with the key ➔

Step	1	2	5	10	20	50	100	200	500

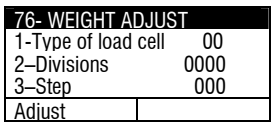
Once the value has been entered press **OK**

MENU
7
6



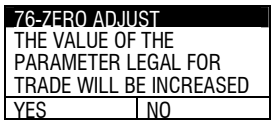
9.6.4 Weight Calibration

Once all the values have been programmed, press the multifunction key Δ marked as ADJUST.



Δ ADJUST DATA

The equipment will show a message " THE VALUE OF THE PARAMETER LEGAL FOR TRADE WILL BE INCREASED".
If the option YES is selected, it will be necessary to enter the password 0159 and press **OK**



OK

The equipment will show a message ZERO ADJUST, remove all the weights placed on the platform. Press the multifunction Δ key marked as YES, the display will show during several seconds a blinking message ZERO ADJUST.
Once the zero adjust has been done, the labeller will show a default value for weight according to the range selected.
This value can be modified using the numeric keyboard.

OK

Place calibrated weights on the weighing platform, with exactly the same weight shown in the display and wait several seconds for having this weight stable.

OK

The labeller will show a message WEIGHT ADJUST, remove all the weights placed on the platform. Press the key **OK** to start the weight adjust , the display will show during several seconds a blinking message WEIGHT ADJUST.

OK

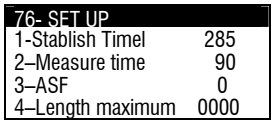
Once the weight adjust has been performed, the scale will return to the initial test situation.

➔

Once the calibration has been done, the value of the parameter Legal Mark (**MENU** **7** **6** **2**)will be increased.
This parameter allows to see the weight adjust data and make a weight adjust.

9.6.5 SET UP

OK



Enter the load cell values by speed reading. For each speed can be set different values.
These are the parameters to set:

Δ ADJUST

Stablish Time - Program the time when the weight capture occurs.
Measure Time - The length of time where the loadcell is measuring.

ASF – Filtering level applied to the loadcell. From 0 to 9. A higher value causes a slower weighing and more stable data.

Lenthg maximum (mm) – The machine wont weigh products that are longer than the value programed in this parameter. In this case it will show a "L" in the display.

Weigh maximum – – The machine wont weigh products that are heavier than the value programed in this parameter. In this case it will show a "L" in the display.

76- SET UP	
2–Measure time	90
3–ASF	0
4-Length max.	0000
5-Weigh max.	600

9.6.6 Stability

Programming the stability criteria for the detection of unstable weighings. The default value is 61. The first value is the stability criteria (value from1 to 9) and the second is the activation of an error signal to detect posible strange objects in the weight belt (values 0 or 1)

76- Stability	
1 OIML.	YES
2-Distance 1-2 (mm)	200
3-Distance 2-3 (mm)	350
4- Type of Motor	Crouzet

OIML – (YES/NO)

Distance 1-2 (mm) – Distance from the detector to the start of the weighing belt.

76- Stability	
3-Distance 2-3 (mm)	350
4- Type of Motor	Crouzet
5-Autozer	0
Timer zero	00

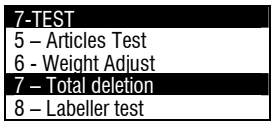
Distance 2-3 (mm) – Length of the weighing belt.

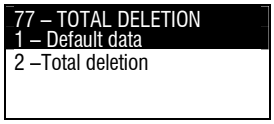
Type of motor – Is selected the type of motor the machine uses. Do not change this parameter.

Autozero - Setting this parameter to 1, the machine will do an autozero

Timer zero - Determine in seconds when the autozero is going to be made.

9.7 TOTAL DELETION





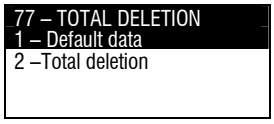
MENU
7
7

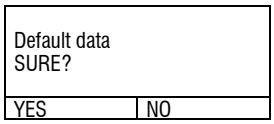
This parameter allows to make an initialisation (total deletion) of the labeller or a setting of the data to the default values.

From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **7** to select Total deletion.

There are two possibilities:

9.6.7 Default Data





MENU
7
7
1

Δ YES

The programmable data of the LS-4000 will be set to their default values.

From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **7** to select Initialisation, select **1** Default Data.

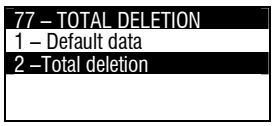
The scale will show a message DEFAULT DATA,

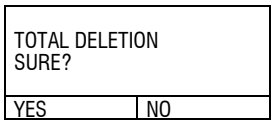
By pressing the multifunction key **Δ** YES, the programmable data of the scale will be set to the default values. The scale will show a blinking message DEFAULT VALUES.

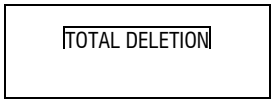
Press **Δ** NO to exit.

9.6.8 Total deletion

All the programmable dataon the LS-4000 will be deleted.







MENU
7
7
2

Δ YES

ESC

From the initial screen, Press **MENU** to enter in the main menu, press the key **7** to enter in Test Mode, then press **7** to select Initialisation, select **2** Total Deletion.

The scale will show a message TOTAL DELETION, SURE?.

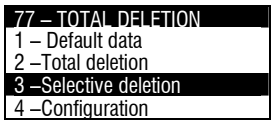
By pressing the multifunction key **Δ** YES, the programmable data of the scale will be set to the default values. The scale will show a blinking message TOTAL DELETION.
Press **Δ** NO to exit.

Press **ESC** to exit the initial Test situation

> ! After a total deletion it is necessary to create again all the PLU´s, label formats, headers, etc...

9.8 SELECTIVE DELETION

MENU
7
7
3



Possibility of making partial deletions of data. The posible data to be selected are:

Articles
Ingredients
Label Format
Recipes
Clients
Products
Windows Fonts
Quarterings

MENU
7
7
4

9.9 CONFIGURATION

This option allows to make a backup copy of the configuration parameters of the equipment which can be restored when necessary.

