Avery Berkel

M Series M² Technology
Retail System Scales

User Instructions

Part 2

ENGLISH

IMPORTANT

When programming or configuring the equipment you must ensure that you comply with all relevant standards and legislation. The example settings given in this book may not be legal for trade with the public.

1 Safety

1.1 Warnings

1   Safety

1.1   Warnings

Safe Installation

The mains plug must be inserted into a socket outlet with a **protective earth contact**. The electrical supply at the socket outlet must provide over current protection of an appropriate rating.

CAUTION: The mains lead must be connected to a supply outlet with a protective earth contact. The electrical supply at the socket outlet must provide over current protection of an appropriate rating.

Pluggable equipment must be installed near an easily accessible socket outlet. Permanently connected equipment must have a readily accessible disconnect device incorporated in the fixed wiring.

USA

If the scale is connected to a 240V supply, the receptacle must be protected by a 15 amp circuit breaker.

Safe use

To avoid the possibility of electric shock or damage to the machine, always switch off the machine and isolate from the power supply before carrying out any routine maintenance.

To avoid the risk of the machine falling, where applicable, ensure that it is placed securely on a flat and level surface.

Cleaning the machine

CAUTION: Harsh abrasives, solvents, scouring cleaners and alkaline cleaning solutions, such as washing soda, should not be used especially on the display windows. Under no circumstances should you attempt to wipe the inside of the machine.

The outside of standard products may be wiped down with a clean cloth moistened with water containing a small amount of washing up liquid. The outside of products waterproofed to IP65, IP66 and IP67 may be washed down with water containing a small amount of a proprietary detergent.

Training

Do not attempt to operate or carry out any procedure on a machine or network unless you have received the appropriate training or read the Instruction Books.

Ergonomics

To avoid the risk of RSI (Repetitive Strain Injury) it is important to ensure that the machine is placed on a surface which is ergonomically satisfactory to the user. It is recommended that frequent breaks are taken during prolonged usage.

EMC compliance

The following warning may be applicable to your machine.

WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Cleaning the print head

CAUTION: Do not use metallic objects on the print head. Only use the recommended print head cleaning kit.

2   Barcodes

2   Barcodes

2.1   Introducing barcodes

Barcodes are used to identify specific characteristics about the product; for example, price, quantity, article number.

The machine displays fixed barcode formats as a series of numbers and letters. Each number and letter represents a digit in the barcode. By re-arranging these groups of digits you can re-define how information is printed on the barcode. No default values are pre-programmed for variable format barcodes.

You can select one of the barcode types for labels, receipts and talons or you can switch off the barcode (see **Part 1**, section 5.5 page 110).

You can create and store up to 15 barcode formats.

Barcode types

The barcode types available are:

•	EAN 13	Fixed format
•	EAN13 Scandinavian	Fixed format
•	EAN8	Fixed format
•	UPC12	Fixed format
•	UPC13	Fixed format
•	EAN128	Variable format
•	Code 128	Variable format
•	Code 39	Variable format
•	Code 39 extended	Variable format
•	ITF 14	Fixed format
•	PDF417	Variable format
•	RSS Expanded	Variable format
•	RSS14	Fixed format
•	RSS Limited	Fixed format

• SSCC Fixed format

Fixed format barcodes

There are several types of fixed format barcode which are accepted internationally for use in the retail trade. The type of barcode used depends on the standard adopted by a particular country.

*Example:*The USA uses UPC barcodes

*Example:*Europe uses EAN barcodes.

Default format

Each type of barcode has been programmed into the machine as a standard format for the barcode digits (see section 2.8, page 35). This is known as the default format.

The barcode formats can be re-defined to enable a source marked barcode or dry article barcode to be printed.

Variable format barcodes

You can enter data freely to specify the information you require to be embedded in the barcode provided it satisfies the requirements for the barcode type you are using. For example, it may need to be capable of encoding using AIs.

Printing barcodes

Please remember .....

Label machines

Barcodes will only be printed if you assign a default barcode format to the machine or enable the barcode in a PLU (see **Part 1** section 5.5, page 110 and **Part 1** section 6.4, page 140).

Please remember .....

Receipt machines

Barcodes will only be printed on receipts or talons if you enable them in the machine.

If the barcode format includes the department number or group number, you may not mix goods or items from different departments or groups on the same receipt.

Printing multiple barcodes

- You can print multiple barcodes on the same label if necessary.

- The barcodes can be defined in the PLU or referenced to a label format.

- Programming the barcode in the PLU is the preferred method for PoS barcodes.

Please remember .....

Create the barcodes before you create PLUs.

2.2   **Serial Shipping Container Code (SSCC)**

The SSCC is used to identify and track packages or logistics units. It constitutes a barcode sticker on the side of a package that contains the company name, plus a unique identifying number known as the 'serial reference'.

Note: SSCC barcodes are printed on pack run total labels only.

There are two types of SSCC that can be programmed:

•   Sequence number SSCC which gets the serial reference from the existing transation sequence number with the 2 digit machine ID at the front - this ensures that the serial reference is unique.

•   Consecutive number SSCC which gets the serial reference from a new machine based, consecutive number. The Machine ID may be appended to the front of the consecutive number.

Note: AI and Dewey Codes can be found in sections 10.2 and 10.3 respectively.

Barcode Programming

The barcode programming is the same as for GTIN. The 'S' code in the barcode format is already used to refer to a transaction sequence number.

The example below shows how a barcode format for an SSCC is programmed where a 7 digit prefix is required and the transaction sequence number is being used as the serial reference number.

This is an example with EAN 128 and demonstrates a sequential barcode.

Digit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Character	1	1	2	3	4	5	6	7	0	S	S	S	S	S	S	S	S	C
	▲			Company Prefix								Serial Reference						▲

Packaging Type   Check Digit

Note: The 9th digit is fixed at zero. However this could be any fixed value or the Network ID.

The example below shows how a barcode format for an SSCC is programmed where a 7 digit company prefix is required and the SSCC consecutive value is being used as the serial reference.

This is an example with EAN 128 and demonstrates a consecutive barcode.

Digit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Character	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**0**	**R**	**R**	**R**	**R**	**R**	**R**	**R**	**R**	**C**
				Company Prefix								Serial Reference						

Packaging Type   Check Digit

Note: All 9 digits of the SSCC consecutive number are used, but this is not mandatory. Any numbers of digits 1-9 can be used.

2.3   Branded goods

Dry article barcodes

This type of barcode contains only the product number.

Dry article barcodes are the most common barcode used on branded goods. For example, a jar of coffee might have a manufacturers product number 5021991245497.

Creating the product (PLU) file:

Create a dry article barcode in EAN8 and EAN13 formats

AAAAAAAC

AAAAAAAAAAAAC.

Please remember .....

Do this before you create the PLU. See section 2.7, page 33.

Then:

1.   Create a **nonweighed** PLU. See **Part 1** section 6.4, page 141.

2.   Program the item price.

3.   Enter any other product information you want to include in the product file.

4.   Select barcode enabled.

5.   Enter the barcode format reference.

6.   Enter or scan the manufacturer's barcode number when you see the barcode format displayed.

Note: You can only enter the product number in the designated article number positions (A) in the barcode format.

Please remember .....

> **You can only assign a dry article barcode to a nonweighed PLU. It is illegal to use this type of barcode for a weighed PLU.**

When the goods are scanned in sales mode the receipt shows the description and the price programmed in the PLU.

Price embedded barcode

Some goods may come from the manufacturer already weighed and priced, for example frozen chickens and pre-packed fruit and vegetables. In this case the manufacturers barcode will include the product number and the selling price.

Creating the product (PLU) file:

Create the barcode format registered with your national coding authority for use with branded, pre-priced goods.

For example, the UK currently uses the format **20AAAAAVPPPPC**.

Please remember .....

> **Do this before you create the PLU. See section 2.7, page 33.**

Then:

1.   Scan the product barcode when you see **Enter PLU**

2.   Enter any other product information you want to include in the product file.

OR

1.   Create a **nonweighed** PLU. See **Part 1** section 6.4, page 131.

2.   Program the item price as **0.00**.

---

3.   Enter any other product information you want to include in the product file.

4.   Select barcode enabled.

5.   Enter the barcode format reference for branded, pre-priced goods.

6.   Enter or scan the manufacturer's barcode number when you see the barcode format displayed.

When the goods are scanned in sales mode the receipt shows the description programmed in the PLU and the price embedded in the manufacturer's barcode.
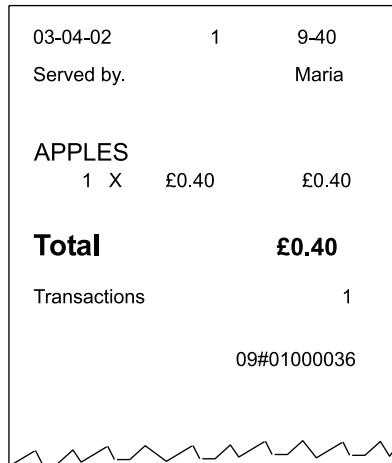
Manufacturer's label example
Barcode format matches the
specified Ean format.
20AAAAAVPPPPC

20   **Prefix - UK national code**
00076   **Article number**
0   **Price verifier**
0040   **Price**
8   **Overall check verifier**

Sales receipt example

2.4   **In-store goods**

You can attach labels with barcodes to goods packed in-store prior to sale. If you include the barcode on the label the operator can scan the goods at the PoS or checkout machine.

Dry article barcodes

Use this type of barcode for goods with a non variable weight and a fixed price.

A barcode showing **just the product number** is attached to the goods and the price is displayed on the shelf edge.

A typical use would be for products from the bakery department

Please remember .....

> **In order to avoid pricing discrepancies the in-store dry article label should not show a price. If you are in any doubt use a price embedded barcode instead.**

Creating the product (PLU) file:

Create the dry article in either EAN8 or EAN13 format:

2AAAAAAC or **02AAAAAAAAAAC**

Please remember .....

> **Do this before you create the PLU. See section 2.7, page 33.**

Then:

1.   Create a **nonweighed** PLU.

2.   Enter a label format that supports barcodes.

3.   Program the item price.

4.   Enter any other product information you want to include in the product file.

5.   Select barcode enabled.

6.   Enter the barcode format reference.

7.   Enter the product number.

Note:
You can only enter the product number in the designated article number positions (A) in the barcode

Please remember .....

> **You can only assign a dry article barcode to a *nonweighed* PLU. It is illegal to use this type of barcode for a weighed PLU.**

8.   Print the barcode labels and attach to the goods.

When the goods are scanned in sales mode the receipt shows the description and the price programmed in the PLU.

FARMHOUSE LOAF

LARGE

< 2 0 0 0 0 7 6 0 >

AZ SUPERMARKET

03-04-00   19-40
Served by.   Maria

FARMHOUSE LOAF
                    1   X   £0.69   £0.69

Total   **£0.69**

Transactions   1

                    09#02001152
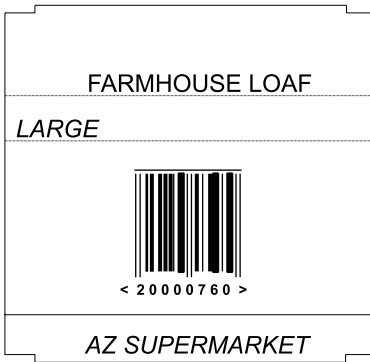
In-store label example
Dry article barcode format.

2AAAAAAC

2	**Prefix - In-store code for EAN8**
000076	**Article number**
0	**Price verifier**
0	**Overall check verifier**

Sales receipt example

Figure 2.1   Label and printed receipt

Price embedded barcode

Use this type of barcode on labels for products such as fresh meat or fish that are priced or weighed and priced in the store pre-pack area.

To create the product (PLU) file:

Create a suitable barcode format for use with in-store, pre-priced goods. The recommended format is:

02AAAAVPPPPPC.

Please remember .....

Do this before you create the PLU. Refer to section 2.7, page 33.

1. Create a **weighed** or **nonweighed** PLU.

2. Enter a label format that supports barcodes.

3. Program the unit or item price.

4. Enter any other product information you want to include in the product file.

5. Select barcode enabled.

6. Enter the barcode format reference.

7. Enter the product number.

Note: You can only enter the product number in the designated article number positions (A) in the barcode

8. Print the barcode labels and attach to the goods.

When you scan the price embedded barcode in sales mode, weighed goods are treated as a nonweighed item. The receipt shows the description programmed in the PLU and the price embedded in the in-store barcode.

Note: If there is a promotion active for that PLU it will be cancelled.

CHICKEN PORTIONS

FRESH

0 2 0 1 2 7 3 6 0 1 8 4 8 >

DATE 1

PRICE	WEIGHT	PACK PRICE
4.60	*0.400*	*1.84*

AZ SUPERMARKET

03-04-02   13-12
Served by.   Paul

CHICKEN PORTIONS
                    1   X   £1.84   £1.84

Total   £1.84

Transactions   1

                    09#02001156
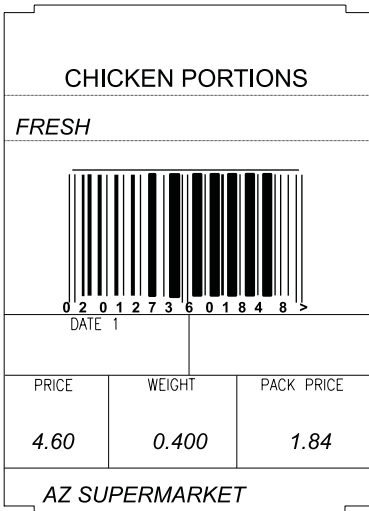
Chicken portions appear as weighed goods on the barcode label and as a nonweighed item on the sales receipt to ensure correct totalisation.

Label example
In-store barcode format matches the recommended EAN format.

Sales receipt example

02AAAAAVPPPPC

02	**Prefix -In-store code for EAN13**
01273	**Article number**
6	**Price verifier**
0184	**Price**
8	**Overall check verifier**

Figure 2.2   Label and nonweighed receipt

2.5   Barcode scanning

You can use the Avery Berkel scanner to:

- read in-store or branded barcodes at a PoS machine when your machine is in sales mode.

- help you program PLUs when your machine is in manager mode (see **Part 1** section 6.4, page 141).

Please remember .....

You can only use the scanner if an appropriate barcode is displayed on the goods.

Branded goods
Branded goods have the barcode printed on the packaging by the manufacturer. The barcode is registered with the EAN authority and is known as a source marked barcode.

In-store goods
If you wish to scan in-store goods you must print a suitable barcode and attach it to the product being sold.

Note: RSS Limited barcodes are not suitable for use with some types of scanner.

Reading a barcode

When the barcode is scanned, the machine searches the barcode list for a prefix that matches the one in the scanned barcode. If it fails to find a matching barcode it treats the barcode as a dry article barcode.

The barcode format can either be the one assigned to the machine or the barcode format programmed in the PLU. The machine will use a PLU barcode if programmed rather than the one assigned to the machine.

Please remember .....

> **The scanner will use the first barcode type it encounters with a prefix matching the one on the goods. It is important that you do not program different barcode types with the same prefix.**

Assigning a barcode

• Assign any barcode reference to the machine and program the required label barcode in the PLU.

Programming the barcode in the PLU is the preferred method as it is the safest

or

• Assign the required barcode reference to the machine and program the PLU barcode reference to **0**.

Please remember .....

• Check that the machine selects the correct PLU when you scan a source marked (branded) barcode.

• Check that the machine prints the correct barcode when you create an in-store barcode.

• Assign a barcode reference to the machine to enable barcode printing.
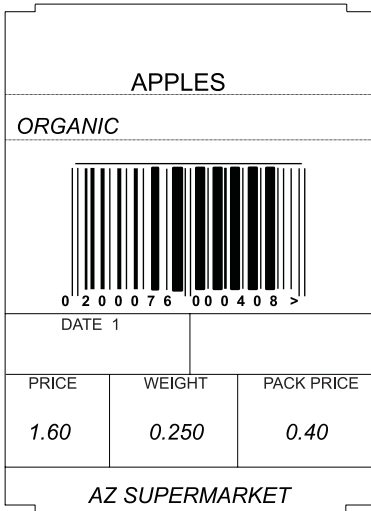
Example 1
label formats
02AAAAVPPPPPC

02	**Prefix**
0407	**PLU or Article number**
6	**Price verifier**
0040	**Price**
8	**Overall check verifier**

Example 2
receipt formats
22TTTTVPPPPPC

02	**Prefix**
7402	**Trace code**
6	**Price verifier**
00040	**Price**
8	**Overall check verifier**

Figure 2.3   Typical barcode printing

Checkout mode

If your machine is operating in checkout mode, when you scan a barcode the transaction will be assigned automatically to the operator logged on at that machine, see **Part 1** Operator Instructions, section 7.4, page 180. This means you do not need to press your operator key or the subtotal key each time.

Subtotal and total receipts

If you want to print subtotal barcodes you must create a suitable barcode format for the receipt barcode. This barcode must have an unique prefix that cannot be confused with any label formats. To include the customer number in the barcode,

the format must contain the character code 'S' for a consecutive number at the appropriate positions in the format.

To print barcodes on subtotal counter receipts only, you must enable **Barcd. On Subtot**.

To print barcodes on sales total receipts only, you must enable **Barcode On Total**.
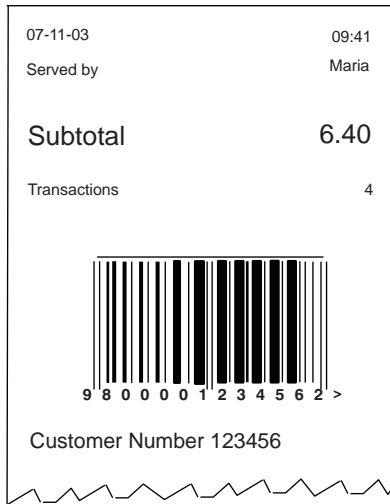
Figure 2.4   Subtotal counter receipt

2.6 Defining the barcode format

Barcodes are printed as a series of bars and digits on receipts and labels. Barcode digits are arranged in groups or fields known as the barcode format. Each group of digits conveys specific information, as shown in the examples in Figure 2.3, page 29.

• You can re-define the barcode formats to enable a source marked barcode or dry article barcode to be printed.

• You can define and store up to 15 barcode formats.

Incorrectly defined formats

If you define the barcode incorrectly you will briefly see the message **Invalid Entry** followed by the barcode format. The wrongly entered character flashes enabling you to correct it. If more than one character is incorrect the first incorrect one flashes. When all the characters are corrected the first character of the barcode will flash.

Correcting the format
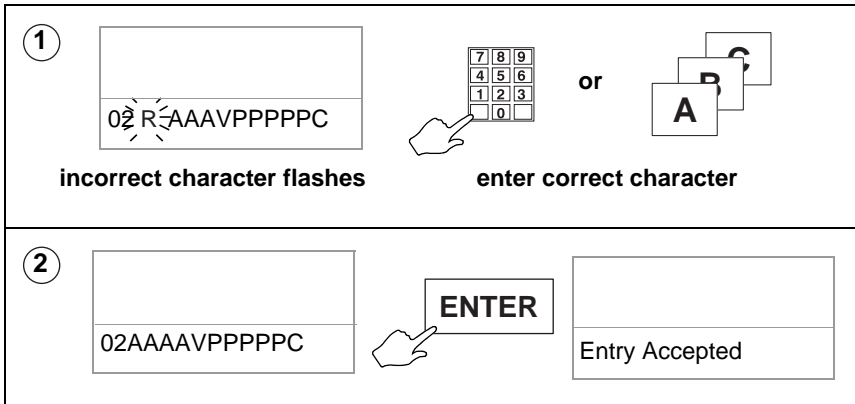
Press **ENTER**. If the format is acceptable you will see the message **Entry Accepted**.

Please remember .....

> **Barcodes will only be printed on receipts or talons if you enable them in the machine.**

2.7   Creating a barcode reference

You can create up to 15 barcode references for labels, one for receipts and one for talons. You can select one barcode type for each reference. The machine displays barcode default formats as a series of numbers and letters. Each number and letter represents a digit in the barcode. You may re-arrange these groups of digits to re-define how information is printed on the barcode. For details of the barcode digits you can enter see page 36 to page 40.

System Data

1.............
5 Tables
6...........
11

1...............
3 Barcode Format
4.............
7

Barcode Format
0 - 15

1 Label
2 Receipt
3 Talon
4 Voucher

1 EAN13
2 Scandinavian
3.................
14 RSS Limited

Edit Barcode Format
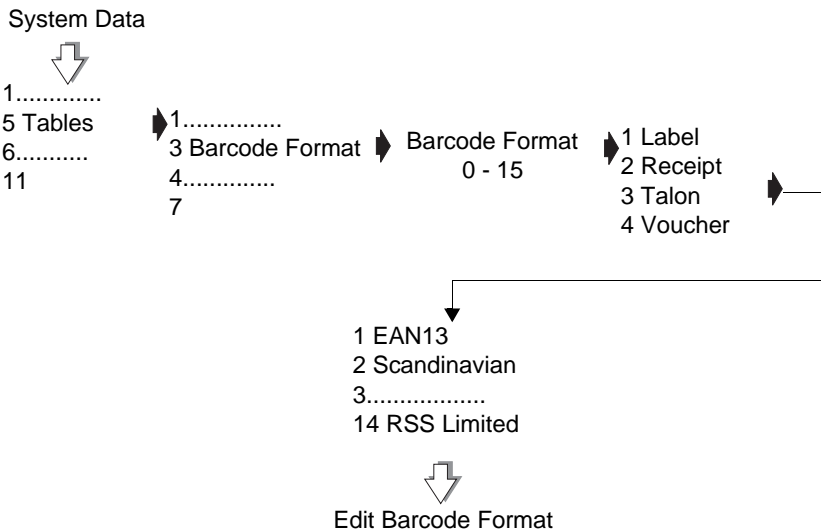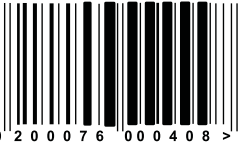
Figure 2.5   Creating a barcode reference

Barcode overflow

If there are more digits in the pack price or weight than specified in the barcode, the article number is printed instead of the barcode.