The data which can be saved/restored are the data of Menu 5 (with the exception of Menu 5.1. Date and Time)

The possible configuration to be saved are:

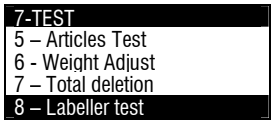
Configuration 1: Configuration reserved for factory programmed parameters. It can only be modified with password. It can be restored at anytime.

Configuration 2: It can be saved or restored by the customer without password.

Configuration 3: It can be saved or restored by the customer without password.

9.10 MACHINE TEST

MENU
7
8

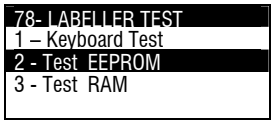


This paragraph allows to make a test of the LS-4000 functioning.

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
The parameters to be programmed are:

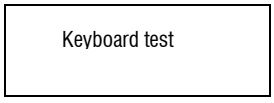
9.10.1 Keyboard Test

MENU
7
8
1



It is possible to make a keyboard test.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **1** Keyboard Test.
When a key is pressed, its function is shown in the display.

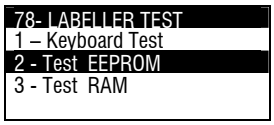
ESC
ESC



The LS-4000 will show the message, KEYBOARD TEST, and when pressing each one of the keys, it will show the incation on the display.
Press **ESC** to finish the keyboard.
Press **ESC** to exit Test.

9.10.2 EEPROM Test

MENU
7
8
2



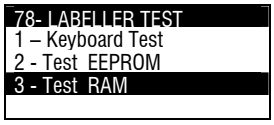
It is possible to make a functional test of the EEPROM Memory.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **2** EEPROM Test..
The LS-4000 will show a message OK if the test is OK or ERROR if there is a problem.

ESC

Press **ESC** to exit Test.

MENU
7
8
3

9.10.3 RAM Test



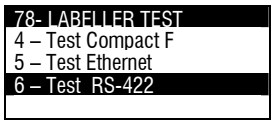
It is possible to make a functional test of the RAM Memoy.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **3** RAM Test.

ESC

The LS-4000 will show a message OK if the test is OK or ERROR if there is a problem.
Press **ESC** to exit Test.

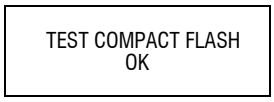
MENU
7
8
4

9.10.4 COMPACT FLASH Test



It is possible to make a functional test of the COMPACT FLASH.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **4** COMPACT FLASH Test.

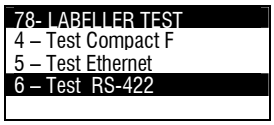
ESC

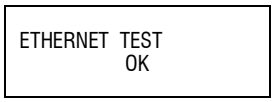


The LS-4000 will show a message OK if the test is OK or ERROR if there is a problem.
Press **ESC** to exit Test.

9.10.5 ETHERNET Test

MENU
7
8
5



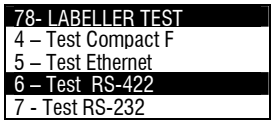


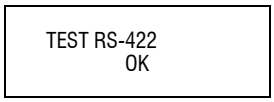
ESC

It is possible to make a test of the Ethernet Communications Channel.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **5** ETHERNET Test..
It is necessary to make a junction between the pins of the Ethernet (See section 12.13 connector.)
Once the test is finished the LS-4000 will show a message OK or ERROR..
Press **ESC** to exit Test.

9.10.6 RS-422 Test

MENU
7
8
6



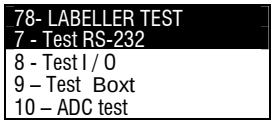


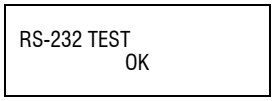
ESC

It is possible to make a test of the RS-422 Communications Channel.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **6** RS-422 Test..
It is necessary to make a junction between the pins of the RS-422.
Once the test is finished the LS-4000 will show a message OK or ERROR..
Press **ESC** to exit Test.

9.10.7 RS-232 Test

MENU
7
8
7





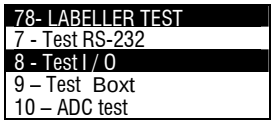
ESC

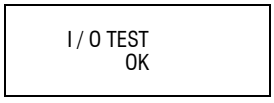
It is possible to make a test of the RS-232 Communications Channel.
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Select **7** RS-232 Test.
It is necessary to make a special junction between the pins of the RS-232.
Once the test is finished the machine will show a message OK or ERROR.

Press **ESC** to exit Test.

9.10.8 Inputs/Outputs Test

MENU
7
8
8





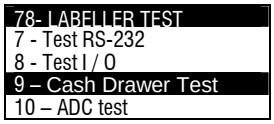
ESC

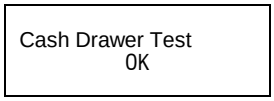
The LS-4000 allows to make a functional test of the inputs outputs.

From the main screen press **MENU** to enter in programming mode, select **7** RS-232 Test and press **8** to select Labeller Test.
Select **8** INPUTS/OUTPUTS Test.
It is necessary to make a special junction between the pins of the I/O.
Once the test is finished the machine will show a message OK or ERROR.

Press **ESC** to exit Test.

9.10.9 Cash Drawer Test





MENU
7
8
9
ESC

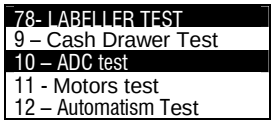
The LS-4000 allows to make a test of the 24V output.

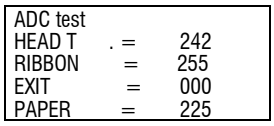
From the main screen press **MENU** to enter in programming mode, select **7** RS-232 Test and press **8** to select Labeller Test.
Select **9** Cash Drawer Test.

Press **ESC** to exit Test.

9.10.10 ADC Test

The LS-4000 allows to make a test of the printing elements.





MENU
7
8
🡻
10

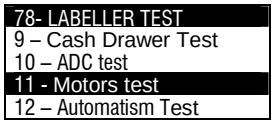
ESC

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press **🡻** until reach 10 ADC Test, and press **OK**
It will be shown the data of:

- Thermal head Temperature.
- Ribbon Detection.
- Detection of exit label
- Detection of paper (label or back paper)

Press **ESC** to exit. Test

9.10.11 Motors Test



MENU
7
8
🡻
11

🡻
OK

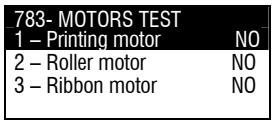
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press **🡻** until reach **11** Motors test, press **OK**.