Example 1
barcode printed

02AAAAAVPPPPC

Example 2
barcode overflow

Article number printed

Figure 2.6   Barcode overflow

2.8   **Barcode formats**

Key:

Prefix defines the characters which may be encoded in barcode formats.

A   PLU or article number

T   Trace code

The trace code is a number used to uniquely identify a machine. It may have up to 6 digits.

V   Price verifier

The price verifier is an automatic check performed by the barcode reader to ensure that it has read the barcode price digits correctly.

P   Price

Price is the transaction price on a label barcode and the total price on a receipt.

W   Weight

Weight is the total weight on weighed labels or the number of items sold on nonweighed labels. On a receipt, weight shows the total weight of all weighed transactions.

D   Department number

G   Group number

N   Operator number

C   Overall check verifier. Cannot be changed.

FF   Decimal point code (EAN13 Scandinavian).

S   Label or receipt sequence number

MM   Machine ID

HH   Network ID

Note: You can include %% codes and %%(AI) codes in some barcode formats. See Appendix on page 193, for a list of codes available for use.

EAN 8

	01	02	03	04	05	06	07	08
Default receipt format	0	0	8	T	T	T	T	C
Default label format	0	0	8	A	A	A	A	C

Permitted entries

Prefix	0 - 999		
A	1 - 7 digits	**W**	4 - 6 digits
T	4 - 6 digits	**D**	2 digits together
P	4 - 6 digits	**N**	2 digits together
G	2 digits together		

UPC 12

	01	02	03	04	05	06	07	08	09	10	11	12
Default receipt format	2	T	T	T	T	T	V	P	P	P	P	C
Default label format	2	A	A	A	A	A	V	P	P	P	P	C

Permitted entries

Prefix	0 - 9	**V**	digit 6 or 7
A	1 - 11 digits	**W**	4 - 6 digits
T	4 - 6 digits	**D**	1 - 2 digits together (printed on receipts)*
P	4 - 6 digits	**N**	2 digits together (printed on receipts)
G	1 - 2 digits together (printed on receipts)*		

Note: If only one digit is available, the least significant digit is printed for example, 12 would be printed as 2.

UPC 13

	01	02	03	04	05	06	07	08	09	10	11	12	13
Default receipt format	2	T	T	T	T	T	V	P	P	P	P	P	C
Default label format	2	A	A	A	A	A	V	P	P	P	P	P	C

Permitted entries

Prefix	00 - 09	**V**	digit 7 or 8
A	1 - 12 digits	**W**	4 - 6 digits
T	1 - 6 digits	**D**	1 - 2 digits together (printed on receipts)*
P	4 - 6 digits	**N**	2 digits together (printed on receipts)
G	1 - 2 digits together (printed on receipts)*		

Note: If only one digit is available, the least significant digit is printed for example, 12 would be printed as 2.

EAN 13

	01	02	03	04	05	06	07	08	09	10	11	12	13
Default receipt format	2	T	T	T	T	T	V	P	P	P	P	P	C
Default label format	2	A	A	A	A	A	V	P	P	P	P	P	C

Permitted entries

Prefix	0 - 9 or 00 - 09	**V**	digit 7 or 8
A	1 - 12 digits	**W**	4 - 6 digits
T	1 - 6 digits	**D**	1 - 2 digits together (printed on receipts)*
G	1 - 2 digits together (printed on receipts)*		
P	4 - 7 digits	**N**	2 digits together (printed on receipts)

Note: If only one digit is available, the least significant digit is printed for example, 12 would be printed as 2.

EAN 13 (Scandinavian)

	01	02	03	04	05	06	07	08	09	10	11	12	13
Default receipt format	F	F	T	T	T	T	T	T	P	P	P	P	C
Default label format	F	F	A	A	A	A	V	A	P	P	P	P	C

Permitted entries

FF	20 - 25	**W**	4 digitS
A	6 digits	**T**	6 digits
T	1 - 6 digits	**D**	1 - 2 digits together (printed on receipts)*
P	4 digits	**N**	2 digits together (printed on receipts)

a)The decimal point codes are:

20 to print PP.PP

21 to print PPP.P

22 to print PPPP.

23 to print W.WWW

24 to print WW.WW

25 to print WWW.W

Weight is the total weight on weighed labels On nonweighed labels, 0000 is printed. On a receipt, weight shows the total weight of all weighed transactions

Dry article barcodes

Use this type of barcode when you want to print a 12 or 11 digit article number. Enter **A**s in the barcode format as shown below.

Please remember .....

> **You can only assign a dry article barcode to a *nonweighed* PLU. It is illegal to use this type of barcode for a weighed PLU.**

EAN13 and UPC13 formats	01	02	03	04	05	06	07	08	09	10	11	12	13
	A	A	A	A	A	A	A	A	A	A	A	A	C

UPC12	01	02	03	04	05	06	07	08	09	10	11	12
	A	A	A	A	A	A	A	A	A	A	A	C

ITF14

	01	02	03	04	05	06	07	08	09	10	11	12	13	13
Default receipt format	A	A	A	A	A	A	A	P	P	P	P	P	P	P
Default label format	0	2	T	T	T	T	T	P	P	P	P	P	P	P

Permitted entries

Prefix	00 - 09		**V**	digit 7 or 8
A	1 - 12 digits		**W**	4 - 6 digits
T	1 - 6 digits		**D**	1 - 2 digits together (printed on receipts)*
P	4 - 6 digits		**N**	2 digits together (printed on receipts)
G	1 - 2 digits together (printed on receipts)*			

Note: If only one digit is available, the least significant digit is printed for example, 12 would be printed as 2.

RSS14 and RSS Limited

These barcodes support Global Trade Item Numbers (GTINs).

RSS14 barcodes have a maximum length of 14 characters.

RSS Limited barcodes only support GTINs with a 0 or 1 as the initial digit in the article number.

	01	02	03	04	05	06	07	08	09	10	11	12	13	13
Default label format	A	A	A	A	A	A	A	A	A	A	A	A	A	C

Permitted entries

A   13 digits   **C**   1 digits

2.9 Variable barcode formats

EAN128

You can enter up to 48 characters including text, %% codes and %%(AI) codes to specify the data to be embedded in the barcode. You can also program standard barcode format characters for standard EAN/UCC AIs, for example,

"AAAAAAAAAAAAACWWWWWW%%BEAN&WEIGHT"

See Appendix on page 193*, for a list of codes available for use.*

Code 128

You can enter up to 48 characters including numeric characters, %% codes and %%(AI) codes to specify the data to be embedded in the barcode.

You can also program standard barcode format characters for standard EAN/UCC AIs, for example,

"%%(10)AAAAAAAAAAAAAAPPPPPPPP"

Code 39

The following 43 characters are supported.

1234567890ABCDEFGHIJKLMNOPQRSTUVWXYZ-.$/+% SPACE

Code 39 Extended

Similar to Code 39 but uses two characters to represent characters outside the 43 character set.

PDF417
Text mode.

In text mode you can use up to 2000 characters including numeric characters, Dewey Decimal codes, %% codes and %%(AI) codes to specify the data to be embedded in the barcode.

AI mode

In AI mode all the data must be capable of encoding using AIs. That means that data must be in the form of a valid substitution code (Dewey Decimal codes, %% codes) or must have been defined in the AI standard list or the AI carcass list. For example, A (article number) or P (price) must be defined as AIs.

RSS Expanded

You can enter up to 74 numeric or 41 alpha-numeric characters. All the data must be capable of encoding using AIs.

Note: If the label field is not wide enough to accommodate all the characters, provided that there is room to increase the height sufficiently, the barcode will print as a 'stacked' barcode.

3 Product Traceability

3   Product Traceability

The product traceability scheme is used to provide an audit trail for a product back through the stages in its production to its original source. You can record traceability for up to 9 cutting centres and 5 fattening countries. It can be used for:

- beef products
- other types of meat products such as pork
- non meat products such as fish or cheese.

These instructions describe how to set up and use the scheme for tracking bovine carcasses.

To use the scheme for other types of product, change the data names and programming texts to suit the product.

3.1   Mandatory information

Traceability enables you to label products with information about the animal or group of animals (batch) from which the product was derived.

In some markets certain traceability information is mandatory.

Example:The following lists the information which is mandatory when labelling beef products in EU countries.

- lot number (more than one animal) or carcass number.
- slaughter house reference and country.
- cutting/de-boning centre reference and country.
- country of birth.
- country of rearing.

In addition, approved voluntary information may be included on labels and receipts.

Please remember .....

If the product is

• **pre-packed** (packed when the customer is not present), the traceability information **must** be printed on the product label or receipt.

• packed or prepared in the **presence of the customer**, there must be a clear link between the product being served and the displayed carcass details.

The best way to ensure this is by individually labelling each pack, or by printing the full details on the counter or ECR receipt. If this is not possible you can use Tray labelling, see page 82.

3.2 Using traceability

Traceability details are printed on labels for all products associated with a carcass/batch.

Traceability format:

- defines the way in which the information is printed on the labels according to the text and data type programmed into the traceability format.

Traceability barcode format:

- defines the actual data and messages printed

- may also contain additional information provided by the supplier.

Traceability tables:

- are a database of countries, categories etc held by the machine.

- provide additional traceability information in relation to specific carcass/lot numbers.

- for non preset PLUs, this database is referenced for each specific carcass/lot number and the details printed on the label or receipt.

You can:

- print carcass/batch data on labels or receipts for all products associated with a particular carcass/batch.

- print counter service tray labels providing full traceability information for the customer.

- create duplicate passports, including a copy of the original barcode.

*Note: For schemes using **Preset** mode, the data may also be managed by a PC application which downloads the panel information in a printable format. See section 3.14, page 84.*

Non-preset mode

The full traceability or batch details are scanned or entered from the sales keyboard each time the operator selects a different batch at the machine.

This is particularly suitable for prepack operations where the operator may be packing a complete batch in one session and then selecting a new complete batch to pack.

Preset mode

The full traceability or batch details are scanned or entered from the keyboard once and the data is stored against a `batch' reference number or against a `tray' key on the sales keyboard. This method is particularly suitable for counter service or ECR mode of operation.

Each time a product is selected, the operator only needs to:

• enter or scan the `batch' number

or

• press the appropriate `tray' key.

Automatic creation of records

When a PLU with traceability enabled is selected, you will be prompted for the Lot number. The display shows the last used lot number for the PLU. You can:

• accept this number or

• enter a new number.

   If the Lot number is not recognised you will see the message **Record Not Found** followed by **Add New Record?**.

• Enter the new lot number and the record will be created automatically.

Lot prompt disabled

If **Lot Prompt Off** is enabled for the PLU, you will not be prompted for a lot number.

Self service mode

You can use PLUs with traceability enabled in Self Service mode provided that **Lot Prompt Off** has also been enabled for the PLU.

The panel text in the traceability record for the lot number is printed in text field 3 on the label and the traceability totals (and GTIN if enabled) are totalised against the lot number.

If you select a PLU with **Lot Prompt On** you will see the message **Traceability PLU** and the PLU will not be selected.

3.3 Traceability schemes

You can set up a different scheme for each type of product that requires traceability.

For each scheme you can select the way in which it operates. You can choose from:

- GTIN operation (see page 54)

  Select **GTIN Operation Y** if you require traceability records to be uniquely identified by a lot number and GTIN.

- Forced lot number entry

  Select **Force Lot Ent. Y** for the Lot number to be requested each time a PLU is selected.

- Label or receipt printing

  You must select **Label & Receipt** for traceability information to be printed on sales receipts.

- PrePack operation

  You must select **PrePack&Counter** for traceability information to be printed on both counter receipts and labels. If you select **Prepack Only** the information will only be printed on labels.

- Traceability mode

  Select **Non Preset Mode** if you are using the database of countries and categories stored in the machine. Select **Preset Mode** if you are using counter service or ECR mode of operation.

- **Retain Lot** or **Don't Retain Lot** (preset mode only)

  Select **Retain Lot** if you want to save the lot number you have entered for the selected PLU and replace the programmed lot number.

- **Passpt. Prompt Y** or **Passpt. Prompt N**

  Select **Passpt. Prompt Y** if you want to create a passport label each time a new traceability record is created in sales mode.

- **Pspt.Lbl.Fmt.M/C** or **Pspt.Lbl.Fmt.**

  Select **Pspt.Lbl.Fmt.M/C** to use the format defined in the machine or **Pspt.Lbl.Fmt.** if you want to program the format to suit the scheme.

  The default value is to use the machine based passport label format.

- Weight limits

  Select **No Weight Limit** if you do not want to use weight limits during trading.

  Batch Weight uses the weight of the whole batch (usually encoded in the supplier barcode).

  Pack Weight allows you to set weight limits for individual cases or packs.

  If the barcode includes AI 303 the batch weight is incremented each time a pack is scanned. When the weight sold equals the weight limit for the batch you will see a warning message and you will not be able to print further labels.

- **% Wastage**

  If you select **Batch Weight** or **Pack Weight** limits you will be prompted for a **% Wastage** value. This is a programmable value that allows for wastage in the batch due to bone etc.

- **Date limits**

  Select **No Date Limit** if you do not want to use date limits during trading. You will not be prompted to enter dates when creating records.

The default option **Use Scheme Life**, computes the expiry date from the slaughter date plus the scheme life. You can manually override the date if required.

Use Expiry Date uses the sell by date encoded (AI 17) in the supplier barcode. You can manually override this date if required.

Scheme reference

This is a reference number from 1 to 10 that is used to link the batch being processed to the correct scheme.

For schemes operating in preset mode, when the PLU is selected, the associated lot number will link the PLU to the correct scheme.

Scheme name

You can program a scheme name, up to a maximum of 20 alpha/numeric characters, for easier identification of a scheme.

Scheme emulation

You can create schemes to emulate specific traceability schemes embedded in the scale or you can choose no emulation. Each of the emulation schemes operates in a slightly different way from the default scheme setup.

The types of scheme available are:

• None (no emulation)

• Emulation 1 (SVA)

   The SVA scheme emulation system ignores standard barcode templates and interprets proprietary barcodes containing check digits.

• Emulation 2 (GTIN)

   GTIN scheme emulation requires traceability records to be uniquely identified by a lot number and GTIN.

   GTIN codes contain data uniquely identifying the supplier and product type.

- Emulation 3 (Geant)

  Geant scheme emulation requires the lot number to be re-entered each time a PLU is selected.

Life

You can set the number of days that limits the duration of a scheme. This is usually referred to as the scheme life and the default value in the machine is 30 days.

Linking a scheme to a PLU

When creating or editing a PLU, you will be asked to enter the scheme reference number for the PLU provided that:

- traceability is enabled and

- more than one traceability scheme exists.

3.4   **Printing the information**

Traceability information is normally printed in text area 3. You can print any of the data in other text fields provided you embed the appropriate %% codes or Dewey Decimal codes (see section 10.3).

You must select a suitable label format or the data will not be printed.

When programming PLUs you must select **Traceability On** to be able to use traceability for that product.

Listed below are the operations you need to perform to enable traceability information to be printed on labels.

*   Enable receipt or counter service printing if required

*   Define the barcode format for non-standard AI reference codes

*   Program the tables with the data names and associated text as you want them to appear on the traceability panel.

*   Create the traceability format which defines the way in which the information will be printed on the label.

*   Set up the traceability schemes required.

3.5　　Traceability code data

The machine contains tables relating the traceability code embedded in the traceability panel format to

• the Application Identifier (AI)

• the data name

• Dewey Decimal codes.

The machine is pre-programmed with industry standard codes for both data names and AIs. You can change these codes if necessary.

For full details of the codes see section 10, Appendix on page 193.

Data name

Data names are the text descriptions associated with the traceability codes. The machine is pre-programmed with industry standard codes. You can change these if necessary to suit the products for which you are using the system.

For example:

	Beef	**Cheese**
Origin 1	Born in:	Produce of:
Cutting ref:	Cutting in:	Packed in:

1 System Data ▸ 1 Products

8 Traceability ▸ 1 Tables

3 Data Name ▸ Trac. Code (0 - Y) *

Enter text ▸

Mandatory ◂
Optional
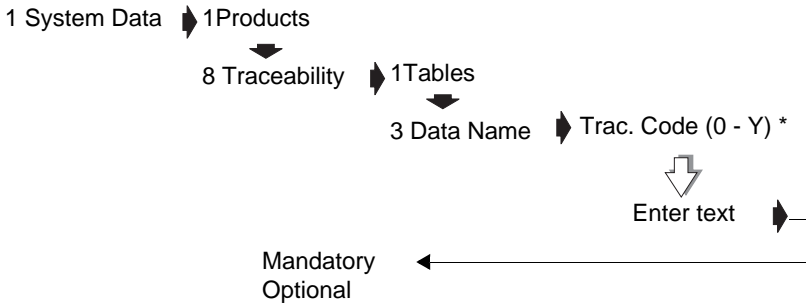
* If trace code 0 is entered the Lot Number will be requested.

Figure 3.1   Editing code data

AI codes

- The AI code is embedded into the barcode followed by the data to which it refers.

- The data is interpreted according to the AI code function.

- The data can be in any order and can be split into more than one barcode if necessary.

Data interpretation

- Printed as read

  Lot/carcass number

  slaughter and cutting numbers

  scheme licence number

  text 3 data.

- Dates are interpreted in the format YYMMDD.

- Referenced

  Origin, slaughter and cutting references, breed, category, type and species data are used as a reference to look up the related text in a table. See Figure 3.6.

- AI codes 7030 to 7039

  Application Identifier 7030 is always for the slaughter house and 7031 to 7039 are for the cutting centres. The first three digits are interpreted as an origin reference and the remaining alphanumeric characters as cutting numbers.

AI (EAN128 only)	Traceability Code (%%)	Dewey Decimal
10	0	%%+2.1%%
422	1	%%+2.6.1%%
423	2	%%+2.23.2.1 - to - %%+2.23.2.5
7030	3, 9	%%+2.16#0
424	3	%%+2.6.3%%
	4	
	5	
	6	
	7	
	8	
7031	A, E	%%+2.16#1
7032 - 7039	A, E	%%+2.16#2 - %%+2.16#9
	B	
425	E	%%+2.23.4.1- to - %%+2.23.4.9
	A	%%+2.24.1 - to - %%+2.24.9
251	I	
426	J	%%+2.6.5%%
	L	
953	Q	%%+2.13%%
	T	

	U	
	V	
	W	
	Y	
3103		%%+10.1.2%%
3303		%%+10.1.1%%
15		%%+10.2#1%%
17		%%+10.2#2%%
3902		%%+5.1%%
8005		%%+5.5%%

Figure 3.2   Supported AI numbers

Unsupported AI codes

You can use the **Tables** function to add an AI code or change an existing AI in the substitution codes list. (See Substitution codes on page 198.)

1. Select **AI**

2. Select **Create & Edit**

3. Enter the %% code or the Dewey Decimal code for the AI code you wish to change or to which the new AI code is to be assigned.

1 System Data ▶ 1Products

5 Tables ▶ 1

7 AI ▶ 1Create & Edit
2 Delete

Enter AI Ref
(%% code or Dewey code)

Enter AI Code
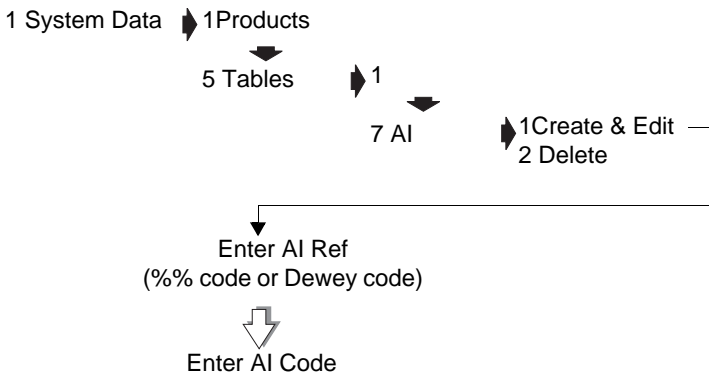
3.6   Programming traceability tables

If you are using nonpreset schemes or scanning supplier proprietary barcodes, you need to set up tables for:

•   countries of origin

•   slaughter centre references

•   cutting centre references.

Creating messages

When creating messages ensure that the messages programmed in your machine match the messages used by your suppliers.

All your suppliers must use the same messages.

You can create seven different lists of messages.

List	Records	Characters
Origin	300	40
Slaughter reference	100	40
Cutting reference	100	40
Category	100	40
Breed	100	40
Type	100	40
Species	100	40

Origin, slaughter reference and cutting reference information is mandatory. Category, breed, type and species is additional information which may be included.