It is possible to test the motors of :

- Printing,
- Paper roller
- Ribbon.

Use the keys **🡻** **🡹** to highlight the motor or press **OK**

9.10.12 Motor Printer

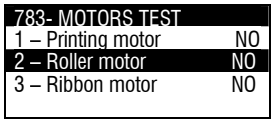


MENU
7
8
🡻
11

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press **🡻** until reach **11** Motors test, press **OK**.

Use the keys **🡻** **🡹** to highlight 1 Motor Printer and press **🡺** to switch between YES and NO (YES= Motor ON, NO= Motor OFF):

9.10.13 Motor Roller



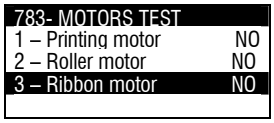
MENU
7
8
11
🡻 **🡹**
🡺

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press **🡻** until reach **11** Motors test, press **OK**.

Use the keys **🡻** **🡹** to highlight 2 Motor Roller and press **🡺** to switch between YES and NO (YES= Motor ON, NO= Motor OFF):

9.10.14 Motor Ribbon

MENU
7
8
11
↓ ↑
→



From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 11 Motors test, press **OK**.

Use the keys ↓ ↑ to highlight 3 Motor Ribbon and press → to switch between YES and NO (YES= Motor ON, NO= Motor OFF):

9.10.15 Automatism Test

MENU
7
8
12
↓ ↑

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 12 Automatism Test, press **OK**.
It is possible to test the automatism of conveyor 1, conveyor 2, conveyor 3, conveyor 4 and photocelules.
Use the keys ↓ ↑ to highlight the automatism or press **OK**

9.10.16 Conveyors

MENU
7
8
12
↓ ↑

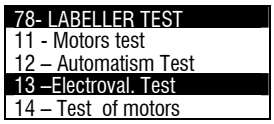
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 12 Automatism Test, press **OK**.
Use the keys ↓ ↑ to highlight 1 Conveyor 1 or 2 Conveyor 2, or 3 Conveyor 3.
Select Yes by pressing → to switch on the motor of belt 1.
Select No by pressing → to switch off the motor of belt 1.

9.10.17 Photocells

MENU
7
8
12
↓ ↑

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 12 Automatism Test, press **OK**.
Use the keys ↓ ↑ to highlight 5 Photocelules.
When a photocell is detecting a package, a 1 is shown on the display, when the photocell is not detecting a 0 is shown on the display.

9.10.18 Electrovalve Test

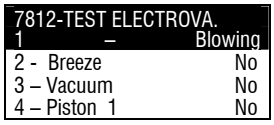


This test is used to verify the functioning of the electrovalves and the vacuum fans for the AirJet labels applicator

From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 13 Electrovalves. Test, press **OK**.

MENU
7
8
13
↓ ↑

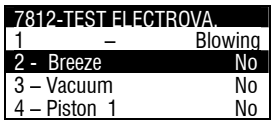
It is possible to test the electrovalves of : Blowing, Breeze , Vacuum and Piston.
Use the keys ↓ ↑ to highlight the electrovalve or press **OK**



Blowing

Select Yes by pressing → to switch on the blowing electrovalve.

→

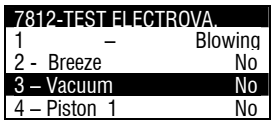


4.1.50 Breeze

→

Select Yes by pressing → to switch on the breeze electrovalve.

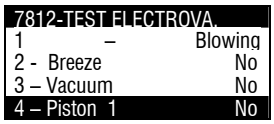
→



4.1.51 Vacuum

Select Yes by pressing → to switch on the vacuum fans.

→

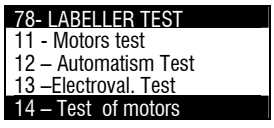


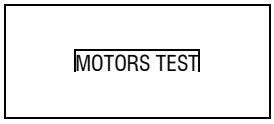
4.1.52 Pistons 1, 2, 3 and 4.

Select YES by pressing → to switch on the Piston 1, 2, 3 or 4.

9.10.19 Motors Test

MENU
7
8
14
ESC



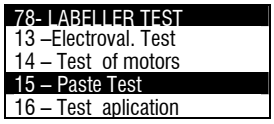


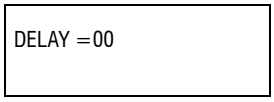
From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 14 Test of Motors, press **OK**.

The equipment will make a sequential test of the motors functioning.
Press **ESC** to exit.

9.10.20 Labels blowing test

MENU
7
8
15
ESC

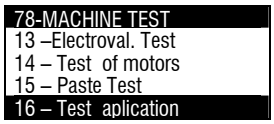


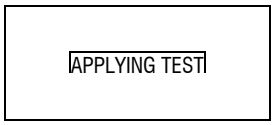


From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 15 Paste Test, press **OK**.
Press **ESC** to exit.

9.10.21 Aplication Test

MENU
7
8
16
ESC





From the main screen press **MENU** to enter in programming mode, select **7** Test and press **8** to select Labeller Test.
Press ↓ until reach 16 Aplication Test, press **OK**.
Press **ESC** to exit.

9.11 PASSWORDS

MENU
7
9
ESC

From the home screen, press **MENU** to enter programming mode, then **7** to enter Test mode. Press **9** to select Passwords.
Use ↓ ↑ to select the parameter for assigning a 4-digit password using the number keys:

Manager: This password will give access to all menus on the machine, except for the Settings (5) and Test (7) menus.

Technician: This password will give access to all menus on the machine.

User: This password only gives access to items with their PLUS or direct-access keys, and to label printing.

Time: Time in seconds that the machine will re-request the password.

Cancel softkeys: With this password is removed the access to the menus using the direct soft keys.

Press **ESC** to leave the Test menu.

9.12 PRINTER LOADING

Allow to update the printer board

10. CLIENTS TOTALS (8)

This parameter allows to select the client which totals will be shown in the display or printed.