Origin messages

An origin message may be a country, a supplier or EC member states. You can print up to four origin messages on the label, for example: country of birth, supplied by. The default origin list contains internationally agreed country references (ISO 3166) but you can change these if necessary. To revert to the default value just delete the current entry in the table (see **Part 1,** section 4.2, Creating and editing text,

page 45) and press | **ENTER** | .

Slaughter reference

This table stores reference information about where the animal was slaughtered. It contains the name of the country and the approval number for the slaughterhouse.

Cutting reference

This table stores reference information about where the carcass was cut up and de-boned. It contains the name of the country and the approval number for the cutting centre.

Category messages

The following category messages must be used for beef:

Messages	Notes
Bull	
Young bovine (steer)	Less than 6 years old
Ox (beef cattle)	
Heifer	Less than 6 years old
Cow	

Breed messages

Breed messages describe the breed or race of the cattle. Examples are Aberdeen Angus and Charolais.

Type messages

Type messages describe the end product from the animal. For beef it could be beef animal, milk animal or mixed.

Species messages
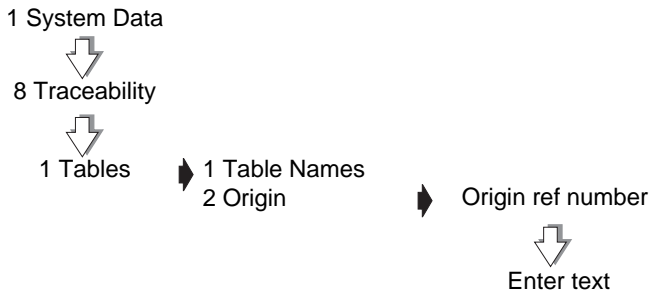
These messages describe the type of animal or product.

1 System Data

8 Traceability

1 Tables ▶ 1 Table Names
2 Origin ▶ Origin ref number

Enter text

Figure 3.3   Creating origin messages

Create other message lists in a similar way.

3.7   Defining the barcodes

There are two types of barcode used with bovine traceability.

- EAN128 standard. These barcodes include the mandatory information and use Application Identifiers (AIs) to determine how the data is interpreted.

This type of barcode cannot be edited.

- EAN128 non-standard barcodes. These barcodes use Application Identifiers (AIs) but include voluntary information in addition to the mandatory information (custom barcode).

This type of barcode can be edited to match those of your supplier.

Each type of barcode has been programmed into the machine as a standard format for the barcode digits. This is known as the default format. You can edit these formats to match the barcode formats received from your suppliers.

Custom barcodes

Use this barcode format to interpret data from non standard AI barcodes received from the supplier. The system uses the AI (950) to identify that the barcode contains voluntary data and AI (953) the licence number to print this data.

The default barcode format for AI 950 is:

LWYTTUUVV

Example:

(10)234567(7030)250789(7031)250654
(950)141010100(953)321

(10)

6 digit carcass/lot number   = 234567

(7030)

3 digit slaughter country reference = 250 = France

3 digit slaughter number   = 789

(7031)

3 digit cutting country reference   = 250 = France

3 digit cutting number   = 654

(950)

1 digit species   = 1 = bovine

1 digit category   = 4 = heifer

1 digit type   = 1 = meat

2 digit breed of father   = 01 = Charolais

2 digit breed of mother   = 01 = Charolais

2 digit breed if mixed   = 00 = N/A

(253)

3 digit scheme licence number   = 321

Traceability barcodes

Used for fixed, non AI barcodes received from suppliers.

A traceability barcode format defines the information conveyed by the printed bars in the barcode in a similar way to a label or receipt barcode. Traceability barcodes are based on digits, for example **00000006666661122335544**.

The default barcode format is:

00000044551122   14digits

6 digit carcass/lot number + 2digit slaughter reference + 2 digit cutting reference + 2 digit origin message 1 + 2digit origin message 2 = 14 digits

Example:

          12345601010501   14 digits

6 digit carcass/lot number= 123456

2 digit slaughter reference= 01 = UK (1143)

2 digit cutting reference= 01 = UK (19985)

2 digit origin message 1= 05 = Scotland

2 digit origin message 2= 01 = UK

The maximum number of barcode digits you can specify in the barcode format is 40.

The barcode digit in the first column of the table is also entered in the traceability format, see page 68, so the machine knows how to print bovine details on the label.

Barcode digit	Used for	Example
0	Lot number	0000000 7 digit lot/batch number (maximum 20 digits)
1	Country of birth	11 2 digit 1st origin message (maximum 4 digits)
2	Country of fattening	22 2 digit 2nd origin message (maximum 4 digits)
3	Country of slaughter	33 2 digit 3rd origin message (maximum 4 digits)
4	Slaughter reference	44 2 digit slaughter reference (maximum 4 digits)
5	Cutting reference	55 2 digit cutting reference (maximum 4 digits)
6	Date of birth	666666 Date 1 (fixed digits)
7	Date of slaughter	777777 Date 2 (fixed digits)
8	Date format	888888 Date 3 (fixed digits)
9	Slaughter house reference	999999 (maximum 30 digits)
A	Cutting centre reference	AAAAAA (maximum 30 digits)
B	Text 3	BBBBBB (maximum 20 digits)
E	Country of cutting	EE 2 digit 4th origin message (maximum 4 digits)

I	Carcass number	IIIIIIII 8 digit carcass number (maximum 20 digits)
J	Whole life country	JJ 2 digit 5th origin message (maximum 4 digits)
Q	Scheme licence	QQQQQQ 6 digit scheme licence number (maximum 30 digits)
T	Breed of father	TT 2 digit breed message (maximum 4 digits)
U	Breed of mother	UU 2 digit breed message (maximum 4 digits)
V	Breed if mixed	VV 2 digit breed message (maximum 4 digits)
W	Category	WW 2 digit category message (maximum 4 digits)
Y	Type	YY 2 digit type message (maximum 4 digits)
L	Species	LL 2 digit species message (maximum 4 digits)

SVA barcodes

The SVA Scheme Emulation system ignores standard barcode templates and interprets proprietary barcodes containing check digits.

If the check digit does not validate you will see the message **Invalid Entry** and you will not be able to scan the barcode.

Note:
You can still use EAN128 standard barcodes when the SVA scheme is enabled.

3.8   Setting up the machine

Creating the traceability panel format

The traceability panel format defines:

•   the text to be printed on the label.

•   the type of data to be printed on the label.

Type the text to be printed on the label. Refer to the table in Figure 3.6 and enter the required code to define the type of data to be printed with the text on the label.

The maximum number of characters that you can have in the traceability panel format is 2000 (including spaces).

For information on creating and editing text see **Part 1** section 4.2, page 45.

Default traceability format

This is already set up in the machine and allows for both fixed barcodes and EAN standard barcodes.

<div align="center">

Traceability panel format

</div>

↵Lot Number: %%0↵Slaughtered In: %%4%%3%%9↵Cutting In: %%5%%E%%A↵Born In: %%1↵Reared In: %%2

<div align="center">

Label print out (text area 3)

</div>

Lot Number: 102354

Slaughtered In: UK (1143)

Cutting In: UK (19985)

Born In: Ireland

Reared In: Ireland

Figure 3.4   Traceability format and label printout

1 System Data

8 Traceability

2 Scheme   ▶ 1 Create & Edit

Scheme Reference

Scheme Name   ▶   1 No Emulation
                     2 Emulation 1
                     3 Emulation 2
                     4 Emulation 3

1 GTIN Operation N
2 GTIN Operation Y

1 Force Lot Ent. N
2 Force Lot Ent. Y

1 Label Only
2 Label & Receipt

1 Prepack Only
2 PrePack&Counter

1 Non Preset Mode
2 Preset Mode

Trac. Format

Enter text including %% codes
(2000 chars. max.)

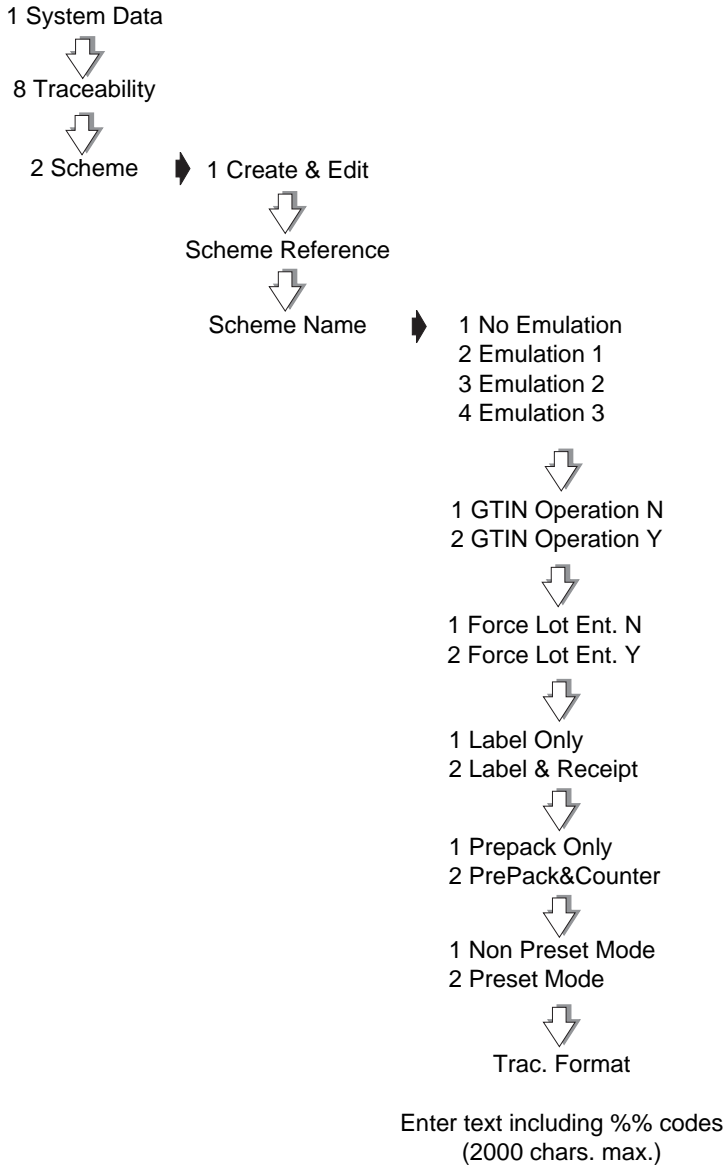**Figure 3.5   Creating the panel format**

Substitution codes

AI (EAN128 only)	Traceability Code (%%)	Dewey Decimal	Data name	Typical use
10	0	%%+2.1%%	Lot number	Batch number (multiple animals)
422	1	%%+2.6.1%%	Origin 1	Country of birth
423	2	%%+2.23.2.1 - to - %%+2.23.2.5	Origin 2	Country of rearing (1 to 5)
7030	3, 9		Origin 3, Slaughter number	Country of slaughter, Slaughter house number
424	3	%%+2.6.3%%	Origin 3	Country of slaughter
	4		Slaughter reference	Slaughter reference
	5		Cutting reference	Cutting reference
	6		Date 1	Date of birth
	7		Date 2	Date of slaughter
	8		Date 3	Date 3
7031	A, E	%%+2.16#1	Processor centre 1	Country of cutting, Processor centre 1
7032 to 7039	A, E	%%+2.16#2 - %%+2.16#9	Processor centre (2 to 9)	Country of cutting, Processor centre 2 to 9
	B		Text 3	Miscellaneous text
425	E	%%+2.23.4.1 - to - %%+2.23.4.9	Origin 4	Country of cutting
	A	%%+2.24.1 - to - %%+2.24.9	Processor centre (1 to 9)	Processor centre (1 to 9)
251	I		Carcass reference number	Carcass number (single animal)
426	J	%%+2.6.5%%	Origin 5	Whole life country
	L		Species	Type of animal or product
953	Q	%%+2.13%%		Scheme licence number
	T		Race	Race of father
	U		Race of mother	Race of mother

	V		Race if mixed	Race if mixed
	W		Category	Animal category see page 62
	Y		Type	Type of end product see page 62
3103		%%+10.1.2%%		Net weight
3303		%%+10.1.1%%		Gross weight
15		%%+10.2#1%%		PLU date 1
17		%%+10.2#2%%		PLU date 2
3902		%%+5.1%%		Price with promo
8005		%%+5.5%%		Unit or item price

Figure 3.6   Table of codes

Note: When selecting a PLU with traceability enabled, the lot/carcass number is always displayed first followed by the remaining traceability information in the order in which it is stored in the carcass format.

3.9   Capturing the source data
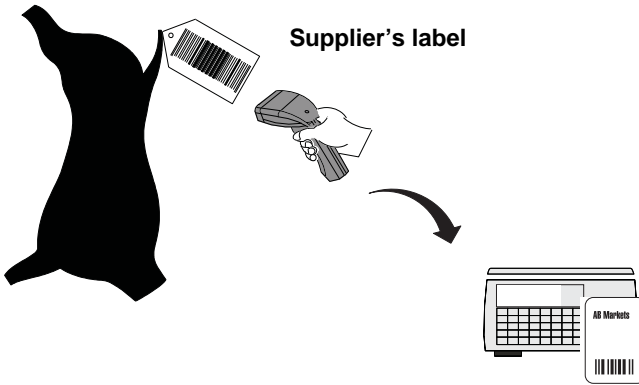
Supplier's label

The supplier attaches a barcoded label (traceability passport) to the carcass containing the information required.

Programming the machine with the same messages and data used by the supplier means that you can print the data defined in the traceability barcode on all labels for associated PLUs.

There are various ways in which the traceability data can be input to the machine.

• Use the Avery Berkel scanner to read the proprietary barcodes printed on the carcass labels by the supplier.

• Use the keyboard to enter the references for each data item when a product is selected.

• Use the Avery Berkel scanner to read the EAN128, PDF417 and RSS barcodes containing all the required bovine data.

Note:
When variable format barcodes are used it is possible that more than one barcode will be required to contain all the data. The system has been designed to cope with this.
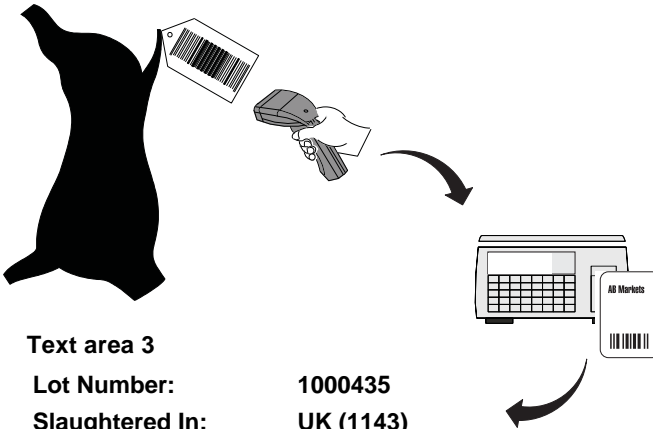
Hash key

If a hash key has been assigned to the keyboard, you can enter the barcode digits manually:

4.   Press **#**

5.   Type in the barcode digits

6.   Press **ENTER**

Use this method if you do not have a scanner or the scanner fails to read the barcode,

3.10   **Pre-pack operation**

The supplier attaches a barcode to the carcass which is
scanned when the carcass is cut and pre-packed in store.

Text area 3

Lot Number:	**1000435**
Slaughtered In:	**UK (1143)**
Cutting In:	**UK (19985)**
Born In:	**Ireland**
Reared In:	**Ireland**
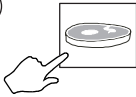
If your scanner is not working you can press $\boxed{\textbf{\#}}$ and then

enter the barcode numbers directly.

When you select the PLU, the last carcass/lot number used is
displayed. You can enter a new carcass or lot number if
required.

*Note: If lot number is enabled in the PLU and the panel text
associated with the number contains text markers, the
designated text is displayed instead of the lot number.*

Category, origin and breed options, and dates are displayed
in the order in which they are set in the print format.
Carcass/Lot number is always displayed first.

If you see the message **Not Found** for any of the options enter the reference number for the origin message to be printed.

1	**or** *Dept ?*	789 456 123 0
Commodity key	**department 0 - 99**	**PLU number**
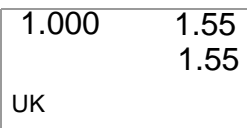
2 ENTER	➡ **6** if the lot number is O.K.	
different carcass?		
	or 789 456 123 0	1.000 1.55 1.55 Lot Number 01471
	carcass/lot number	

3 ENTER	➡ **6** if you do not wish to change any other data	

4	**change options?**	1.000 1.55 1.55 UK
or	✳	

5	**different origin?** 789 456 123 0	1.000 1.55 1.55 UK 02
	origin number	⬇
	ENTER	1.000 1.55 1.55 Ireland
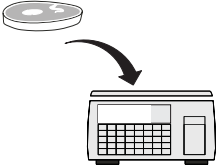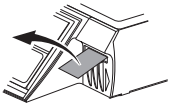
Repeat step 5 for any other options you wish to change.

⑥

⑦

⑧

more labels? ▶ ⑥

⑨ **C** to exit PLU

RUMP STEAK

Carcass Ref.: 1000435
Slaughtered in: UK (1256)
Cutting In: UK (987234)
Country of origin: Ireland
Fattened In: Ireland

0 2 0 0 0 7 6 0 0 0 4 0 8>

DATE 1	DATE 2
15-02-01	16-02-01

PRICE	WEIGHT	PACK PRICE
9.60	0.250	2.40

AZ SUPERMARKETS
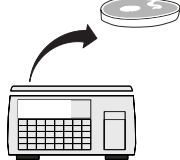
Figure 3.7   Typical label

3.11 Traceability passport

A carcass may be delivered with a single barcoded label attached (traceability passport) containing all the information to provide full traceability for that animal.

The information received from the supplier may be contained across more than one barcode.

Barcode amalgamation

The traceability passport function allows you to amalgamate multiple barcodes into one traceability passport barcode.

Barcode amalgamation only applies to EAN128 barcodes.

When the carcass has been split up for retail sale, the barcoded information is needed to create additional copies of the passport for scanning at the counter service point.

Passport label format.

Traceability schemes may be configured to use either

• **Pspt.Lbl.Fmt.M/C**

The format defined in the machine

• **Pspt.Lbl.Fmt.**

These formats are programmed to suit the scheme.

Printing a duplicate passport

You must use a suitable label format, see **Part 1** section 5.5 page page 110. The default label format is 90 for the machine passport format.

1. Set up a traceability passport key for each carcass currently in use.

2. Use these keys to create a sheet of duplicate passports.

3. The operator scans the appropriate one for the transaction to print the required receipt or label.

Manager Mode

1 ....

4 Machine Setup ▶ 1 Keyboard Setup ▶ 1 Dedicated Keys ▶
5 ....   2   2
7   8

1 Standard Assign ▶ 1 PLU
2 ECR Assign
3 Prepack Assign

18 Trac. Keys ▶

Assign Key
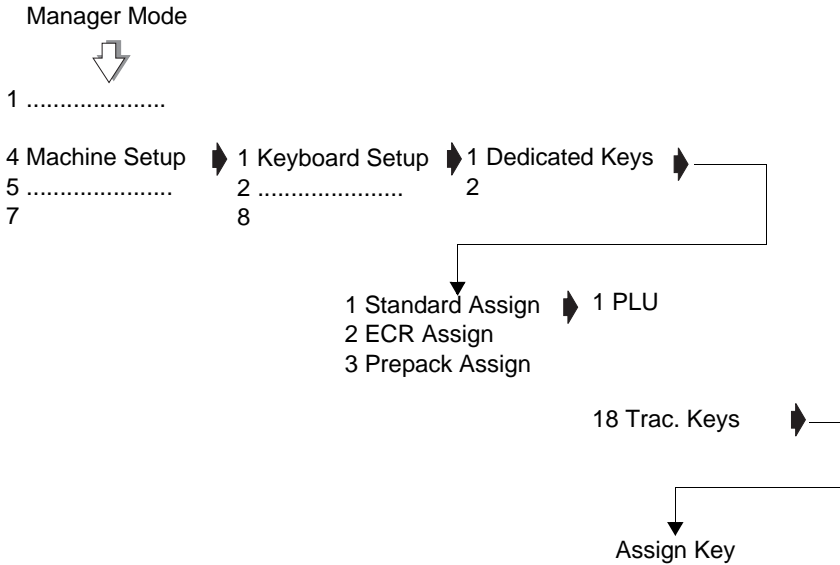
Figure 3.8   Duplicate passport key

**To create a single passport barcode from one, two or
three barcodes:**

1.   Press | *Pass-*
port | .

2.   Scan each of the supplier barcodes.

3.   Press   ✳   to print the passport barcode.

BATCH NUMBER

(10)123456

CARCASS DETAILS

(422)616(423)056(7030)620213(7031)442312

CARCASS PASSPORT

(10)123456(422)616(423)056(7030)620213(7031)442312
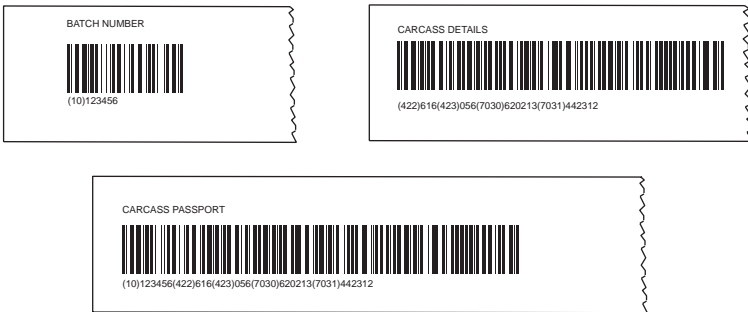
Figure 3.9   Sample barcode amalgamation

3.12   Pre-weigh function

You must be able to account for all the meat from a batch. The pre-weigh key enables you to pre-weigh meat for counter service. For example, when you move meat from the chill room to the counter.