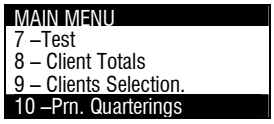
11. SELECTION OF CLIENTS (9)

This parameter allows to select the client used to work in client mode, so all the articles labelled will be accumulated to this client.

12. PRINT QUARTERINGS (10)

OK

Δ



From the main menu, select parameter 10 and press **OK** to go to printing of cuts.
The cut code can be entered directly or using the list of cuts by pressing **Δ**. Use either method to go to a menu in which the following can be selected:

1. Quantity (number of times the channel will be printed).
2. Mode (Unit or Group form of printing).

In the Unit mode, each channel piece is printed one by one, and the operation is repeated as many times as indicated in the quantity parameter.
In the Group mode, each channel piece is printed as many times as indicated in the quantity parameter before the next piece is printed. Printing ends when the last cut piece has been printed.

Δ

OK

After selecting quantity and printing mode, start printing by pressing softkey 1 **Δ** (PRINT).
Enter the product (animal) code associated with the cut. Press **OK**. Printing will then commence automatically.

13. ANNEX

13.1 CHANGE OF PAPER ROLL IN THE LS 4000

Turn the metal lever that release the printerhead anticlockwise.

Turn round the applicator to make it easy to fit new label roll

Remove the safety screw and put the reel in place

Fit back the reel holdelr and beging to guide the paper over the rollers

Slide the paper under the printhead

Slide the paper under the air auxiliary metal tube

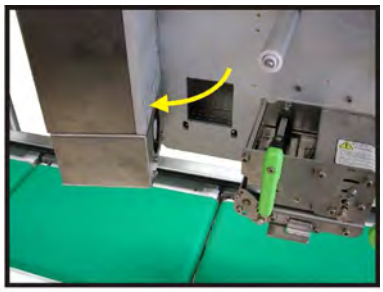
Guide the paper to the tractor roll follow the direction of the rollers

Hold the paper down with the clip onto the collector roller

Put back the applicator into the working position

1. Unscrew the securing screw holding the reel of paper.

2. Put the new reel in place and screw back

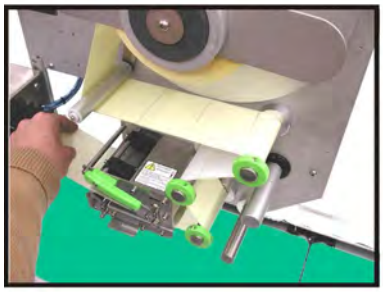


3. Turn the applicator

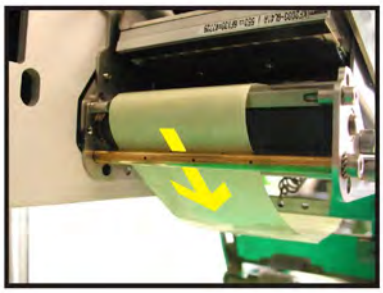
4. Turn the green lever anti-clockwise

5. Turn the backpaper roller anticlockwise

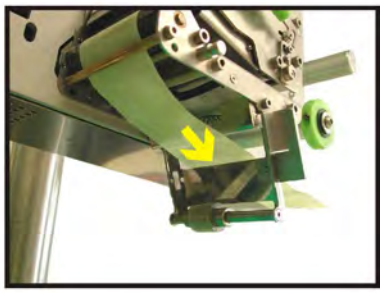
6. Remove the clip which holds the remaining back paper



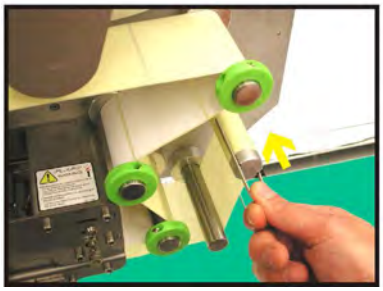
7. Pass the paper under the rollers



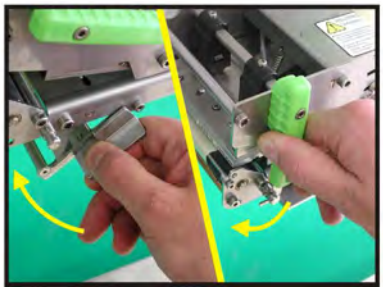
8. Pass the back paper over the breeze bar



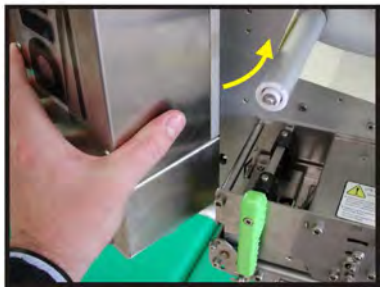
9. Pass the back paper inside of the holding backpaper element



10. Pass the back paper through the low until reach the picker and hold it with the clip



11. Turn the green lever and the backpaper holder clockwise to hold the paper



12. Put the applicator in the working position

13.2 DISPLAY MODE

Labelling machine LS-4000 offers an option for display mode operation. To do this, go to the start screen and press the quick access key that is above the PLU 6 key.

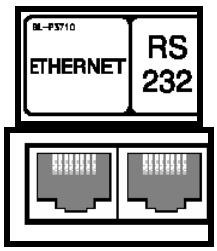
To return to the start screen, press any key except the tare key. The tare key has the same function as in the normal weight display mode.

13.3 CONNECTORS

The connectors of the labeller are the following:

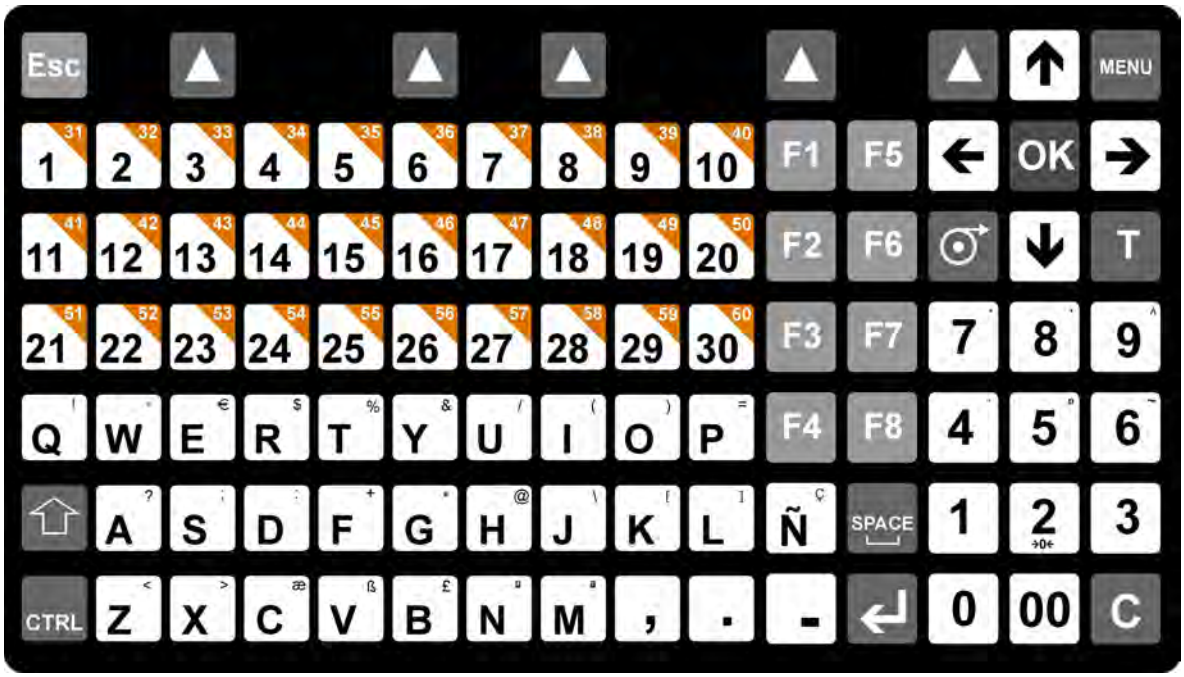
13.4 COMMUNICATIONS

The communication connectors are the following:



	Connector marked as ETHERNET ETHERNET Communication
	Connection to Peripherals

13.5 KEYBOARD DESCRIPTION



13.6 SHORTCUT KEYS

The shortcut keys of the equipment are the following:

B - "Labelling without moving belts". The belts are stopped to weight the product and to apply the label.
C - "Copy of label. The equipment prints a copy of the last printed label.
D – Manual labelling.
E – There are two posible functions:
When the equipment is not multi-header. Semiautomatic labelling.
Multi-header equipment. Copy of the label in the slave equipment.
F - Date
K – Edition of Heading Line 1
M – Edition of Heading Line 2.
N – Normal labelling.
Ñ - "Only Apply". I weights, accumulate, blow but doesn´t print the label.
L – Edition of batch Number
P – New PLU selection
Q – Change of peripheral device.
S – Stop and Start of the belts
T - Totals.
V – Indicator Mode
W – Edition of the weight of the package
F1 – Repeat Last Label
F2– Cancel Label
F3– Mode "Discount"
F4– Mode "Not Accumulate"
F8– Mode "Not Print"