Pre-weighing may not be used in the presence of the customer.

You must assign a pre-weigh key to the sales keyboard.

Using pre-weigh

1.   Select pre-weigh

2.   Confirm lot number

3.   Weigh each cut from the carcass

      The weight is added to the total pre-weight for that carcass or lot number.

4.   The new total pre-weigh value is displayed in the total display.

5.   Press $\ast$ when all the cuts from the carcass have been weighed, to print a report.

```
****Trac. Pre-Weigh****
02-08-2002                    10:27


Lot Number                    20011
Pre-Weighed            52.870 kg

   ****Report Complete****

```
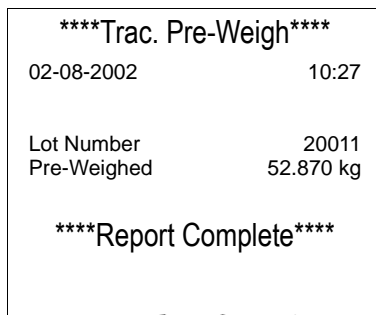
Figure 3.10 Traceability pre-weigh report

The weight limit and pre-weighed weight are included in the traceability totals report as separate fields.

Pre-weigh returns

There may be a requirement to take meat from the counter for pre-packing. If this happens it is necessary to adjust the pre-weigh total to account for the returns.

After selecting the pre-weigh function, use the Return key for the transactions and the returns value will be subtracted from the sales totals.

You must assign a pre-weigh key to the sales keyboard.

1. Select pre-weigh

2. Confirm lot number

3. Press Return.

4. Weigh each cut from the carcass

    The weight is added to the total pre-weight for that carcass or lot number.

The total return value is displayed as a negative value in the total display and is printed as a negative value on the Traceability pre-weigh report..

3.13   Counter service operation

In counter service you can scan the barcoded information from the tray label for the product, or you can type in the lot number at the keyboard and the machine will print it on the label or receipt.

Tray labelling

Where the product is packed in the presence of the customer, it is not necessary to print all the carcass/batch details on each label or receipt, provided that the information is clearly displayed and obviously intended for that product.

The system enables you to assign a panel key to print `tray labels' for use in this mode of operation. You can use this key to print a counter service tray label for each tray of product on sale.

Tray labelling can be used in non-preset and preset modes.

Setting up the key

1.   Create a PLU called `Tray Label'.

2.   Select a label format for the PLU that has the relevant text fields included.

Tray labels usually have larger print than pack labels and the field needs to be large enough to allow all the information to be printed.

3.   Enter the text required and the appropriate %% or Dewey Decimal codes in one of the PLU text fields.

4.   Step through the remaining options except unit or item price without entering any data.

5.   Select **Traceability On**.

6.   Assign the key to the sales keyboard.

Note: You will need to program the PLU with a nominal unit or item price, but check that the label format selected has no fields for printing weight or price information.

This tray contains:

Carcass Ref: 0112254
Slaughtered In: UK (112456)
Cutting In: UK (11224)
Born In   Ireland
Fattened In   Ireland
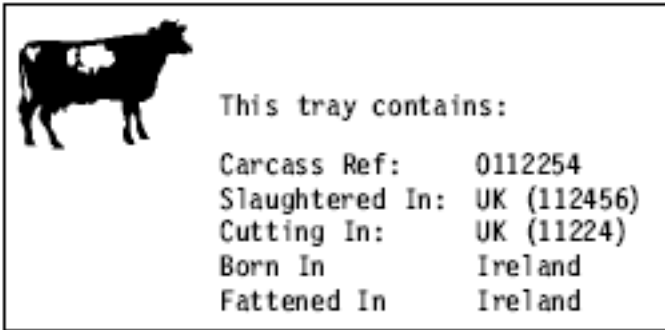
Figure 3.11 Tray label

Recall lot number

If preset mode is enabled, the panel key can be used to recall the lot number instead of scanning or entering the data for the tray label.

For details on assigning panel keys see section 3.14, page 87, Traceability panel (batch) keys.

3.14   Preset mode

If preset mode has been enabled in the scheme, the
information printed on labels or receipts is held in a record file.
Each record is referenced by a `batch' or lot number. The
record file can be built at a host PC and sent to the machine or
you can create or edit them at the machine.

Retained lot number

When you select a PLU, the last used lot number is displayed.
You can enter a new lot number at this point if required.
If **Retain Lot** has been enabled for your scale the new lot
number will be retained, replacing the programmed lot
number in the PLU
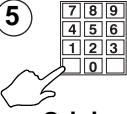
Edit preset traceability

To create or edit a traceability record from the sales keyboard

1.   Enter the **scheme reference** to be used

2.   Enter the **lot number**

3.   Enter the **references** to the appropriate data tables as
      you are prompted for them.

You can scan the barcode if you have a scanner at the
machine, or use the # key to program data from the supplier
barcodes, if the appropriate barcoded information is available.
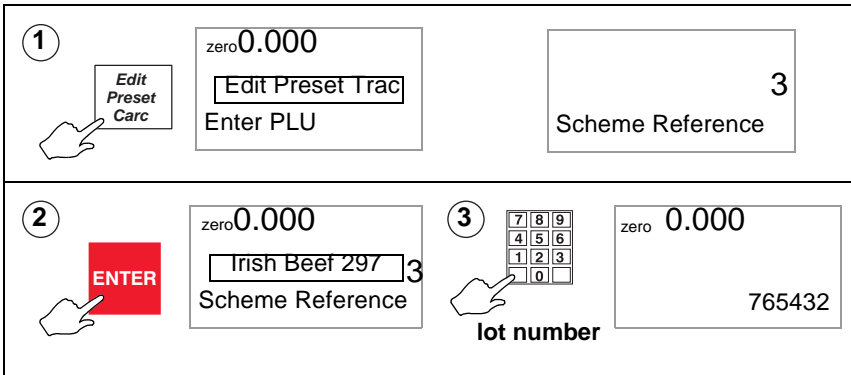
④ **ENTER**	zero0.000 ORIGIN 1	⑤ [789 456 123 0] **Origin**	zero0.000 ORIGIN 1 372
⑥ **ENTER**			zero 0.000 Ireland
⑦ Repeat steps 3 to 5 for any further options displayed			zero0.000 ireland
⑧ Lot 01471	To assign the lot number to the key		

If the record already exists, when you have finished entering data, you will see the message **Record Exists** followed by **Update Record ?**.

Press ✳ to confirm that you want to update the

traceability panel or press **C** to cancel the changes.

If all 999 records are currently in use, when you try to create a new panel you will see the message **No Space Left** followed by **Delete Old Rec.?**.

The system uses the last pack date to select the oldest record.

Press ✳ to confirm selection.

Press | Edit Preset Carc | to view the next oldest record.

You can keep pressing | Edit Preset Carc | to step through the traceability

records and press ✳ to delete any record no longer

required.

If you need to delete old records by lot number or specific dates, see section 3.17, page 96.

Traceability panel (batch) keys

A lot number may refer to multiple carcasses or a batch providing:

• all share the same source (slaughter and cutting for animal products)

• all are processed on the same day (at the cutting centre for animal products)

• all share the other data printed on the label (mandatory or voluntary).

For schemes operating in preset mode, you can assign a lot number to a key. This means that instead of scanning or entering the details for each transaction, you can just press the appropriate key.

• Traceability/batch details can be assigned to a `panel' key on the sales keyboard.

• You can label the keys to suit your own requirements

• You can print labels or receipts, depending on how your machine is configured, or you can print tray labels for counter service.

Assigning panel keys.

Manager Mode

1 ....
4 Machine Setup ▶ 1 Keyboard Setup ▶
5 ....

1 Key Assign ▶ 1 Standard Assign ▶
2   2
                    3
                    4

1 PLU
2............
18 Trac. Keys ▶ 1 Trac. Panel ▶
19...........   2 ....
25

1 By Lot Number
2 By Panel Number

Assign Key
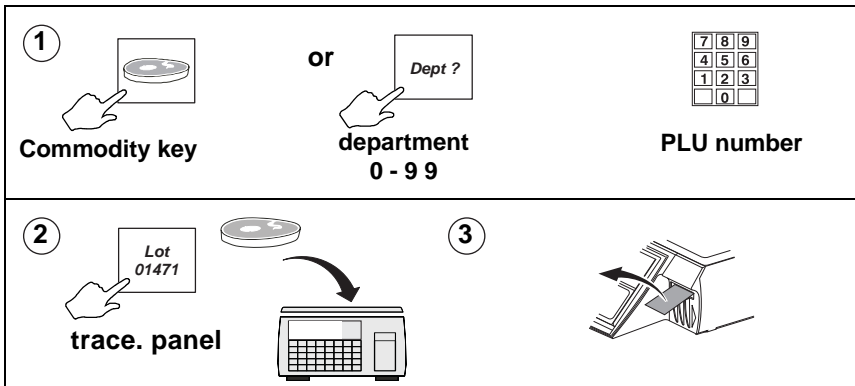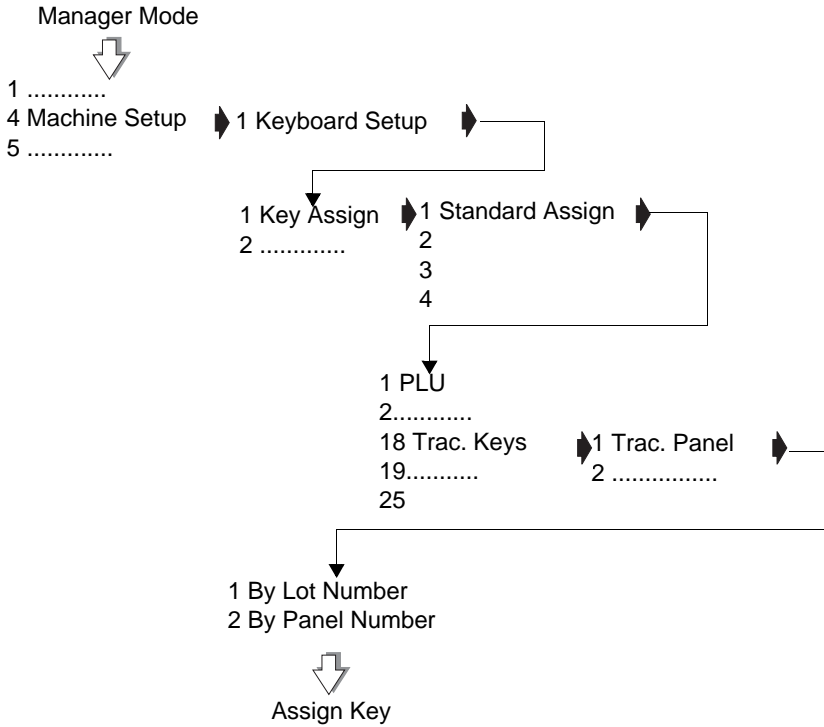
Figure 3.12 Trac. panel (batch) keys

3.15   Traceability Records

- The system can store up to 999 records.

- You can download the records from a PC or create them at the machine.

- If you have an `edit preset trac' key assigned to the sales keyboard you can create or edit records in sales mode.

  Enter the scheme reference.

  Enter the lot number, then enter the **references** to the appropriate data tables see Edit preset traceability, page 84.

You cannot change weight or date limits when editing traceability records in sales mode.

1 System Data ▶ 1 ....

```
              8 Traceability  ▶ 1
              9 ............     .....Records.. ▶ 1 Create & Edit  ▶
              11               ......            2 ............
                              4 Records          4
```

Lot Number (20 digits max)

Scheme Reference

Weight Disabled

Date Disabled
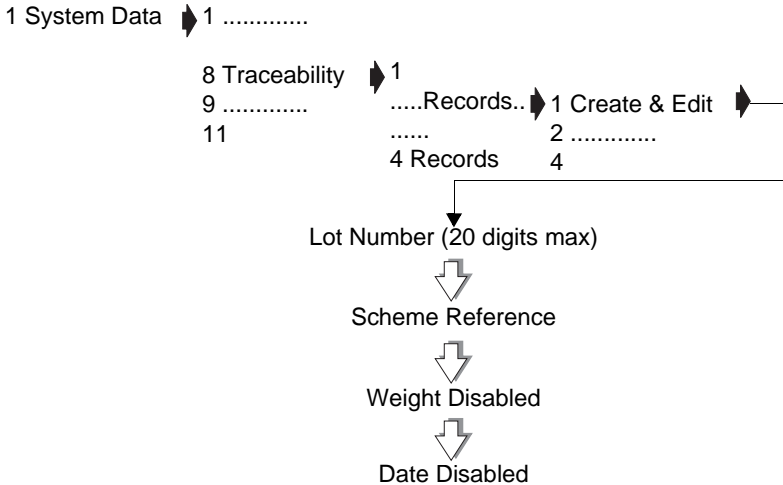
Figure 3.13 Creating a record

To create or edit a record in manager mode:

1. Enter the lot or carcass number.

2. Enter the full text as you want it to be printed on the label. This is referred to as the **traceability panel text**.

Traceability panel text

↵Lot Number: 102354↵Slaughtered In: UK
(1143)↵Cutting In: UK (19985)↵Born In:
Ireland↵Reared In: Ireland

Printed result (text area 3)

Lot Number: 102354

Slaughtered In: UK (1143)

Cutting In: UK (19985)

Born In: Ireland

Reared In: Ireland

Figure 3.14 Traceability records

Please remember .....

You can scan the barcode for the lot number if you have a
scanner at the machine, and the appropriate barcoded
information is available.

*Note: Ensure that the messages programmed in your machine
match those used by your suppliers.*

Panel text

Each panel text can have up to a maximum text length of 420
characters. However, if you create a large number of panels
you may have insufficient memory for them all to use the
maximum. If there is not enough memory to store a panel you
will see the message **No Space Left**.

Text markers

You can include text markers (two consecutive degree symbols) in the panel text to define the data to be displayed.:

• **one text marker (°°) included**

    the next 16 characters are displayed.

• **two text markers (°°   °°) included**

    the text between the markers is displayed.

• **no text markers included**

    the first 16 characters from the left will be shown.

If the record already exists, when you have finished entering the data you will see the message **Record Exists** followed by **Update Record ?**.

If all 250 records are currently in use, when you try to create a new panel you will see the message **No Space Left** followed by **Delete Old Rec.?**. If you want to delete old records **.**

Assigning records

There are two ways to assign traceability records to batch keys.

• When creating or editing a traceability record you can assign the record to a key on the sales keyboard.

• If the traceability file has been downloaded from the PC or you do not wish to edit the traceability record, you can assign traceability panel keys.

You can label the keys to suit your own requirements.

3.16   Lot number in PLUs

In preset mode, you can assign a lot number previously programmed in the traceability records to a PLU.

This means that you can:

• set up default lot numbers for PLUs which do not often need the lot number changed.

• link a set of common traceability panels to PLUs requiring traceability information.

Enabling PLU lot number

When creating or editing the PLU, you can enable a lot number. When the lot number is entered, if a traceability record exists, the panel text is displayed. At this point you can confirm the selection or enter a different lot number for use with the PLU.

If you want a different lot number, you can enter the new number when the current lot number is displayed or when the panel text is displayed.

If you enter a lot number for a traceability record using a different scheme reference you will see the message **Wrong Scheme Ref.**

If no record exists you will see the message **Record not found** followed by the message **Add New Record?**

1 System Data ▶ 1 Products ▶ 1 ....
2 .... 2 .... 2 Create & Edit ▶ Dept. Number
3 ....
9

1 Traceability Off
2 Traceability On

Scheme Reference ▶ 1 Lot Num.Disabled
2 Lot Num.Enabled ▶ Lot Number
(20 digits max)
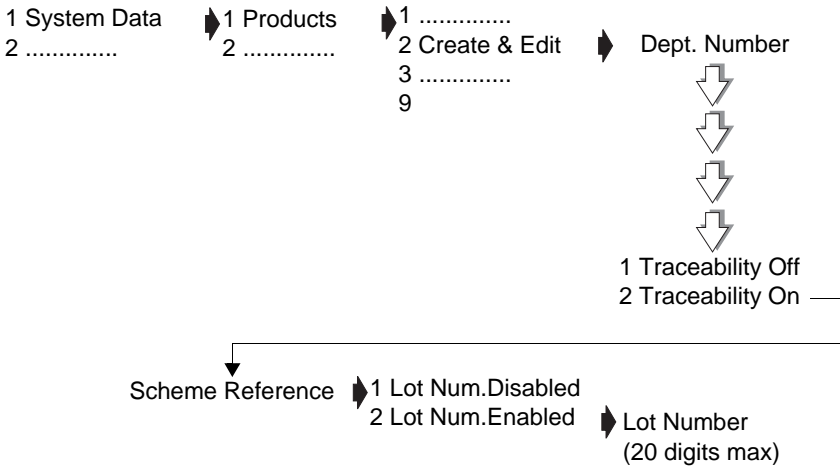
Figure 3.15 Lot number in PLU

The data is used as long as the PLU is not changed, allowing you to label batches.

Change lot number

This is a new function to allow quick changes of the panel reference linked to the PLU.

<div align="center">

1 System Data

⬇

1 Products

⬇

8 Change Lot Num.s

⬇

Dept. Numbers

⬇

Enter PLU

⬇

Lot Number
(20 digits max)

⬇

Comfirm lot number

</div>
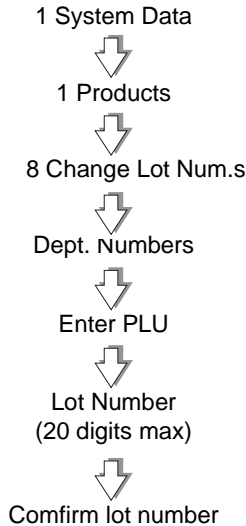
Figure 3.16 Change lot number

You can assign a `hot' key to the function and program a security level if required.

For details on programming `hot' keys see **Part 1** section 5.1 *Direct access (Hot) keys* on page 89**.**

Retaining the lot number

In pre-pack mode, whenever you select a PLU the last lot number used is displayed. Enter a new lot number at this stage if required. You can now choose whether to save the new lot number in the PLU overwriting the previous lot number

If **Retain Lot** is disabled the next time the PLU is recalled it will revert to the lot number programmed in the PLU record.

If **Retain Lot** is enabled the new lot number will be retained replacing the programmed lot number in the PLU.

Enable or disable **Retain Lot** in the traceability menus in Manager Mode.

8 Traceability

2 Scheme ▶ 1 Create & Edit   ▶ Scheme Reference
              2 Delete

                                   Scheme Name

1 No Emulation
2 Emulation 1
3 Emulation 2   ▶ 1 GTIN Operation N   ▶ 1 Force Lot Ent. N   ▶
4 Emulation 3   2 GTIN Operation Y   2 Force Lot Ent. Y

                   1 Label Only   ▶ 1 Prepack Only   ▶
                   2 Label & Receipt   2 PrePack&Counter

                   1 Non Preset Mode   ▶ 1 Don't Retain Lot
                   2 Preset Mode   2 Retain Lot
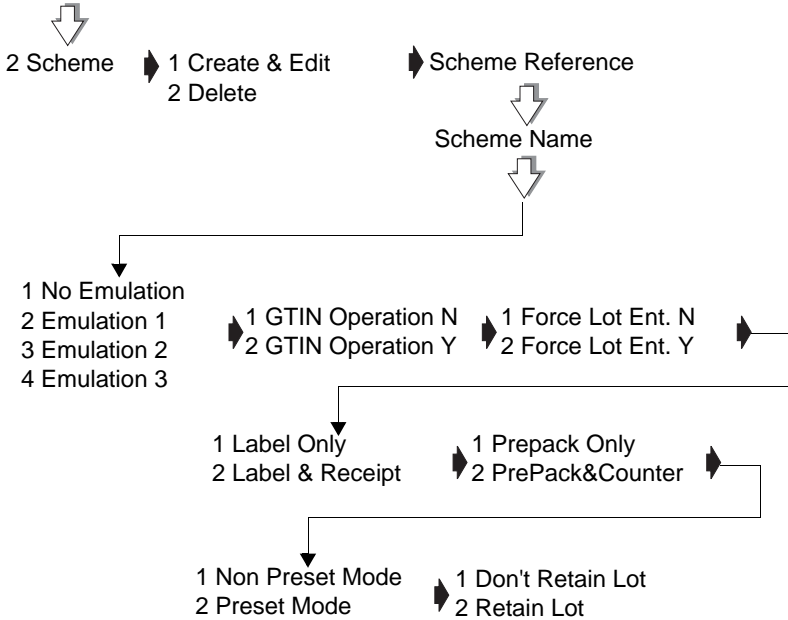
Figure 3.17   Retained lot number setup

PLU file list

If:

- traceability and lot number are enabled for the PLU, then the lot number will be printed in the PLU file list.

- traceability is enabled and lot number is disabled for the PLU, then the lot number will be printed as **No** in the PLU file list.

- traceability is off, no lot number will be shown in the PLU file list.

3.17   Deleting old panel texts

If all the 999 traceability records have been used, you will need to delete old records before you can create any new panels.

You can delete panel texts by:

- lot number

- specific dates

- by last pack date

or you can delete all panels.

You can delete old traceability panels by last pack date from the sales keyboard, see section 3.14, page 84.

```
1 System Data  ▶ 1 ..............
                 8 Traceability   ▶ 1 ..............    ▶ 1 Create & Edit
                 9 ..............     4 Records           2 Delete By Number
                 11                                       3 Delete By Date
                                                          4 Delete All
```

Figure 3.18 Deleting old panels

4   Reporting Functions

4   Reporting Functions

- Totals are updated whenever a label or receipt has been printed successfully.

- You must be in Manager Mode to print a report.

- You can assign a security level to any report.

Missing fields

If there is no data for a particular field then that field is not printed on the report. For example, if you are printing a Grand or Operator report and no voids have been registered then the Void Value and Void Count lines are not printed.

Sales value

Sales values show actual turnover.

Sales totals

- are **not reduced** by refunds or returns.

- are **reduced** by Negative PLUs.

Report type

When printing:

Non clearing (X) reports, the totals for that category are carried forward.

An **X** report prints the totals for the period and does not reset any totals data.

Clearing (Z) reports, the totals are cleared and the relevant clearing date in the security report is updated.

A **Z** report prints the **X** totals for the period and then resets those totals.

If the report printing fails for any reason or you abort the report printing, the totals will be unchanged.

4.1   **Batch reports**

You can group frequently used reports in a batch and assign a key to the keyboard for printing the batch. This has the advantage of allowing you to print a group of reports from a single key press when in Manager Mode.

Batch setup

You can create up to five batches and program each batch with the following information:

- Batch report reference   (1 - 5)
- Batch name   (20 characters max)
- Batch security level   (0 - 9)
- Totals reports   (up to 9 reports)
- Totals type (X, X2, Z, Z2) (for each report)

Each batch can contain up to nine reports. The number of reports in the batch is displayed on screen during **Create & Edit**. Each time you select or disable a report the number is updated.

```
              2 Reports
                 ⬇
            1 Totals Report
                 ⬇
8 Batch Reports  ▶ 1 Print Batch     1 Create & Edit    ▶
                    2 Batch Setup     2 Delete
                                      3 Batch Assign

                          Batch Assign
                               ⬇
                           Enter text
                         (20 chars. max)
                               ⬇
                          Security Level
                               ⬇
              Select required report type and reports
              Select disabled when selection is complete
                               ⬇
                          Assign Key
```
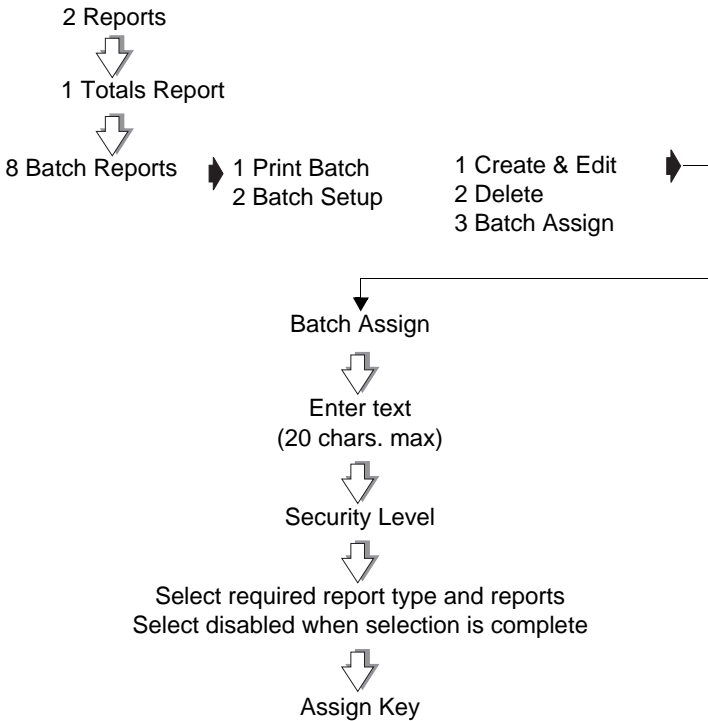
Figure 4.1   Creating batch reports

Selecting reports

Each batch can contain up to nine reports.

1.   Create the batch and assign a security level.

2.   Select the type of report required.

3.   Select the report.

     The number of reports selected is displayed on screen.

4.   Repeat step 3 until you have selected all the reports you want to include in the batch (maximum 9).

5.   Select **disabled** from the report type list.

6.   Assign the batch report key or press **ENTER** .

4.2   Configuring reports

Reports can be printed on receipt rolls or labels. When printing to labels, the label gaps are skipped so that no data is lost.

Reporting period

You can select either single or two period reporting. Two period reporting enables you to obtain totals covering two different trading periods, for example daily and weekly. The default setting is for single period reporting.

Note: If you select two period reporting, the amount of memory available for PLU programming will be reduced.

The reporting periods are:

•   **X** and **X2** for non clearing reports

•   **Z** and **Z2** for clearing reports

An **X** report prints the totals for period 1 and does not reset any totals data.

An **X2** report prints the totals for period 2 and does not reset any totals data.

A **Z** report prints the **X** totals for period 1 and then resets those totals.

A **Z2** report prints the totals for period 2 and then resets those totals.

Please remember .....

If the report printing fails for any reason or you abort the report printing, the totals will be unchanged.

Report setup

In report setup you configure the way in which you want the reports printed. The choices you make will apply to all the machines on the system. You can select:

- X and X2 Totals   or   X Totals Only
- PLU Totals Yes   or   PLU Totals No
- Amount Entry OFF   or   Amount Entry ON

or   Amount Auto

- Short Cash Rpr   or   Full Cash Rprt
- PRun Totals No   or   PRun Totals Yes

PLU totals

If you do not require PLU totals from the scale, disabling them makes more memory available for PLU storage at the scale.

Amount entry

If you select:

Amount Entry ON, you must enter the value of each type of payment in the cash drawer before printing a Z machine totals report. You will only be prompted to enter values for payment types that have been enabled in the payment programming table (see User Instructions Part One, section 4.3 page 49). You may enter zero values. Any discrepancies between the expected values and the values entered will be printed.

Amount Entry OFF, you will not be prompted to enter drawer values and discrepancies will not be printed in the report.

Amount Auto, you will only be prompted to enter values for payment types actually taken.

When requesting the amounts in the drawer, If enforce value has been enabled for a payment type, you must enter a value

or zero. If enforce value is disabled you may press **ENTER** to

skip the entry.

If you have selected **Amount Entry ON** or **Amount Auto**, when printing Z Grand Total reports, all the amounts entered are accumulated into a single declared value and printed after the sequence numbers at the top of the report.

Cash report

The cash report configuration applies to **X** and **X2** machine reports. If you select **Short Cash Rprt** a summary machine report is printed that does not list the payment types.

The report will include tax totals.

Note: Only non zero tax totals are printed.

Tax totals are part of the grand totals command and therefore can only be cleared when the grand totals are run and not when the cash report is run.

Please remember .....

The valid tax totals period is printed with the tax summary which can be different from the period of the cash report.

4.3   Totals reports

You can print any of the following totals reports:

- Grand Totals

- Department totals

- Machine Totals

- Operator Totals

- Hourly totals

- PLU Totals

- Group Totals

- Discount Totals

- Promotion Totals

- Security report

- System cash

You can also:

- Clear All Totals.

Report numbering

Each totals report has its own sequential number for security purposes. There are four separate number sequences, one each for X, X2, Z and Z2 reports. The number is incremented each time you print a report.

Report fields

* indicates the reports that include this field

** indicates fields that only appear on Z reports.

Field name	Description	Grand	Department	Machine	Operator	Hourlyr	PLU	Group	Discount	Promotion	System
Sales value	Value of all transactions in PoS mode	*	*	*	*	*	*	*		*	*
Sales weight/ items	Weight/items sold						*			*	
Counter value	Value of all transactions in non-PoS mode	*	*	*	*	*	*	*			*
Counter weight/items	Weight/items labelled						*				
Pre-pack value	Value of all transactions in Pre-pack mode	*	*	*	*	*	*	*			*
Pre-pack weight/items	Weight/items pre-packed						*				
Transactions	Total number of transactions (Sales + Counter + Pre-pack)	*	*	*	*	*	*	*			*
Customer	Total number of receipts + Total ADD labels	*	*	*	*	*					*
Training value	Value of all transactions in training mode			*	*	*					*
Override value	Value of override transactions	*	*	*	*	*					*
Override count	Total number of overrides	*	*	*	*	*					*
Void value	Value of void transactions	*	*	*	*	*					*
Void count	Total number of voids	*	*	*	*	*					*
Return value	Value of return transactions	*	*	*	*	*		*			*
Return count	Total number of returns	*	*	*	*	*		*			*
Return weight/items	Weight/items returned						*				
Refund value	Value of refund transaction	*	*	*	*	*					*
Refund count	Total number of refunds	*	*	*	*	*					*
Discount value	Value of all discounts	*	*	*	*	*				*	*
Discount count	Total number of discounts	*	*	*	*	*				*	*
No Sale count	Total number of No Sales	*	*	*	*	*					*
Pick Up value**	Amount of Pick Up			*	*	*					*
Pick Up count	Total number of Pick Ups			*	*	*					*

Field name	Description	Grand	Department	Machine	Operator	Hourlyr	PLU	Group	Discount	Promotion	System
Float value**	Amount of Float			*	*	*					*
Paid Out value**	Amount paid out			*	*	*					*
Paid Out count	Total number of Paid Outs			*	*	*					*
Local Cash value**	Value of local cash payments			*	*	*					*
Payment value**	Value of each payment type (not local cash)			*	*	*					*
Received on Account	Value of payments received on account			*	*	*					*
Promotion cost	Difference between sales value at standard price and sales value at promotion price									*	*
Batch value	Sales during the promo period									*	*
Batch cost	Difference between sales value at standard price and sales value at promotion price during the promo period									*	*
Payment usage	The number of payments taken for each payment type.			*							*

Grand totals report

A Grand total consolidates data from PLU, Operator, Department, Machine, Group and Discount reports for each machine on the system and prints a report of the total sales. It also provides a tax breakdown for the entire system. Net sales value and tax value are calculated according to whether the tax system in use is inclusive or exclusive.

You can select either X or Z totals to print. If you select the X total, the totals are carried forward and are not cleared. If you select the Z total, the totals are cleared.

Example:*Printing Grand totals*

①	**Manager Mode**		
	ENTER **or** **2**		Reports
②	**ENTER** **or** **1**		Totals Report
③	**1** X Reports **or** **2** Z Reports		
④	**ENTER** **or** **1**		Grand Totals
⑤	**ENTER**		Sales value Counter value Transactions

```
∗∗∗Grand Report∗∗∗∗∗∗∗

X Report                0001#0012
03-08-2002                    13:28

Sequence Numbers  0012:0012
Sales Value                £949.25
Counter Value                £7.19
PrePack Value                £5.84
Transactions                    58
Customers                       23
Override                     £3.29
Override Count                   8
Voids Value                  £0.36
Voids Count                      1
Return Value                £14.80
Return Trans                     4
Refund Value                £14.80
Refund Trans                     4

Tax Ref 0                    0.00%
Sales Value                £774.66
Tax Value                    £0.00
Net Sales Value            £774.66

Tax Ref 1                   10.00%
Sales Value                £174.59
Tax Value                   £15.87
Net Sales Value            £158.72

From:          02-08-2002  13:35

To:            03-08-2002  13:28


∗∗∗∗Report Complete∗∗∗∗
```

```
∗∗∗Grand Report∗∗∗∗∗∗∗

Z Report                0001#0013
03-08-2002                    13:29

Sequence Numbers  0012:0013
Declared                   £950.03

Sales Value                £949.25
Counter Value                £7.19
PrePack Value                £5.84
Transactions                    58
Customers                       23
Override                     £3.29
Override Count                   8
Voids Value                  £0.36
Voids Count                      1
Return Value                £14.80
Return Trans                     4
Refund Value                £14.80
Refund Trans                     4

Tax Ref 0                    0.00%
Sales Value                £774.66
Tax Value                    £0.00
Net Sales Value            £774.66

Tax Ref 1                   10.00%
Sales Value                £174.59
Tax Value                   £15.87
Net Sales Value            £158.72

From:          02-08-2002  13:35

To:            03-08-2002  13:28


∗∗∗∗Report Complete∗∗∗∗
```

Figure 4.2   Grand totals reports

Machine totals report

Machine totals are calculated from the number of transactions so that they may be used to monitor machine utilisation.

The machine report gives totals for each machine. You can print a report for an individual machine or all machines.

If you select **All Machines** a consolidated cash up report is printed at the end of Z reports,.

Note: Returns value and Returns Trans are printed if return transactions are not zero.

```
****Machine Report*****

Z Report              0001#0004
02-08-2002                18:28

Sequence Numbers  0002:0004
Machine Start                1
Machine End                  4

Machine ID                   1

Performance Data
Sales Value           £ 807.47
Counter Value           £ 0.40
Transactions             127
Customers                 84

Exceptional Data
Voids  Value            £ 0.66
Voids Count                  1
Return Value            £ 5.60
Return Trans                 2
Refund                 £ 10.10
Refund Count                 2
Discount Value         £ 11.10
Discount Count               3
No Sale Count                2
Pick Up Count                1
Paid Out Count               1
Rcvd On Accnt.        £ 150.00

Machine ID                   2

Performance Data
Sales Value           £ 317.43
PrePack Value         £ 210.40
```

```
Return Value            £ 2.46
Return Trans                 1
Refund                  £ 1.90
Refund Count                 1
Discount Value          £ 2.50
Discount Count               5
No Sale Count                1
Pick Up Count                1
Paid Out Count               1
- - - - - - - - - - - - - - -
         Cashup Report
- - - - - - - - - - - - - - -

Cash                  £ 702.53
Cheque                £ 695.35
Card                  £ 327.15
Account               £ 250.25
Coupon                 £ 23.70
Total                £ 1998.98

Float                 £ 500.00
Paid Out               -£ 5.00
Pick Up              -£ 750.00
Drawer Value         £ 1743.98

Discrepencies
                 Declared    Difference
Cash        £      704.53         2.00
Cheque      £      675.35 -     - 20.00

From:         02-08-2002  06:30

To:           02-08-2002  18:29

****Report Complete****
```

Figure 4.3   Machine Totals report (clearing)

Operator totals report

The machine stores both trading and training totals. The report includes all transactions assigned to the operator and prints the training value, if any, on a separate line. Depending on how your machine is configured, a receipt item count may be printed.

You can choose to print the report for an individual operator or all operators.

```
***Operator Report***

X Report              0001#0004
02-08-2002               18:29

Sequence Numbers 0001:0004
Operator Start               0
Operator End                99

Operator Num 1
SANDRA

Performance Data
Sales Value            £633.57
PrePack Value           £59.20
Transactions               103
Customers                   58
         4
Exceptional Data
Voids  Value            £14.66
Voids Count                  4
Return Value             £2.46
Return Trans                 1

Operator Num 2
MARIA
```

```
Transactions                23
Customers                    8

Operator Num 14
ANNE

Performance Data
Sales Value            £873.54
Transactions               181
Customers                   66

Exceptional Data
Voids  Value            £14.66
Voids Count                  4
Return Value             £2.46
Return Trans                 1


From:        02-08-2002 15:30

To:          02-08-2002 18:29


****Report Complete****
```

Figure 4.4   Operator totals report (non-clearing)

Hourly totals report

Hourly reports allow you to monitor trading patterns throughout the day. You should clear hourly totals daily if you want to ensure that totals from the previous day are not included with the current day. You can print the reports for each hour or for each half hour period throughout the day. Clearing either report also clears the other one.

Note: The first hour of the day is 00:00 to 00:59. If no trading has taken place during an hour or half hour period that period is not listed.

*******Hourly Report*******	*******Hourly Report*******
Z Report 0001#0035 02-08-2003 12:00	Z Report 0001#0035 02-08-2003 12:00
Sequence Numbers 0001:0035 **Time 08:00-08:59**	**Time 08:30-08:59**
Sales Value £107.47 Transactions 13 Customers 5	Sales Value £107.47 Transactions 13 Customers 5
Time 09:00-09:59	**Time 09:00-09:29**
Sales Value £141.78 Counter Value £16.79 PrePack Value £23.84 Transactions 31 Customers 13	Sales Value £101.68 Counter Value £10.28 PrePack Value £23.84 Transactions 23 Customers 10
Time 10:00-10:59	**Time 09:30-09:59**
Sales Value £102.18 PrePack Value £27.03 Transactions 23 Customers 11	Sales Value £40.10 Counter Value £6.51 Transactions 8 Customers 3
Time 11:00-11:59	******Report Complete******
Sales Value £165.24 Counter Value £50.32 PrePack Value £56.99 Transactions 43 Customers 25	

Figure 4.5   Hourly report (clearing)

PLU, department and group reports

These are sales analysis reports and show counter, sales and prepack values for each PLU, department or group.

PLU, department and group reports can be listed in various formats (see page page 114) to help you analyse sales more easily.

Note: Returns value and Returns Trans are printed only if return transactions are not zero.

Printing a department or group report

You can choose to print the report for an individual department or group, or all departments or groups.

```
∗∗∗Department Report∗∗∗∗

X Report            0001#0016
02-08-2002              18:25

Sequence Numbers  0003:0016
Dept. Start                  2
Dept. End                    2

Department 2
BAKERY
Sales Value            £183.97
Sales Items                 86
Counter Value           £59.20
Counter Items               43
Return Value            £12.87
Return Items                13
Return Trans                 1
Transactions               120
Customers                   72

From:        02-08-2002  16:31

To:          02-08-2002  18:25


   ∗∗∗∗Report Complete∗∗∗∗
```

```
∗∗∗∗∗Group Report∗∗∗∗∗

X Report            0001#0017
02-08-2002              18:26

Group Start                  1
Group End                    1

Group Number 1
BREAD
Sales Value            £121.77
Sales Items                 62
Counter Value           £29.10
Counter Items               21
Return Value            £12.87
Return Items                13
Return Trans                 1
Transactions                79
Customers                   52

From:        02-08-2002  16:30

To:          02-08-2002  18:26


   ∗∗∗∗Report Complete∗∗∗∗
```

Figure 4.6   Department and Group reports

Printing PLU reports

You can choose to print PLU reports with the information sorted by PLU number, counter, sales or transactions.

Define filter

You can specify either an individual PLU or a range of PLUs for listing PLU totals. To print the totals for one PLU only, enter the same PLU number for both the start and end value.

***Note:** PLU totals reports include weight and items.*

```
*****PLU Report*****

X Report                0001#0019
02-08-2002                  18:25


Sequence Numbers  0001:0019
Dept. Start                     0
Dept. End                       9
PLU Start                       1
PLU End                         3
Group Start                     0
Group End                       9

Sorted By                 PLU No.
- - - - - - - - - - - - - - - - -
        Department 2
            BAKERY
- - - - - - - - - - - - - - - - -

PLU  2001
CARROT CAKE
Sales Value               £83.97
Sales Items                   76
Counter Value             £59.20
Counter Items                 43
Return Trans                   1
Return Value               £2.86
Return Items                   3

PLU  2002
BAGUETTE
Sales Value              £121.77
Sales Items                   62
Counter Value             £29.10
```

```
LARGE WHOLEMEAL
Sales Value               £97.44
Sales Items                  116
Counter Value             £27.84
Counter Items                 24
Return Trans                   1
Return Value               £2.52
Return Items                   3
- - - - - - - - - - - - - - - -
            Summary
- - - - - - - - - - - - - - - -

Number of PLUs                 3
PLU Totals               Enabled

Sales Value               £97.44
Sales Items                  116
Counter Value             £27.84

From:        02-08-2002  16:30

To:          02-08-2002  18:26


   ****Report Complete****
```

Figure 4.7   PLU report (non-clearing)

Discount totals report

Discount totals include manual transaction and receipt discounts.

```
****Discount Report****

X Report              0001#0006
02-08-2002                 18:27

Sequence Numbers  0004:0006
Discount  1
MANAGER SPECIAL
Discount Value         £150.00
Discount Count              30

Discount  2
LOYALTY BONUS
Discount Value         £753.06
Discount Count             497

From:        02-08-2002  18:30

To:          03-08-2002  18:26
```

Figure 4.8   Discount report

Promotion totals report

You can select to print promotion totals by:

• single batch

• all batches

• PLU number

Batch promotion reports include the promo batch name, start and end dates, sales value and quantity for each PLU and the promotion cost. The promotion cost is the difference between selling at the standard price and the sales value at the promotion price. PLU totals are included, even if they are zero, to assist with promotion analysis.