13.7 STANDARD INGREDIENTS CODES

A
0000 ACETIC ACID
0001 ACID CALCIUM PHOSPHATE
0002 ACID SODIUM
0003 ACIDIFIER
0004 ACIDIFIERS
0005 ACIDIFIERS:
0006 ACIDITY REGULATOR
0007 ACIDS
0008 ACIDULANTS
0009 ADDITIVES
0010 ADDITIVES:
0011 AGLUTINANT
0012 AGLUTINANTS:
0013 ALBUMIN
0014 ALCOHOL
0015 ALKALINIZER
0016 ALKALINIZERS
0017 ALKALINZERS:
0018 ALMONDS
0019 AMMONIA BICARBONATE
0020 AMMONIUM CARBONATE
0021 ANCHOVIES
0022 ANIMAL FAT
0023 ANIMAL FATS
0024 ANIMAL FATS:
0025 ANIMAL PROTEIN
0026 ANISEED
0027 ANISEED SPIRITS
0028 ANTIAGLUTINANTS
0029 ANTIAGLUTINANTS:
0030 ANTIAGLUTINENT
0031 ANTICOAGULANT
0032 ANTICOAGULANTS
0033 ANTICOAGULANTS:
0034 ANTIOXIDANT
0035 ANTIOXIDANTS:
0036 APPLE
0037 APPLE EXTRACT
0038 APPLES
0039 APRICOTS
0040 AROMAS
0041 AROMATIC AGENTS
0042 AROMATIC AGENTS:
0043 ARTICHOKES
0044 ARTIFICIAL
0045 ARTIFICIAL AROMA
0046 ARTIFICIAL AROMAS
0047 ARTIFICIAL AROMAS:
0048 ARTIFICIAL SWEETENER
0049 ARTIFICIAL SWEETENERS
0050 ARTIFICIAL SWEETENERS:
0051 ARTIFICIALS
0052 ASCORBIC ACID
0053 ASPARAGUS
0054 ASPARAGUS STEMS
0055 AUBERGINES
B
0200 BACON
0201 BANANA
0202 BANANAS
0203 BARLEY
0204 BARLEY GERM
0205 BATTER
0206 BAY LEAF
0207 BEANS
0208 BEANS:
0209 BECHAMEL SAUCE
0210 BEEF
0211 BEEF DRIPPING
0212 BEEF & ONION SEASONING
0213 BEEF / LAMB`S FAT
0214 BEER
0215 BEETROOT
0216 BELLY
0217 BICARBONATE
0218 BISCUIT
0219 BISCUITS
0220 BLACK PEPPER
0221 BLACK PUDDING
0222 BLACKBERRIES
0223 BLACKBERRY EXTRACT
0224 BLOOD
0225 BOILED EGG
0226 BRAN
0227 BRANDY
0228 BRAZIL NUTS
0229 BREAD
0230 BREADCRUMBS
0231 BROAD BEANS
0232 BROWN BREAD
0233 BROWN SUGAR
0234 BUTTER
0235 BEST BEFORE
C
0300 CABBAGE
0301 CAFFEINE
0302 CAKE
0303 CALCIUM
0304 CALCIUM CARBONATE
0305 CAMOMILE TEA
0306 CANE SUGAR
0307 CAPSANTHIN
0308 CARAMEL
0309 CARBONATES
0310 CARBONIC WATER
0311 CAROB BEANS
0312 CARROT
0313 CARROT JUICE
0314 CARROTS
0315 CASEIN
0316 CASEINATES
0317 CAULIFLOWER
0318 CELERY
0319 CELLULOSE
0320 CEREAL
0321 CEREALS
0322 CHEDDAR CHEESE
0323 CHEESE
0324 CHERRIES
0325 CHERRY
0326 CHESTNUTS
0327 CHICK PEAS
0328 CHICKEN
0329 CHICKEN BREAST
0330 CHICKEN LIVER
0331 CHILLI BEANS
0332 CHILLI POWDER
0333 CHILLIES
0334 CHIVES
0335 CHLORIDE
0336 CHOCOLATE
0337CHOCOLATE GLACE
0338 CHOCOLATE SUBSTITUTE
0339 CIDER
0340 CINNAMON
0341 CITRIC ACID
0342 COCHINEAL
0343 COCKLE
0344 COCOA
0345 COCONUT
0346 COFFEE
0347 COGNAC
0348 COLOMBIA
0349 COLOUR
0350 COLOURANTS
0351 COMPOSITION
0352 CONCENTRATE
0353 CONDIMENTS
0354 CONFITURE
0355 CONSERVANTS
0356 CONSERVATOR
0357 CONSERVATORS
0358 CONSERVATORS:
0359 CONTAINS
0360 CORIANDER
0361 CORN
0362 CORN GERM
0363 CORN OIL
0364 CORNFLOUR
0365 CORNSTARCH
0366 COTTAGE CHEESE
0367 COURGETTE
0368 COW`S MILK
0369 CRAB
0370 CREAM
0371 CREAM CHEESE
0372 CRUMB
0373 CUCUMBER
0374 CUMIN
0375 CURCUMIN
0376 CURED CHEESE
0377 CURRANTS
0378 CUSTARD
D
0500 DAMSONS
0501 DATES
0502 DEHYDRATED EGG
0503 DEXTROSE
0504 DILL
0505 DOUGH
0506 DRIED GLUCOSE SYRUP
0507 DRIED PEPPER
0508 DRIED PRUNES
0509 DRIED SKIMMED MILK
0510 DRIED SMOKED SALMON
0511 DRIED SOY SAUCE
0512 DRIED TOMATO
0513 DUCK
0514 DUCK`S BREAST
0515 DUCK`S LIVER
E
0600 EDIBLE FATS
0601 EELS
0602 EGG
0603 EGG WHITE
0604 EGG YOLK
0605 EGG YOLKS
0606 EGGS
0607 EMULGENTS
0608 EMULGENTS:
0609 EMULSIFIER (E-466)
0610 ENHANCED AROMA
0611 ENHANCED AROMAS
0612 ENHANCED AROMAS:
0613 ENZYMES BRINE
0614 ENZYMES: 0615 ESSENCE
0616 E-100
0617 E-101
0618 E-102
0619 E-104
0620 E-110
0621 E-120
0622 E-122
0623 E-123
0624 E-124
0625 E-127
0626 E-131
0627 E-132
0628 E-140
0629 E-141
0630 E-142
0631 E-150
0632 E-151
0633 E-153
0634 E-160(a)
0635 E-160(b)
0636 E-160(d)
0637 E-160(e)
0638 E-160(f)
0639 E-161
0640 E-161(a)
0641 E-161(b)
0642 E-161(c)
0643 E-161(d)
0644 E-161(e)
0645 E-161(f)
0646 E-161(g)
0647 E-162
0648 E-163
0649 E-170
0650 E-171
0651 E-172
0652 E-173
0653 E-174
0654 E-175
0655 E-200
0656 E-201
0657 E-202
0658 E-203
0659 E-210
0660 E-211
0661 E-212
0662 E-213
0663 E-214
0664 E-215
0665 E-216
0666 E-217
0667 E-218
0668 E-219
0669 E-220
0670 E-221
0671 E-222
0672 E-223
0673 E-224
0674 E-226
0675 E-249
0676 E-250
0677 E-251
0678 E-252
0679 E-260
0680 E-261
0681 E-262
0682 E-263
0683 E-270
0684 E-280
0685 E-281
0686 E-282
0687 E-283
0688 E-290
0689 E-300
0690 E-301
0691 E-302
0692 E-303
0693 E-304
0694 E-306
0695 E-307
0696 E-308
0697 E-309
0698 E-310
0699 E-311
0700 E-312
0701 E-320
0702 E-321
0703 E-322
0704 E-325
0705 E-326
0706 E-327
0707 E-330
0708 E-331
0709 E-332
0710 E-333
0711 E-334
0712 E-335
0713 E-336
0714 E-337
0715 E-338
0716 E-339
0717 E-339(i)
0718 E-340
0719 E-340(i)
0720 E-341
0721 E-400
0722 E-401
0723 E-402
0724 E-403
0725 E-404
0726 E-405
0727 E-407
0729 E-410
0730 E-412
0731 E-413
0732 E-414
0733 E-415
0734 E-420
0735 E-421
0736 E-422
0737 E-440
0738 E-450
0739 E-450(a)
0740 E-450(i)
0741 E-460
0742 E-461
0743 E-463
0744 E-464
0745 E-465
0746 E-466
0747 E-470
0748 E-471
0749 E-472
0750 E-473
0751 E-474
0752 E-475
0753 E-477
0754 E-481
0755 E-482
0756 E-483
F
0900 FAT
0901 FATS
0902 FIBRE
0903 FIG
0904 FIGS
0905 FISH
0906 FISH ESSENCE
0907 FISH EXTRACT
0908 FISH FUMET
0909 FLAKY PASTRY
0910FLAVOUR ENHANCER
0911 FLAVOURING
0912 FLOUR
0913 FRESH ONION
0914 FRUCTOSE
0915 FRUIT
0916 FRUIT EXTRACT
0917 FRUIT NECTAR
0918 FRUITS
G
1000 GALACTOSE
1001 GARLIC
1002 GARLIC EXTRACT
1003 GASIFIER
1004 GASIFIERS
1005 GASIFIERS:
1006 GELATINE
1007 GELIFIER
1008 GELIFIERS
1009 GELIFIERS:
1010 GHERKINS
1011 GINGER
1012 GLACEED
1013 GLUCOSE
1014 GLUCOSE SYRUP
1015 GLYCERINE
1016 GLYCERINES
1017 GOAT`S CHEESE
1018 GOAT`S MILK
1019 GOOSE
1020 GOOSE LIVER
1021 GRAPE JUICE
1022 GRAPEFRUIT
1023 GRAPEFRUIT JUICE
1024 GRAPES
1025 GREEN BEANS
1026 GREEN CHILLI PEPPERS
1027 GREEN PEPPERS
1028 GRENADINE
1029 GROUPER
1030 GUAR GUM
H
1100 HAKE
1101 HAM
1102 HARD BOILED EGG
1103 HARDENER
1104 HARDENERS
1105 HARDENERS:
1106 HAZELNUTS
1107 HERBS
1108 HERBS:
1109 HERRING
1110 HONEY
1111 HUMECTANT
1112 HUMECTANTS
1113 HYDROGENATED VEGETABLE OIL
1114 HYDROLIZED
1115 HYDROLYSED VEGETABLE PROTEIN
1116 HYDROL. PROTEINS
1117 H-3243
1118 H-3246
1119 H-3247
1120 H-3250
1121 H-4381
1122 H-4382
1123 H-4383
1124 H-4384
1125 H-4385
1126 H-4386
1127 H-4387
1128 H-4388
1129 H-4389
1130 H-4390
1131 H-4391
1132 H-4392
1133 H-4393
1134 H-4394
1135 H-4395
1136 H-4421
1137 H-4422
1138 H-4423
1139 H-4424
1140 H-4425
1141H-4436
1143 H-4437
1144 H-4438
1145 H-4439
1146 H-4440
1147 H-4511
1148 H-4512
1149 H-4521
1150 H-5514
1151 H-5801
1152 H-5804
1153 H-5805
1154 H-5810
1155 H-5812
1156 H-5813
1157 H-5814
1158 H-5816
1159 H-5817
1160 H-6880
1161 H-6881
1162 H-6882
1163 H-6884
1164 H-6886
1165 H-6887
1166 H-7034
1167 H-7093
1168 H-7103
1169 H-7120
1170 H-7170
1171 H-7171
1172 H-7172
1173 H-7173
1174 H-7174
1175 H-7175
1176 H-7176
1177 H-7177
1178 H-7194
1179 H-7198
1180 H-7199
1181 H-7217
1182 H-7218
1183 H-8001
1184 H-8002
1185 H-8006
1186 H-8016
1187 H-8020
1188 H-8030
1189 H-8036
1190 H-8050
1191 H-8051
1192 H-8052
1193 H-8053
1194 H-8058
1195 H-8066
1196 H-8080
1197 H-8085
1198 H-8086
1199 H-8110
1200 H-8131
1201 H-8140
1202 H-8162
1203 H-8186
1204 H-9845
1205 H-10056
1206 H-10062
1207 H-10068
1208 H-11061
1209 H-11091
1210 H-11106
1211 H-11134
1212 H-11135
1213 H-11181
1214 H-11182
1215 H-11185
I
1300 INGREDIENTS
1301 INGREDIENTS:
1302 INTRIFICANTS
1303 IRON
J
1400 JELLIED FRUIT
1401 JELLY
1402 JUICES
K
1500 KIDNEY BEANS
1501 KIPPER
1502 KIPPERS
1503 KIWI
1504 KEEP REFRIGERATED
1505 KILO
L
1600 LACTEOUS
1601 LACTOFLAVINE
1602 LAMB
1603 LAMB`/ PORK`S FAT
1604 LEAN
1605 LEAN BEEF
1606 LEAN PORK
1607 LECITHIN
1608 LEEK
1609 LEEKS
1610 LEMON
1611 LEMON EXTRACT
1612 LEMON JUICE
1613 LEMONS
1614 LENTILS
1615 LETTUCE
1616 LIGHT SAUCE
1617 LIME
1618 LINSEED
1619 LIQUEUR
1620 LIQUID CARAMEL
1621 LIQUORICE
1622 LIVER
M
1800 MACARONI
1801 MACKEREL
1802 MAGNESIUM
1803 MALT
1804 MALT GERM
1805 MALT VINEGAR
1806 MALTODEXTRIN
1807 MANDARIN
1808 MANDARINS
1809 MANGANESE
1810 MARGARINE
1811 MARZIPAN
1812 MAYONNAISE
1813 MEAT
1814 MEAT EXTRACT
1815 MELTED CHEESE
1816 MERINGUE
1817 MILK
1818 MILK PRODUCTS
1819 MINERAL
1820 MINERAL WATER
1821 MINERALS