Reports printed by PLU number will show the totals for all PLUs on promotion whether they are linked to a batch or not.

```
        ***Promotion Report***
X Report                 0001#0008
03-11-2003                   08:09

Sequence Numbers  0001:0008
Dept. Start                        0
Dept. End                          3
PLU Start                          1
PLU End           9999999999999
Group Start                        0
Group End                         99

Batch Start                        7
Batch End                          7

Promotion Batch                    1
EARLY BIRD SPECIAL
From:          03-11 2003    06:00

To:            03-11 2003    08:00
- - - - - - - - - - - - - - - - - -
        Department 3
            BEVERAGES
- - - - - - - - - - - - - - - - - -

PLU  00313
TEA BAGS
Promotion Value              £83.32
Promotion Cost                £8.70
Promotion Items                  77
- - - - - - - - - - - - - - - - - -
        Department 4
              DAIRY
- - - - - - - - - - - - - - - - - -

PLU  00413
MILK ILTR
Promotion Value              £14.18
Promotion Cost                £2.48
Promotion Items                  34
- - - - - - - - - - - - - - - - - -
            Summary
- - - - - - - - - - - - - - - - - -
Number of PLUs                    2

From:          02-11-2032   08:20
To:            03-11-2003   08:09
    ****Report Complete****
```

by Batch

```
        ***Promotion Report***
X Report                 0001#0039
03-11-2003                   18:26

Dept. Start                        2
Dept. End                          2
PLU Start                          1
PLU End           9999999999999
Group Start                        0
Group End                         99
- - - - - - - - - - - - - - - - - -
        Department 2
- - - - - - BAKERY - - - - - -

PLU  2001
CARROT CAKE
Promotion Value              £23.76
Promotion Cost                £4.80
Promotion Items                  24

PLU  2002
BAGUETTE
Promotion Value              £52.08
Promotion Cost               £26.04
Promotion Items                  62

- - - - - - - - - - - - - - - - - -
            Summary
- - - - - - - - - - - - - - - - - -
Number of PLUs                    2

From:          03-11-2003  16:31
To:            03-11-2003  18:26
    ****Report Complete****
```

by PLU

Figure 4.9   Promotion report (non-clearing)

Security report

Security reports are non-clearing reports and list:

• the sequence numbers for the Z reports

• the sequence numbers for the Z2 reports

• the date and time of the last Z report for each report type

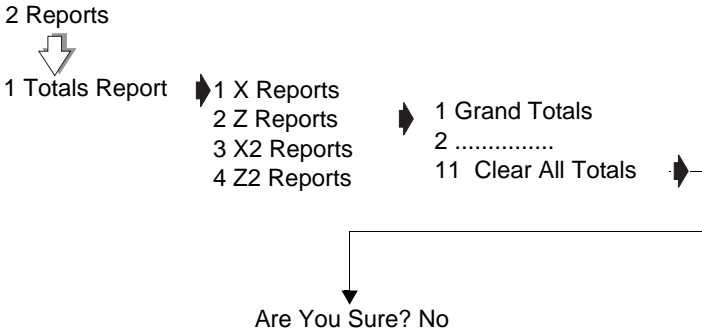• the date and time of the last Z2 report for each report type

****Security Report****		
X Report		0001#0000
02-08-2003		18:03

Sequence Numbers

	X	Z
PLU	11	9
Promo	11	9
Operator	11	9
Grand	11	9
Dept	11	9
Machine	11	9
Group	11	9
Discount	11	9
Clear All	11	9
System	11	9

Z Clearing Dates

PLU	02-08-03	18.00
Promo	02-08-03	18.00
Operator	02-08-03	18.00
Grand	02-08-03	18.00
Dept	02-08-03	18.00
Machine	02-08-03	18.00
Group	02-08-03	18.00
Discount	02-08-03	18.00
Clear All	02-08-03	18.00
System	02-08-03	18.00

****Report Complete****

****Security Report****		
Z Report		0001#0000
3-08-2003		13:04

Sequence Numbers

	X	Z
PLU	12	9
Promo	12	10
Operator	12	9
Grand	12	9
Dept	12	10
Machine	12	10
Group	12	9
Discount	12	9
Clear All	12	9
System	12	9

Z Clearing Dates

PLU	02-08-03	18.00
Promo	03-08-03	13.00
Operator	02-08-03	18.00
Grand	02-08-03	18.00
Dept	03-08-03	13.00
Machine	03-08-03	13.00
Group	02-08-03	18.00
Discount	02-08-03	18.00
Clear All	02-08-03	18.00
System	02-08-03	18.00

****Report Complete****

Figure 4.10 Security report (non-clearing)

Clear All Totals

This function is only available with Z Totals. It clears all totals except carcass totals.

2 Reports

1 Totals Report 1 X Reports   1 Grand Totals
                 2 Z Reports   2 ....
                 3 X2 Reports   11 Clear All Totals
                 4 Z2 Reports

Are You Sure? No

To confirm that you want to clear totals, press

Figure 4.11 Clearing totals

System cash report

The accumulated Z totals and the declared payment values for all the machines being cashed up are added into the system cash totals. If the machines are configured for two period reporting both X and X2 reports are updated.

Detailed cash reports are always printed for system cash reports.

Clear All Totals does not clear the system cash report. These reports can only be cleared by printing the Z or Z2 system cash reports corresponding to the X reports.

```
     ∗∗∗System Cash Report∗∗

Z Report              0001#0005
02-08-2002                18:30

Performance Data
Sales Value             £ 807.47
Counter Value            £ 0.40
Transactions                 127
Customers                     84

Exceptional Data
Voids  Value             £ 0.66
Voids Count                    1
Return Value             £ 5.60
Return Trans                   2
Refund                  £ 10.10
Refund Count                   2
Discount Value          £ 11.10
Discount Count                 3
No Sale Count                  2
Pick Up Count                  1
Paid Out Count                 1
Rcvd On Accnt.         £ 150.00
```

```
          Cashup Report


Cash                    £ 702.53
Cheque                  £ 695.35
Card                    £ 327.15
Account                 £ 250.25
Coupon                   £ 23.70
Total                  £ 1998.98

Float                   £ 500.00
Paid Out                 -£ 5.00
Pick Up                -£ 750.00
Drawer Value           £ 1743.98

Discrepencies
                 Declared   Difference
Cash         £    702.53         2.53
Cheque       £    695.35        25.00


From:        02-08-2002  06:30

To:          02-08-2002  18:29


  ∗∗∗∗Report Complete∗∗∗∗
```

Figure 4.12 System cash report

4.4   Traceability totals report

Traceability totals are non-clearing. The report is an audit trail of the last 100 batches/carcases stored in memory.

You can choose to print traceability totals by date or by lot number. If you select lot number a report is printed for the lot number you enter. If you select date a report is printed for all the lot numbers that have been updated since the date entered.

Weight used is the total used weight of the batch/carcass and is incremented each time a standard or pre-weighed transaction is completed. As this value is non-clearing, you can always use it as a check against the weight of the batch/ carcass

The date that a lot number was last updated in any way is printed at the end of the details.

```
         **Traceability Report**

  03-08-03                    15:10


  Lot Number 20011
  Weight                  12.800kg
  Counter Weight           3.720kg
  Pre-Pack Weight          5.455kg
  Pre-Weighed              6.000kg

  Weight Used            123.652kg

  Weight Limit           272.768kg

           Additional Data

  Sales Value              £118.85
  Transactions                  35
  Pre-Weigh Return        1.320 kg
  First Used    24-03-05     09:11
  Last Updated  03-05-05     08:45
  Expiry Date             06-05-05

       ****Report Complete****
```

Figure 4.13 Traceability report (non-clearing)

4.5   Pack run totals

Outstanding Pack runs

This report lists any incomplete pack runs against the pack run reference number. The report includes:

• order number

• customer reference number

• packs, cartons, boxes packed

• target values for level 1, level 2 and level 3.

Completed pack runs

You can print completed pack run totals by order number, customer reference number or by pack run reference. For each type of report you can select either summary or detailed.

Summary reports list against each pack run

• order number or customer reference (depending on type of report selected).

• tare weight

• number of items

• number of packs

• number of cartons

• number of boxes

• total weight or items

• total price

Detailed reports also print the details for each transaction in the pack run.
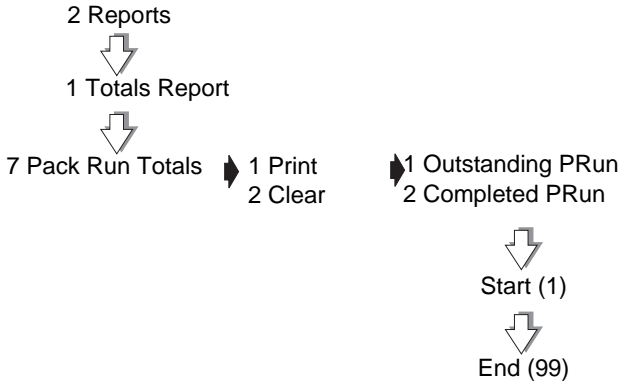
2 Reports

1 Totals Report

7 Pack Run Totals ▶ 1 Print   ▶1 Outstanding PRun
                    2 Clear   2 Completed PRun

                                       Start (1)

                                       End (99)

Figure 4.14 Printing pack run reports

4.6   Transaction reports

Printing transactions

Printing **live** transactions will show you if there are any incomplete transactions outstanding against any of the operators.

Sub-totalised transactions are those for which **sub-total receipts** have been printed but have not yet been consolidated into a **sales total receipt** and added to sales totals.

Note: You cannot print totals if there are any outstanding transactions. You must complete the transactions before printing totals.

Clearing transactions

You can clear any outstanding transactions at the end of trading or when you move or replace a machine. Cleared transactions are not added to the totals.

If you clear transactions during trading current sales will be lost.

2 Reports

3 Trans. Reports ▶ 1 Live
                    2 Sub-Totalised

                    1 Print Trans.
                    2 Clear Trans.

Figure 4.15 Printing transaction reports

4.7   Defining filters

You can specify the following filter criteria when listing
Department or PLU totals:

• individual or range of departments

• individual or range of PLUs.

To print the labels for one department or PLU only, enter the
same department or PLU number for both the start and end
value.

5 Audit Mode

5.1 Setting up the audit function

5.2 Printing the audit report

5.3 Erase audit list

5   Audit Mode

Audit mode provides a reporting function that enables you:

•   to print out completed transactions (receipts).

•   to collect transactions if you have the appropriate PC
        software application (MX100)

Machines in local mode

Communications failure

If there is a communications failure between the server and
client machines a machine may retain audit transactions while
operating in local mode.

As soon as the server detects and reinstates the client
machine, the client audit transactions are transferred to the
server.

If the client buffer is set to linear mode, no warnings will be
given when the buffer is nearly full. No further transactions will
be allowed when the buffer is full.

5.1   Setting up the audit function

Filtering the information

You can set up the audit function to:

•   include label or receipt totals or both

or

•   include stock or account totals or both.

•   be able to continue trading when the audit store is full
        (circular).

•   to have to clear audit transactions before trading can
        continue when the audit store is full (linear).

Server/client buffer mode

Note: Client buffer mode only takes effect in local mode.

If you select **Circular** you will be able to continue trading when the audit store is full but new audit transactions will over write the oldest audit transactions. You will not see any warning messages.

If you select **Linear** you will see flashing warning messages **Audit 75% Full** and **Audit 90% Full** as the number of transactions in the audit store approach the maximum permitted. The message replaces the scroll message on the vendor display in sales mode and is also displayed if you go to the network map in manager mode.

Note: Normally the server buffer mode is set to circular and the clients are set to linear.

An error message is displayed at three stages:

- **Audit 75% Full** when the audit store is 75% full.

- **Audit 90% Full** when the audit store is 90% full.

- **Audit Full** when there is no space left in the audit store.

To continue trading you must either **Erase Audit List** or print the **Audit Report** and then **Erase Audit List** to clear the audit store of transactions.

5.2   Printing the audit report

The audit report prints transactions that have been totalised and printed on the label or receipt. You will be prompted to enter

• the start and end dates or times

• receipt numbers for the report.

You can customise the reports to include only the type of transaction you require or all transactions. You can select from

• label

• receipt

• label and receipt

• account

• stock

• stock and account

• or all transactions

If you select **Summary Report** the report prints a summary of each receipt or label. A **Detailed Report** prints all the transaction details for each label, receipt or account.
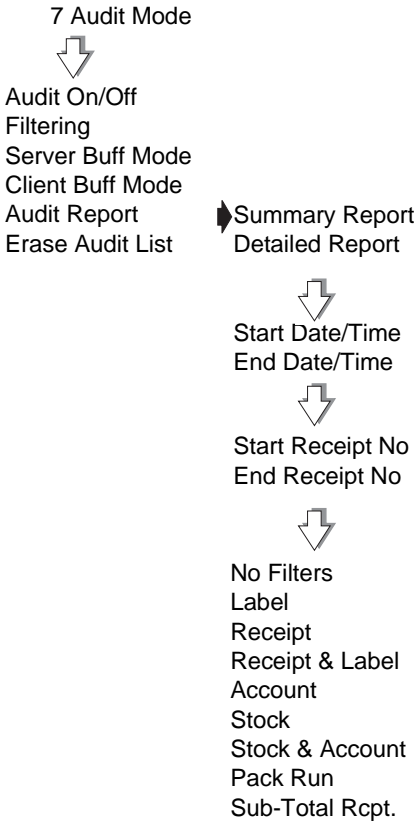
7 Audit Mode

Audit On/Off
Filtering
Server Buff Mode
Client Buff Mode
Audit Report   ▶Summary Report
Erase Audit List   Detailed Report

Start Date/Time
End Date/Time

Start Receipt No
End Receipt No

No Filters
Label
Receipt
Receipt & Label
Account
Stock
Stock & Account
Pack Run
Sub-Total Rcpt.

Figure 5.1   Printing an audit report

5.3   Erase audit list

You can clear all the audit transactions (No Filter) or you can set selection criteria as in printing the audit report.

If your system has a backup server and that machine is off-line when you try to erase the audit list you will see warning messages:

• No Backup Server
• Data May Be Lost
• Are you sure? No

You must press ☐ **YES** ☐ to delete the list.

Do not erase the audit list unless you are certain that the backup server will not be restored during the trading period. In this situation, **remove it from the network map**.

If you erase the audit list and the backup is subsequently restored, totals data may be corrupted.
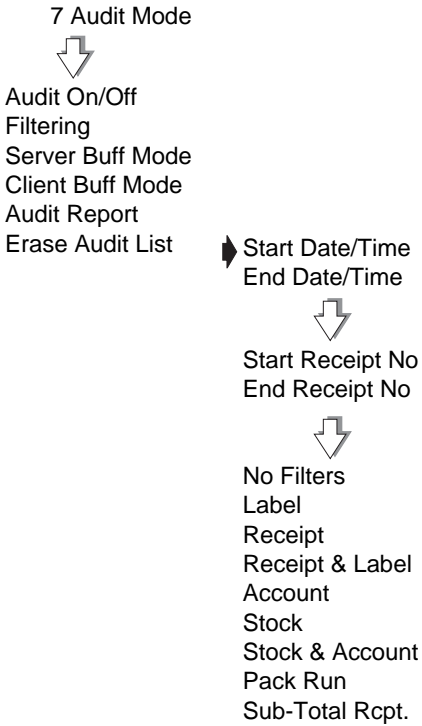
7 Audit Mode

Audit On/Off
Filtering
Server Buff Mode
Client Buff Mode
Audit Report
Erase Audit List   ▶ Start Date/Time
                            End Date/Time

                            Start Receipt No
                            End Receipt No

                            No Filters
                            Label
                            Receipt
                            Receipt & Label
                            Account
                            Stock
                            Stock & Account
                            Pack Run
                            Sub-Total Rcpt.

Figure 5.2   Clearing the audit list

6   Store Networks

6.1   Operating mode

6.2   Counter operation

6.3   Point of Sale operation

6   Store Networks

You can link up to 31 compatible machines in a store network. For information on setting up a network see *Section 7 - Communications*, page 145

The system will support any combination of machines in the M series range provided they have the same software version.

Machines may be used for weighing or nonweighing applications in

• counter service

• checkout

• rear of store operations.

6.1   Operating mode

The store network can consist of a mixture of label and receipt machines.

Vendors may be logged on to more than one machine and 'float' between machines to serve customers anywhere in the store.

Receipt printing machines will

• totalise transactions

• print a counter receipt

• print a sales receipt where the vendor receives payment for the goods.

Counter receipts are redeemed at a Point of Sale (PoS) machine or checkout for payment.

Label machines will

• print labels

• consolidate the transactions at the checkout or PoS machine.

Other PoS machines within the store will complete transactions and generate sales receipts for any purchases at those machines.

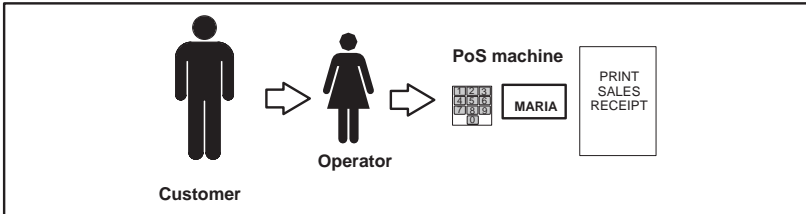For example, cigarettes purchased at the tobacco kiosk.

.

Figure 6.1   PoS purchase only

Store setup

The network can be set up to operate using auto generated (system mode) or manually entered (customer mode) customer numbers.

Customer numbers are printed on subtotal counter receipts and are used to

- identify individual receipts

- identify customers.

You can print subtotal counter receipts at any machine throughout the store that has either

- a subtotal print key

- or has the total/print key configured for subtotals.

These receipts are then scanned at the checkout and, together with any additional purchases, are consolidated into one total sales receipt at the checkout.

If you do not have a scanner, or the barcode cannot be read, the customer number may be manually entered using the customer number key.

All transactions will be itemised on the sales total receipt.

Subtotal counter receipts can only be generated at receipt machines.

Subtotal transactions are stored in the audit list. You must enable the Audit function to be able to re-open subtotal receipts. (See Setting up the audit function on page 127.)

Note: Management totals are only updated when a final receipt is printed. Subtotal receipts are treated as part of the single total receipt and are not totalised separately.

6.2   Counter operation

System mode
The machines are set up to use auto generated customer numbers.

The operator

1.   serves a customer

2.   prints a counter receipt which shows the subtotal for the transactions and the system generated customer number.

The customer may then make further purchases within the store or go straight to the PoS machine (checkout) to pay.

If the customer makes additional purchases the operator at the next machine can either

•   enter the system generated customer number to add the transactions to the subtotal and print a new counter subtotal receipt or

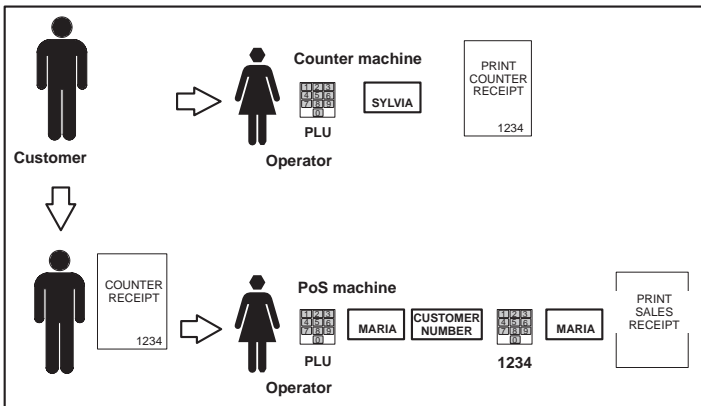•   print a new counter subtotal receipt which includes a new system generated customer number.

Figure 6.2   System mode

At the checkout

The operator

1.   serves the customer to any additional purchases

2.   Scans or enters the customer number from the counter receipts.

3.   Printers the sales receipt.

The subtotals stored against each system number assigned to a customer are consolidated when the customer pays at the checkout or a PoS machine with payment keys and obtains a sales total receipt

Customer mode

The machines are set up to use manually entered customer numbers,

The operator

1.   serves a customer

2.   enters the customer number

3.   prints the subtotal counter receipt.

The customer number is printed on the subtotal counter receipt.

If the customer makes additional purchases, the operators at subsequent counter machines must enter or scan the customer number each time before printing the subtotal receipt again.
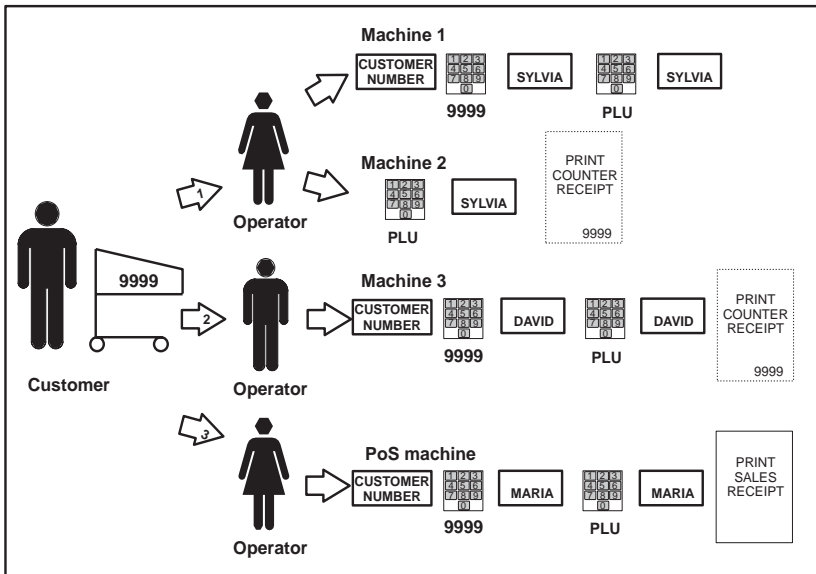

Figure 6.3   Customer mode

6.3 Point of Sale operation

Customer and system mode

The customer

1. goes to a PoS machine or checkout to pay for their purchases

2.   presents the subtotal counter receipts.

3. The customer number(s) is scanned or manually entered and the transaction data linked to the number is recalled.

More than one subtotal counter receipt may be brought together (consolidated) to form a total sales receipt.

In addition to the consolidated subtotals, the sales total receipt may also include

• purchases from label machines in the store

• purchases made directly at the checkout.

These transactions are listed on the receipt after all the consolidated subtotals.

Receipt consolidation

Consolidation is the process by which several subtotal receipts are brought together to generate a final sales receipt.

• The list of subtotal transactions is linked to the consolidation receipt store (primary receipt store).

• A secondary receipt store holds all the receipt values for the subtotal receipts they represent but no transactions.

• The list of secondary receipts is only held on the server.

• Client machines hold only the primary receipt store and the transactions.
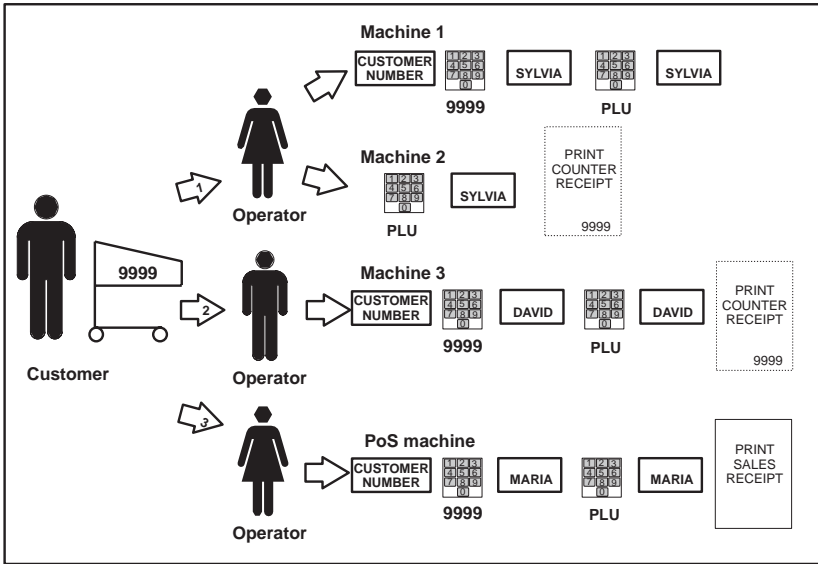
Figure 6.4   Consolidation

Final receipt details may be retained for the audit trail but detail from the subtotal receipts is lost as only the primary receipt information and transactions are kept.

Voiding transactions and deconsolidation

Individual transactions or all the transactions may be voided before the total receipt is printed. In **Part 1** See Voiding a transaction on page 187.

7 Communications

7   Communications

Networked machines are connected using either ethernet network cables or Wireless LAN communications (see Wireless LAN communications, page 164). These cables or the internal scale RF cards enable information to be passed between each connected machine (and other devices if used).

One machine on the network is called the server and is responsible for overseeing the network. The remaining machines are known as client machines. Any machine may be programmed as the server.

All the machines on the network use the same PLU and system data. You can enter data at any machine and the other machines on the network will receive the information provided they are switched on.

Please remember .....

> **The server must be switched on when the client machines are in operation. If a client machine has been connected to the network but not had the machine ID set up it will not be recognised by the server.**

Network compatibility

You can use MX100 back office software to link an M^2 series machine network to

- another existing Mseries network

- a GM series network

An M^2 series machine network can be linked to an existing CX/Avery Advantage machine through its network gateway.

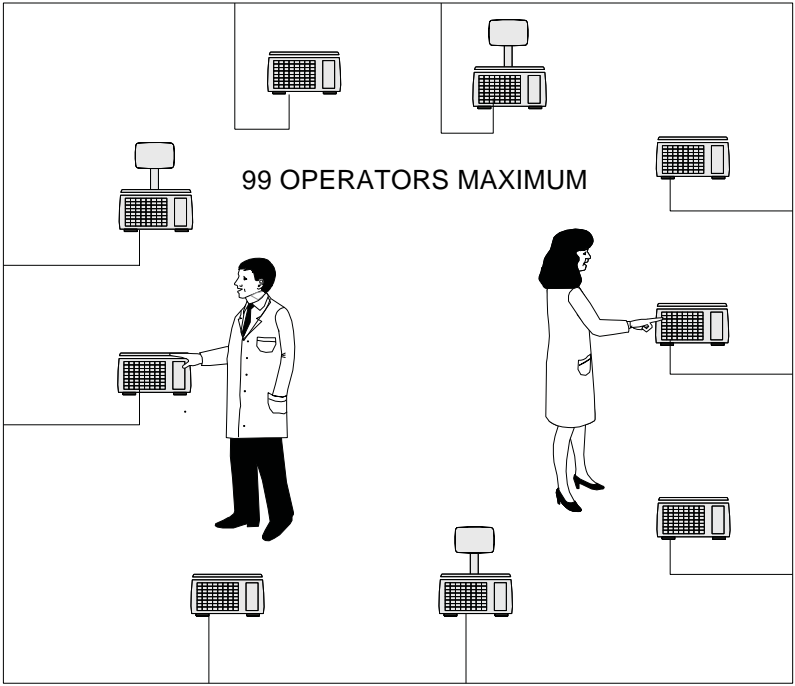For further information contact your Avery Weigh-Tronix centre.

99 OPERATORS MAXIMUM

Figure 7.1   Typical ethernet network

7.1 'Auto configure

'You can use auto configure to quickly set up a network of machines that are programmed with the factory default IP address and have been connected to an ethernet hub.

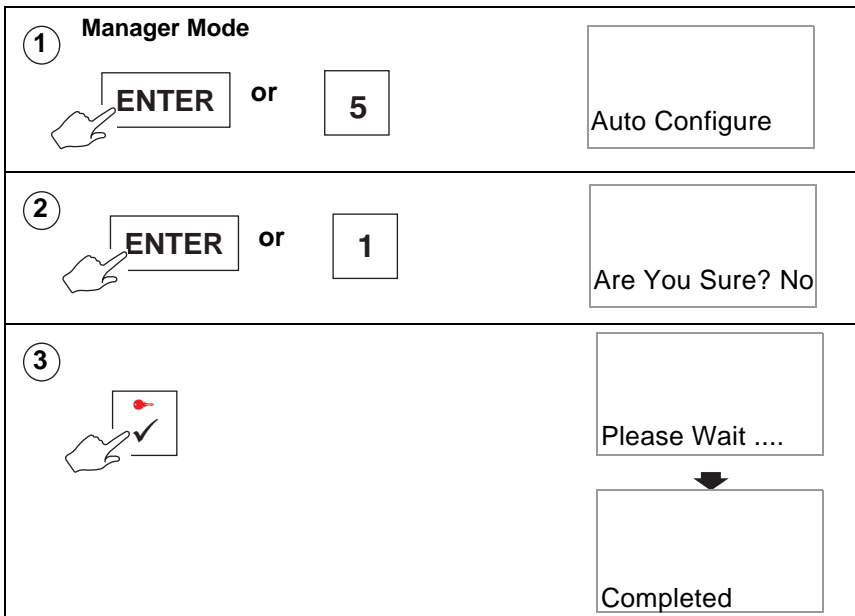### Adding a machine to the network

You can add machines to the network up to the maximum allowed (31). When you select **Auto Configure** at the new machine it will automatically be allocated the next machine ID.

Updating the PLU file

You can perform a **Network Dump** from the server if the PLU file at the new client machine does not match the server PLU file (see section 7.7, page 157).

Each time the client machine uses a PLU it fetches the PLU data from the server and the PLU file at the client machine is updated.

If you choose not to perform a network dump, the PLU file at the client will gradually be updated to match the server.

① **Manager Mode** **ENTER** or **5**		Auto Configure
② **ENTER** or **1**		Are You Sure? No
③ ✓		Please Wait .... ▼ Completed

7.2 Setting machine ID

The server uses machine identity to distinguish between individual machines on the network. You can

- enter a value for the machine ID between 1 and 31.

- select either **Server** or **Client** for the machine status. An S or C will be displayed on the network map at the appropriate position.

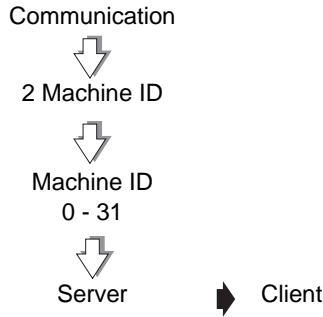If you set the machine ID to 0 it will operate as a stand alone machine.

Communication

2 Machine ID

Machine ID
0 - 31

Server   Client

Figure 7.2   Setting machine ID

7.3   Network map

The network map at any machine shows the positions (machine ID) of all the machines on the network.

At each position on the map corresponding to a machine you will see a character indicating the machine status. The flashing character indicates the ID of the machine currently being used to display the network map.

You can only change the status of a machine at **that** machine. For instructions for selecting client or server status see
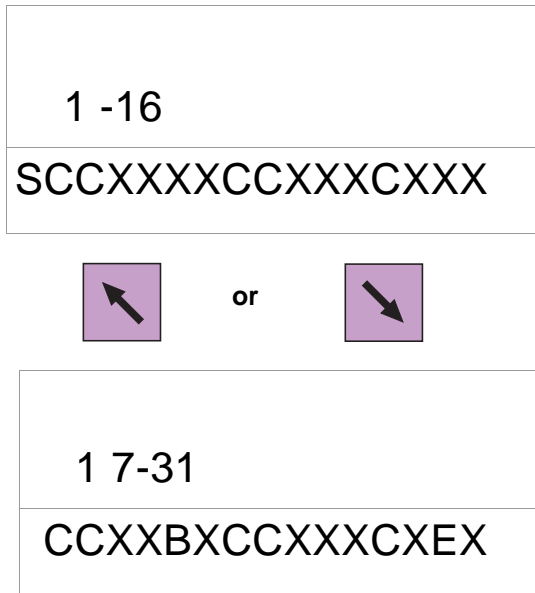
```
┌─────────────────────────────────┐
│                                 │
│                                 │
│     1 -16                       │
│                                 │
├─────────────────────────────────┤
│  SCCXXXXCCXXXCXXX                │
└─────────────────────────────────┘
```

↖   **or**   ↘

```
┌─────────────────────────────────┐
│                                 │
│                                 │
│     1 7-31                      │
│                                 │
├─────────────────────────────────┤
│   CCXXBXCCXXXCXEX                │
└─────────────────────────────────┘
```

Figure 7.3   Network map

The following table defines the characters you may see on the network map.

Character	Meaning
S	Server: responsible for overseeing the network
C	Client
X	No machine set up.
E	The PLU file in the client machine at that position does not match the server PLU file.
O	The machine corresponding to that position is off line. (**Map Error**)
L	The machine is set to **Local Mode**.
B	Backup server

7.4   **Backup server**

You can change the status of any client machine to server see
section 7.2, page 148. If a server already exists on the
network the new server becomes the backup server. If there is
more than one machine already set to server on the system,
the new server becomes the backup server and the old
backup server reverts to client status.

If the main server goes off-line for any reason the backup
server takes over without any loss of operation.

Please remember .....

> **You should not continue to trade for an extended period unless
> both the main server and backup server are switched on.**

Should both servers go off-line you can choose to operate the
client machines in **Local Mode** see section 7.6, page 154.

If audible warning is configured for the machine you will hear
a bleep and the network map will show 0 at the position for the
old server.

If there is a cable fault, both the main and backup server will
bleep and each machine will show the other and the client
machines as off-line.

Before setting a machine to server status you should:

• clear all transactions

• clear all totals
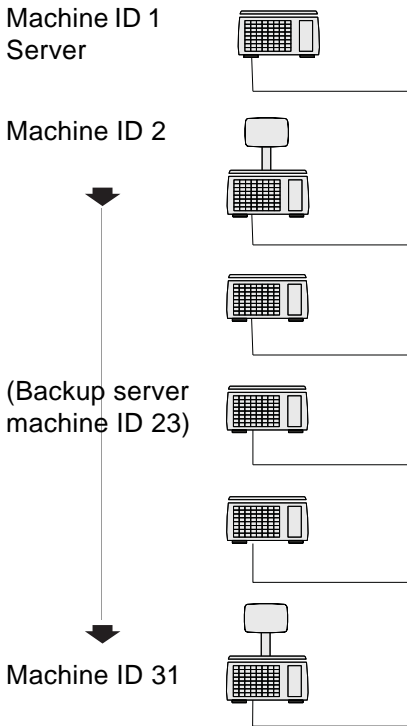
• Clear the audit list completely.

Machine ID 1
Server

Machine ID 2

(Backup server
machine ID 23)

Machine ID 31

Figure 7.4   Dual server network

7.5 Dealing with network faults

The server constantly monitors the network and when it detects a network error it will bleep.

If the cause is a faulty client machine

1. switch off or disconnect the faulty machine.

2. At the server go to Manager Mode.

3. Press NETWORK MAP to display the network map.

4. Press **ENTER** to stop the bleep.

If the cause is a client machine that has been switched off, then switch the client back on.

Error message	Cause	Action
Memory Full	The system cannot store any more PLUs	Delete any old, unwanted PLUs.
Comms Error	Breakdown in communications between machines.	Check network map
Map Error	The machine corresponding to that position is off line.	Check the network map. Check the network connections and set the machine ID if necessary.
Incomplete Error	The PLU file in the client machine does not match the server PLU file.	Perform a **Network Dump** at the server (see section 7.7 page 157).
Local Mode	The machine is in **Local Mode**.	To reinstate the client see page 156
No Server	Client machine is not communicating with server machine.	Check network cable. Set machine to operate in **Local Mode**.

7.6 Local mode

If you see the message **No Server** followed by **Local Mode ?** when you try to:

- select a PLU

- assign transactions

- print a label

it means that the client cannot operate on the network because there is a communication failure between that client and the server.

Switching a client to Local Mode

You can set the machine to operate independently of the network when it cannot communicate with the server.

When you switch the client to **Local Mode** any transactions that have been entered but not printed will be lost. You must re-enter any uncompleted transactions.

- Press **ENTER** to switch the client to **Local Mode**.

If you do not want the client to operate in **Local Mode**

- press any other key just to clear the message.

label machines only

- Press **C** to select the PLU and print one label.

The message is repeated next time you select a PLU.

There will be no totals for that label.

*Note: If the server is faulty you will see the message **No Server** at whichever client machine you are using.*

If you see the message **Local Mode** at the end of the start up routine when you switch on a machine then that machine is operating in **Local Mode**.

If you see the message **Local Machine(s)** at the end of the
start up routine when you switch on the server, there is at
least one client operating in **Local Mode**. Go to the **Network
Dump** to check which machine it is.

Operating in local mode

If you use a client machine in **Local Mode** you will not be able
to store totals as these are collected and stored by the server.

Audit buffer

The audit buffer can operate in linear or circular mode.

Linear mode

In linear mode you cannot continue trading when the audit
buffer is full (see 5.1, *Setting up the audit function*, page 127).
You will see flashing warning messages **Audit 75% Full** and
Audit 90% Full as the number of transactions in the audit
store approach the maximum permitted.

Circular mode

In circular mode new audit transactions over write the oldest
transactions.

Default setting

The default buffer setting for **client** machines is linear and the
transaction memory limit is set at 20 receipts with up to eight
transactions per receipt (160 transactions).

You can change the client buffer mode from linear to circular if
required.

If you wish to reset the audit buffer size, contact Avery Berkel.

Please remember .....

> **Before making any changes you should read section 5, *Audit
> Mode*.**

Reinstating a local client

When the problem with the network has been resolved the client machine operating in local mode is automatically restored to the network a follows

1.   Connect the machine to the network (if it has been disconnected).

2.   The server detects the client in local mode and switches the client on-line.

The server will then:

•   transfer any outstanding live transactions from the client.

•   transfer completed transactions to the server as a background task.

•   update totals.

7.7   Network dump

Network dump synchronises all data held at client machines with that of the server.
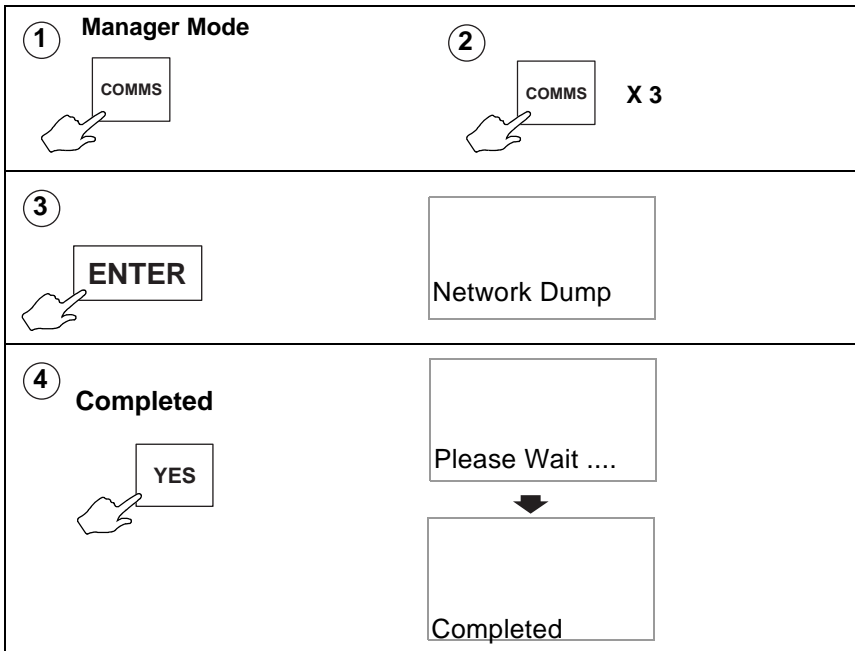
When dumping data to client machines, the server copies the PLU file and all data apart from the positions of programmed keys and assignments.

You will need to dump data to client machines if you:

• programme the data at a server which is not connected to the network

• link a new or replacement machine onto the network.

You will *not* need to dump the data if you:

• programme the data at a server which is connected to the network and all the machines are switched on

• make amendments to the PLU data at any machine provided that all the machines are switched on.

① **Manager Mode**	② COMMS **X 3**
COMMS	

③	
ENTER	Network Dump

④ **Completed**	
YES	Please Wait ....
	⬇
	Completed

7.8   Machine setup dump

Machine setup dump allows you to copy the machine setup
and dedicated keys from machine to machine. The default
security setting for this function is 9.

Communication

Auto Configure   ▶   Machine ID
                              0 - 31

                        Server   ▶   Client
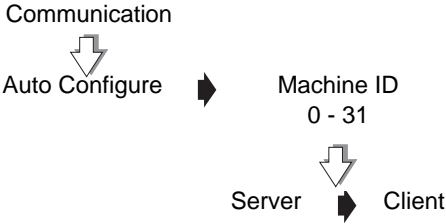
7.9 Advanced set-up

Machine IP address

Each machine in a network must have a unique IP address. The IP address is used by the TCP/IP protocol to identify the source and destination of data packets.

The machines are manufactured with unique IP addresses which only need to be changed if the M series network is to be integrated with an existing Ethernet network.

The IP address of the machine consists of two parts.

• The network address

 The network address must be the same as all the other machines on the same network.

• The machine address.

 The machine address must be different from the other machines on the same network

The network address depends on which sub-net mask is used, for example for an IP address of 88.1.1.7:

Sub-net mask	255.0.0.0	255.255.0.0	255.255.255.0
Network address	**88**.0.0.0	**88**.**1**.0.0	**88**.**1**.**1**.0
Machine address	88.**1**.**1**.**7**	88.1.**1**.**7**	88.1.1.**7**

Sub-net mask

The sub-net mask allows you to split a large physical network into smaller logical networks.

Please remember .....

> **If a machine is being added to an existing network and you need to change the IP address and sub-net mask, the network address and the subnet mask must match the existing network. For further information contact Avery Berkel.**

Host name

This only applies to machines on networks with DHCP enabled. The host name enables the machine to be identified even if the IP address has changed. The name can have up to 100 characters in either a fixed or variable string. You can include the following codes in the string:

%%NTID **or** %%+8.2%%network ID (2two digits)

%%MCID **or** %%+8.1%%machine ID (2two digits)

The default host name text is:

Avery.Berkel.GM.NetId.%%NTID.McId%%MCID

Gateway IP address

Where M series machines are linked to a PC through a gateway, the M series machine needs to know the gateway address in order to communicate with it.

Network ID

The machines are manufactured with a default network ID. You will only need to change it if more than one M series network is required.

Up to 31 machines can be connected together into a single machine network. All the machines in a single network must have the same network ID.

Up to 99 machine networks can be created but each group of machines must have a network ID number that is different from any other group.

Base port number

The base port number is used with the network ID to generate a TCP/IP port number for inter scale communications.

This port number is used by the scales in the network to communicate across the network. If this port number is used by other equipment you may need to change the base port number.

Advantage IP address

This is provided for use where CX/Avery Advantage machines on an existing ethernet network are to be linked to the M series network.

The Advantage IP address must be set up on the servers as only servers communicates with the CX/Advantage machines.