1822 MINT
1823 MODIFIED STARCH
1824 MODIFIER
1825 MOD. ORGANOLEPTIC
1826 MOLASSES
1827 MONOSODIUM GLUTAMATE
1828 MOZZARELLA CHEESE
1829 MUSHROOMS
1830 MUSSELS
1831 MUSTARD
1832 MUSTARD SEEDS

N

2000 NATURAL AROMA
2001 NATURAL AROMAS
2002 NATURAL AROMAS:
2003 NATURAL JUICES
2004 NATURAL SKINS
2005 NATURAL SPICES
2006 NATURAL SWEETENER
2007 NATURAL SWEETENERS
2008 NATURAL SWEETENERS:
2009 NECTAR
2010 NEUTRALISER
2011 NEUTRALISERS
2012 NEUTRALISERS:
2013 NITRIFICANTS:
2014 NOODLES

O

2100 OATGERM
2101 OATS
2102 OIL
2103 OLIVE OIL
2104 OLIVES
2105 ONION
2106 ORANGE
2107 ORANGE BRANDY
2108 ORANGE EXTRACT
2109 ORANGE JUICE
2110 ORANGES
2111 OREGANO
2112 ORGANOLEPTIC MODIFIER
2113 OX TONGUE
2114 OXYGENATED WATER
2115 OYSTERINE
2116 OYSTERS

P

2200 PAPRIKA
2201 PARMESAN CHEESE
2202 PARMESAN CHEESE POWDER
2203 PARSLEY
2204 PARTRIDGE
2205 PARTRIDGES
2206 PASTA
2207 PEACH
2208 PEACH BRANDY
2209 PEACH JUICE
2210 PEACHES
2211 PEANUT BUTTER
2212 PEANUTS
2213 PEAR
2214 PEAR JUICE
2215 PEARS
2216 PEAS
2217 PEPPER
2218 PEPPERS
2219 PH REGULATOR
2220 PHEASANT
2221 PHOSPHATE
2222 PHOSPHATES
2223 PHOSPHOROUS
2224 PIG´S LIVER
2225 PIG´S TROTTERS
2226 PIGEON
2227 PINE KERNAL NUTS
2228 PINEAPPLE
2229 PINEAPPLE JUICE
2230 PISTACHIOS
2231 POLYPHOSPHATES
2232 PORK
2233 PORK FAT
2234 PORK RIBS
2235 PORT WINE
2236 POTASSIUM
2237 POTASSIUM NITRATE
2238 POTASSIUM SORBATE
2239 POTATO
2240 POTATOES
2241 POWDERED SKIMMED MILK
2242 POWDERED SKIMMED YOGHURT
2243 POWDERED WHOLE EGG
2244 POWDERED YOGGHURT
2245 PRAWN EXTRACT
2246 PRAWNS
2247 PRESERVATIVE
2248 PRESERVATIVES
2249 PRESERVATIVES:
2250 PROTEINS
2251 PUMPKIN
2252 PUREE
2253 PACKED DATE
2254 PRICE

R

2500 RABBIT
2501 RAISING AGENT
2502 RAISINS
2503 RASPBERRIES
2504 RED KIDNEY BEANS
2505 RED PEPPER
2506 RED WINE
2507 REGULATOR
2508 REGULATORS
2509 REGULATORS:
2510 RICE
2511 RIOJA WINE
2512 ROAST HAM
2513 ROLLED OATS
2514 ROQUEFORT CHEESE
2515 ROSE WINE
2516 RUM
2517 RUNNER BEANS
2518 RUSK
2519 RYE
2520 RYE GERM

S

2600 SACCHARINE
2601 SAFFRON
2602 SALAMI
2603 SALMON
2604 SALT
2605 SALTS
2606 SARDINE
2607 SARDINES
2608 SAUCE
2609 SAUSAGE
2610 SAUSAGES
2611 SCAMPI
2612 SEA SALT
2613 SEED
2614 SEEDS
2615 SEMOLINA
2616 SESAME
2617 SESAME SEEDS
2618 SHERRY
2619 SKIMMED YOGHURT
2620 SMOKED BACON
2621 SMOKED CHEESE
2622 SMOKED EEL
2623 SMOKED HAM
2624 SMOKED MACKEREL
2625 SMOKED SALMON
2626 SMOKED TROUT
2627 SODA
2628 SODIUM BENZOATE
2629 SODIUM BICARBONATE
2630 SODIUM CHLORIDE
2631 SODIUM L-ASCORBATE
2632 SODIUM NITRATE
2633 SODIUM NITRITE
2634 SODIUM PHOSPHATES
2635 SODIUM & POTASSIUM PHOSPHATES
2636 SOLE
2637 SORBITOL
2638 SOY
2639 SOY SAUCE
2640 SOYA PROTEIN
2641 SPICE EXTRACT
2642 SPICES
2643 SPICES:
2644 SPINACH
2645 SPIRIT VINEGAR
2646 SPRING ONIONS
2647 SQUID
2648 STABILISERS
2649 STABILISERS:
2650 STABILIZING
2651 STABILIZING AGENTS
2652 STABILIZING AGENTS:
2653 STARCH
2654 STILTON CHEESE
2655 STRAWBERRIES
2656 SUBSTANCES
2657 SUBSTITUTE
2658 SUBSTITUTES
2659 SUGAR
2660 SUGARS
2661 SULPHATES
2662 SUNFLOWER
2663 SUNFLOWER GERM
2664 SUNFLOWER SEED NUTS
2665 SUNFLOWER SEED OIL
2666 SUNFLOWER SEED STARCH
2667 SWEET PAPRIKA
2668 SWEETENER
2669 SWEETENERS
2670 SWEETENERS:
2671 SYNERGIC
2672 SYNERGICS
2673 SYRUP
2674 SUITABLE FOR FREEZING
2675 STORE AT 0 TO 18 ³C

T

2800 TEA
2801 THICKENER
2802 THICKENERS:
2803 THYME
2804 TOMATO
2805 TOMATO POWDER
2806 TOMATO PUREE
2807 TOMATO SAUCE
2808 TOMATO SOUP
2809 TOMATOES
2810 TRIPE
2811 TRIPHOSPHATES
2812 TROUT
2813 TRUFFLE
2814 TRUFFLES
2815 TUNA FISH
2816 TURKEY
2817 TURMERIC
2818 TURNIP
2819 TURNIPS

U

3000 USE BY

V

3100 VANILLA
3101 VEAL
3102 VEGETABLE BOUILLON
3103 VEGETABLE EXTRACT
3104 VEGETABLE FAT
3105 VEGETABLE FIBRE
3106 VEGETABLE OIL
3107 VEGETABLE PROTEINS
3108 VEGETABLE SOUP
3109 VEGETABLES
3110 VEGETABLES:
3111 VENISON
3112 VERMOUTH
3113 VINEGAR
3114 VITAMINS
3200 WALNUT
3201 WALNUTS
3202 WATER
3203 WATERCRESS
3204 WHEAT

W

3205 WHEAT GERM
3206 WHEAT STARCH
3207 WHEATFLOUR
3208 WHEATGERM OIL
3209 WHISKY
3210 WHITE PEPPER
3211 WHITE SUGAR
3212 WHITE WINE
3213 WHITENER
3214 WHITENERS
3215 WHITENERS:
3216 WHOLEMEAL FLOUR
3217 WINE
3218 WINE VINEGAR
3219 WINES
3220 WEIGHT
3221 WEIGHT KG

X

3300 XANTHAN GUM

Y

3400 YEAST
3401 YEAST EXTRACT
3402 YOGHURT
3403 YOLK
3404 YOLKS
3405 YORK HAM
3800 0 - 5 ³C

3801 %