Changes to an IP address will only take effect when the machine is restarted. This is automatic on leaving Manager Mode after such a change.

Port number

This is the port number used to communicate with the CX/Avery Advantage machine.

Host port number

This is the TCP/IP port number used to communicate with a PC running MX100 software. The M series machine needs to know the port number for MX100 in order to be able to communicate with the PC. The default value for the port number will not usually need to be changed.

Ping IP test

This function tests connections between the scale and other IP addresses.

Modem setup

Modem enable

You can use a modem to link the scale to a remote PC. The modem uses the same serial port (port1) as MX050, the service software tool. The machine has to be set to use one or the other.

The factory default setting is **Modem Disabled**. If you need to change this setting contact Avery Berkel or your supplier for advice.

Modem username and password

These must match the username and password used for the 'dial up account' on a remote PC. You can edit the username and password.

Initstring (edit and reset)

When the modem is enabled and the machine is switched on, the initstring is sent to the modem to instruct it how to behave. The default initstring is designed to work with the majority of modems and it is unlikely that it will need to be changed.

If the initstring has been changed you can use **Reset InitString** to return to the default initstring setting.

Test modem link

Use this function if you want to check that the link to the modem is working.

Test PPP link

Use this function if you want to check that the machine is currently on line to a remote PC.

Data clone

You can use data clone to copy machine specific data, as well as system data, from the server to a new or replacement machine on a network. The new machine must use the same network ID.

Cloning transfers:

• system data

• service configuration (not capacity)

• machine setup

• dedicated keys

• Euro setup.

Relaxed Timing

Communication timeouts can be extended by 0 < 10s to accommodate reliable operation in networks with long delays, for example in wireless networks.

7.9.1   Test Report

The test report contains information regarding the network configuration. The following details may be included:

• MAC address

• encryption type being used

• authenticity

• signal strength

Printing the test report

To print the test report:

• switch the machine into sales (weighing mode)

• press the display test key twice in quick succession

• the test report will print.

7.10   **Wireless LAN communications**

Wireless LAN allows communication between machines on a Local Area Network using radio signals. Each machine can operate in two modes.

Ad Hoc (peer to peer) mode

This mode does not require an Access Point.

When operating in Ad Hoc mode, the internal WLAN PC cards in the scales communicate directly with each other. This requires all the machines on the network to have visibility of each other. In practical terms this usually means that the distances between the machines are fairly short.

Access Point mode

This mode requires an Access Point to be included in the Ethernet network.

This type of wireless communication typically has a range of up to 50m depending on store layout and environment factors (counters, walls, partitions, ceiling height).

- The range can be extended by using additional access points.
- The coverage from each access point must slightly overlap the next.

The Access Point:
- communicates directly with each device allowing larger, diverse networks.
- acts as a hub for scales fitted with internal WLAN PC cards and provides a connection to the Ethernet LAN.
- controls communications between scales in the store and between PC and scales.

Note: Wireless LAN communication is only available on machines using software version 3.3 and later.

Wireless set up

In order for your machine to operate using the Wireless LAN interface you must first set:

Wireless IP address and subnet mask

You can select the wireless IP address and subnet mask you want to use. However the IP address **must be separate** from the one used for the ethernet interface.

WLAN host name

If a Wireless IP address has been programmed as 0.0.0.0, you can choose to select a host name (for DHCP use) so that the back office PC can identify the machine. You can enter a host name up to 49 characters long or you can use the default host name.

If a Wireless IP address has been programmed you will see the message **Invalid Entry** when you select WLAN Host Name.

WLAN mode

Allows you to select either Access Point mode or Ad Hoc mode.

All machines on the same WLAN must operate in the same mode.

Wireless channel

The WLAN PC cards in the machines can operate on a number of different channels to prevent interference with other equipment.

In Access Point mode the channel is determined by the access point and you will see the message **Invalid Entry**.

In Ad Hoc mode you can select the channel in the range 1-14.

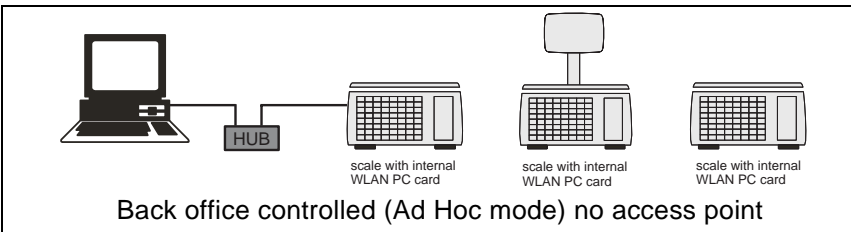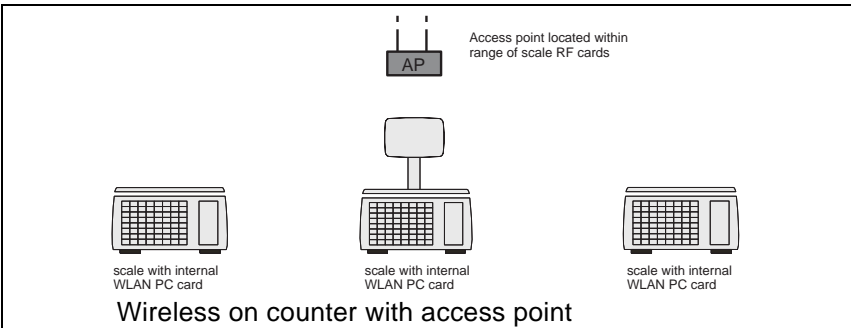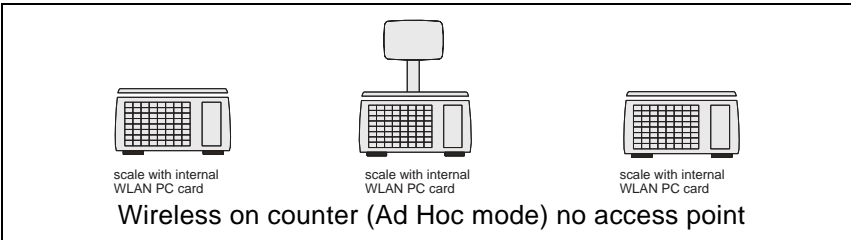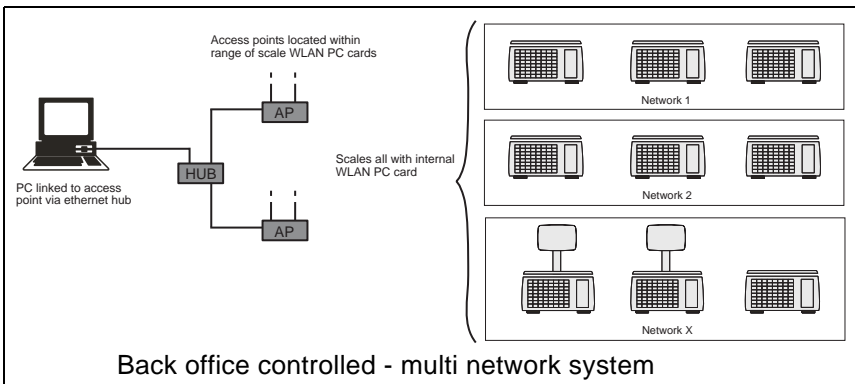**All machines on the same WLAN must have matching channels.**

ESSID

(Extended Service Set Identifier)

This is a 32 character alphanumeric string which separates wireless LANs.

All machines on the same WLAN must have matching ESSID.

Supported network configurations

scale with internal
WLAN PC card

scale with internal
WLAN PC card

scale with internal
WLAN PC card

Wireless on counter (Ad Hoc mode) no access point

Access point located within
range of scale RF cards

AP

scale with internal
WLAN PC card

scale with internal
WLAN PC card

scale with internal
WLAN PC card

Wireless on counter with access point

HUB

scale with internal
WLAN PC card

scale with internal
WLAN PC card

scale with internal
WLAN PC card

Back office controlled (Ad Hoc mode) no access point

PC linked to access
point via ethernet hub

Access point located
within range of scale
WLAN PC cards

scale with internal
WLAN PC card

scale with internal
WLAN PC card

scale with internal
WLAN PC card

Back office controlled

point via ethernet hub
PC linked to access

one scale only with
internal WLAN PC card

Back office controlled - ethernet linked scales

Access points located within
range of scale WLAN PC cards

Scales all with internal
WLAN PC card

PC linked to access
point via ethernet hub

Network 1

Network 2

Network X

Back office controlled - multi network system

Access points located within
range of scale WLAN PC cards

Scales all with internal
WLAN PC card

PC linked to access
point via ethernet hub

AP

AP

HUB

HUB
Network 1

HUB
Network 2

HUB
Network X

Back office controlled - multi networked system with
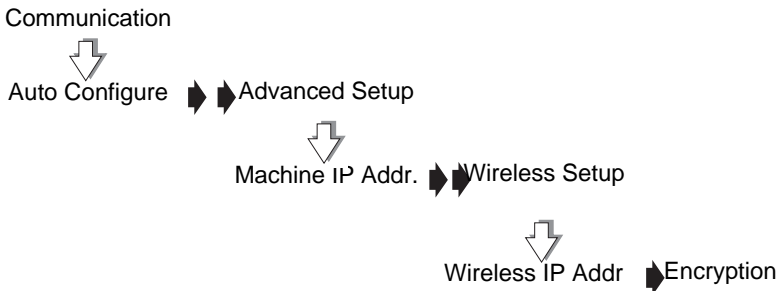ethernet linked scales

7.11   RF encryption

Communications across wireless networks can be encrypted to keep transmissions secure, and to keep networks separate.

Encryption makes use of user defined 'keys' which set how the scale encodes and decodes the transmissions. Only scales using the same active encryption key will be able to communicate with each other.

Communication

Auto Configure ▶ ▶ Advanced Setup

Machine IP Addr. ▶ ▶ Wireless Setup

Wireless IP Addr ▶ Encryption

Encryption mode

There are two encryption modes available. Select either **40 bit** encryption or **128 bit** encryption. The factory default setting for the scales is **No Encryption**.

• 40 bit encryption
The scale uses 40 bit protection. Encryption keys can consist of either 5 alpha characters or 10 hex digits

• 128 bit
The scale uses 128 bit protection. Encryption keys can consist of 13 alpha chars or 26 hex digits.

Encryption format

• Alpha format
Keys are typed in as an alpha numeric sequence. The following characters are allowed:
*abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOP
QRSTUVWXYZ1234567890=+?*-:!#%/()@,.* and *SPACE*

• Hex format
  Keys are typed in as a sequence of hexadecimal digits.
  Hexadecimal numbers consist of the following digits:
  1234567890ABCDEF

Note: Selecting alpha or hex format will not change the key itself. A single key can be represented in either hex or alpha format, this does not affect the scale's ability to communicate on the network.

Encryption keys
Use this option to define the encryption keys. Up to 4 different encryption keys can be stored.

Active key
Select which encryption key (1 - 4) will be used as the **Active Key** to transmit and receive data.

Only scales using the same active encryption key will be able to communicate with each other.

Ethernet disable
Where a scale network is using Wireless LAN communications it may be necessary to disable the ethernet interface. In certain circumstances, depending on the IP addresses chosen, data packets could be routed to the unused ethernet interface rather than the radio interface.

Subsequently, if the machine is switched off and the radio card removed, when the machine is switched on again the ethernet interface is automatically enabled.

7.12   Email alerts

The email alert system can provide IT departments or remote service support with information about notable events or errors occurring at a scale.

Restricted access

The e-mail alert function is only available if you have set up an **Operator 0** with security level **9**. The default PIN for Operator 0 is 4296 You may wish to change the PIN for security.

Please remember .....

> **This function is not available to any other operator.**

E-mail setup details

You can select either:

• A LAN e-mail server or

• Dial up connection

Dial up connection requires a modem. This may be local to the client machine or on the server.

For general network monitoring, the modem should be located at the server machine.

For diagnostic purposes, locate the modem at the individual machine to be monitored.

Please remember .....

> **You must enable the modem before setting up alerts. See** *Modem setup***, page 161**

Server name (dial up only)

This is the e-mail server name only applies to dial up connection. The server name can have a maximum of 64 characters.

Example:smtp.wideblueyonder.com

Server IP (LAN only)
This is the IP address of the SMTP server.

Server Port
This is the port number of the SMTP server. The default port number is 25. You can program values between 1 and 65535.

ISP phone number (dial up only)
This is the telephone number you need to dial for a dial up connection. You can program up to 32 characters.

Authentication type
Some SMTP servers require an authentication type to be programmed before relaying an e-mail outside the local domain. You can select from:

1.   None

     Default

2.   Login

     The user name and password are verified separately.

3.   Plain.

     The user name and password are verified in a single communication packet.

User name and password
Your username and password are required for authentication. For LAN connections this is your internal ID and password. Remote dial up systems require an internet username and password.

Example: *LAN*   *jsmith*   *U0262919*

             Dial up   jsmith@OAOL.com   87654321

E-mail addresses
Three e-mail addresses can be programmed. Each address can have up to 64 characters.

Send to: E-mail alert recipient.

Copy to: The alert is copied to this address.

Reply to: Replies will be sent to this address.

Changing the 'from' address
The default e-mail 'from' address for the scale is
mseries@averyberkel.com.

If you want to use a different address see *Asset Identifier*, on
page 174.

Alert details
You can program the details for the alerts you wish to monitor
or you can delete an alert.

Create Alert
• The default setting for alerts is **Disabled**.

• You must enable an alert for it to be monitored.A
maximum of 20 alerts can be monitored

• There are 14 alerts programmed in the system. The table
in Figure 7.5 lists these and the options available for each.

• You can edit the existing alerts.

Delete Alert
Deletes any changes to the selected alert and resets the
values to the default settings.

Alert ref. number	Alert	Status	Trip limit	Default trip limit
1	Software exceptions	Off, On	1	1
2	Critical system log events	Off, On	1	1
3	Print head resistance limit 1	Off, On	1	1
4	Print head resistance limit 2	Off, On	1	1
5	Service Alert	Off, On	1	1
100	Network errors	Off, On	1- 9999	30
101	Machine offline errors	Off, On	1- 9999	60
102	Local Mode errors	Off, On	1- 9999	30
103	PLU file errors	Off, On	1- 9999	100
104	Manual reboots	Off, On	1- 9999	1000
105	Auto reboots	Off, On	1- 9999	10
106	Power supply brown outs	Off, On	1- 9999	10
107	Label feed errors	Off, On	1- 9999	10
108	Paper out errors	Off, On	1- 9999	10
109	Print head temperature limit	Off, On	1- 9999	5

Figure 7.5   Default alerts

Asset Identifier

You can program a text string to help identify the scale being monitored. You can enter up to 50 alpha numeric characters.

'From' address

You can use an e-mail address as the whole, or part of, the Asset Identifier.

- If the system detects an '@' it will use the string as the 'from'address.

- If there is no '@', the text string will identify the scale but the system will still use the default 'from' address.

Example:

Text string

DeliScale1

Text string used to identify scale being monitored

Text string

DeliScale1 deli@abcmarkets.com Smethwick

Text string used to identify scale being monitored and e-mail 'from' address.

If the e-mail address is part of a longer text string, you must include a space at the start and end of the e-mail address.

8 Data Backup

8.1 Dumping/loading data

8 Data Backup

When setting up several stand-alone machines with the same PLUs and system information, using a data back up tool saves you having to enter the data at each machine. You can store backup files which can be loaded to a machine should you ever experience problems.

The amount of information you can store will depend on the type of data collection system available. A hand held DCU will not have sufficient memory to store the system file but may store all the PLU file.

Note: A hand held DCU may need an additional component for you to be able to use it with M series machines. Contact Avery Berkel for advice.

Remember to take a backup whenever you make any amendments, otherwise the files will be out of date.

8.1 Dumping/loading data

Dumping

The data back up tool receives data from the machine and stores a copy in its own memory until you wish to use it. The original data is retained by the machine.

Loading

The DCU (Data Collection Unit) or data back up tool sends data to the machine. The data held by the machine is replaced or overwritten but is still retained by the DCU or data back up tool.

System data

System data is comprised of the functions that need to be the same on all the machines in a store. Where machines are part of a network the system information will be common to all the machines.

When loading or dumping system information from the machine, the following data is sent to or received from the data back up tool:

departments	tax rates
network ID	stored tares
operator numbers	barcode formats
store name	PLUs
sign on/off messages	ADD label
scroll messages	carcass tracking data
label formats	logos
Euro rate and symbol	

Machine data

Machine data is comprised of those functions that are specific to each machine.

When loading or dumping machine set up information from the machine, the following data is sent to or received from the data back up tool:

machine ID	label mode
key assignments	label type
key set-up	label detect
printer set-up	tare interlock
print modes	barcode assignments
trace code	Euro print set-up
symbols	display contrast
custom menus	

PLU file

The PLU file can be dumped or loaded independently of the system file.

Label formats

Label formats can be dumped or loaded independently of the system file.

If you want to keep a backup of a logo you must perform a **System Dump**. The system file includes label format and logo data.

Totals dump

To create a backup file of totals information you must perform a **Totals Dump.** The system file created from a system dump does not include totals information.

6 Data Backup

1 System Dump
2 System Load
3 Machine Dump
4 Machine Load
5 PLU Dump
6 PLU Load   ▶   Loading ....
7 Label Dump
8 Label Load
9 Totals Dump

Figure 8.1   Example: Loading the PLU file

9 Help

9.1 Set-up mode

9.2 Error messages
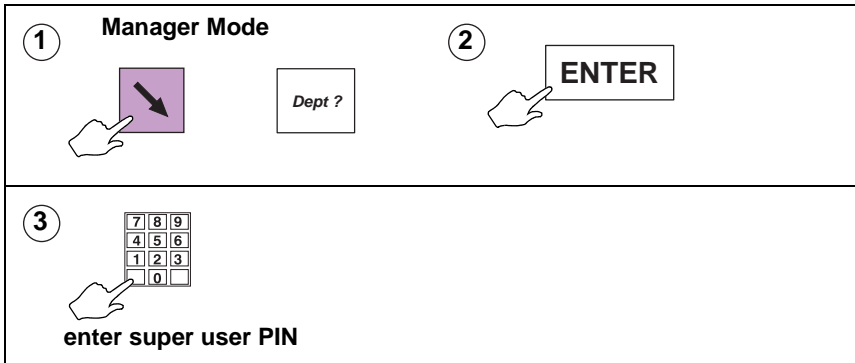
9.3 If things go wrong

9   Help

9.1   Set-up mode

It is possible to inadvertently set all users security levels so that security levels can no longer be modified and no user has access to any sales or manager functions. This could happen, for example, if:

- manager's security level initially set to 9

- all sales and manager functions set to perhaps level 5

- manager changes own security level to 4

The manager can no longer use any function or change his/her own security level.

If no user has a security level set to 9 the Super User function becomes available. This function permits access to all functions regardless of the security level set, provided the user knows the Super User PIN

Note: If you do not know or cannot remember the Super User PIN, contact Avery Berkel.

9.2 Error messages

Whilst using the machine, you may see messages on the display to help you when things go wrong. These messages, and the action you should take, are listed below.

CALIBRATION LOST

The machine is not weighing accurately. Do not use the machine. Contact Avery Berkel.

CHECKSUM FAILURE

Contact Avery Berkel.

COMMS ERROR

There has been a breakdown in communications between machines. Check network map.

FILE TYPE ERROR

The files stored by the DCU do not match those set in the machine.

FORMAT ERROR

You are trying to load the wrong type of file from the DCU. Check the file format.

HARDWARE ERROR

If necessary, press **C** to stop the machine bleeping.

Switch off the machine and switch it back on. Contact Avery Berkel if the fault persists.

HARDWARE ERROR

Contact Avery Berkel.

INVALID ENTRY

You are trying to enter a tare value which is not a multiple of the display division. Enter a correct tare value.

You have tried to enter an incorrect barcode format.

You are trying to enter a machine ID that conflicts with another client machine.

INVALID OPTION

You are trying to select an option not permitted at your machine.

LABEL FEED ERROR

The printer has run out of labels or is not feeding the labels correctly. Check the printer.

You are trying to print the wrong type of label. Check printer set up.

If you are using pre-printed labels check with Avery Berkel that the labels are suitable.

LABEL NOT TAKEN

You are trying to obtain a label before removing the previous one.

MAP ERROR

Network map error. Check the network map and the network connections. Set the machine ID if necessary.

Perform a **Network dump** at the server,
see section 7.7, page 157.

NO SPACE LEFT

You cannot enter any more characters in the text. Edit the text.

You have selected a weighed PLU with no goods on the machine.

NO TARE SELECTED

Tare interlock has been set on at the machine and you are trying to print a label without first selecting a tare. Weigh the goods in a container.

NOT FOUND

The PLU, department, lot number etc. entered does not exist in the selected department.

PLU:

Ensure you selected the correct department and PLU number. Program the PLU.

Department:

Program the department. Assign a department key.

Lot number:

Ensure you selected the correct department and PLU number. Ensure the machine is in pre-pack mode. Program the traceability details.

OUT OF PAPER

The printer is out of paper. Replace the roll. Press **C** to

clear the message.

PRICE OVERFLOW

The value of the transaction or the subtotal exceeds 9999,99. If you are using an open PLU, ensure you entered the correct unit price. If you are in receipt mode, print the receipt for any current transactions.

PRINT HEAD HOT

Print head overheating. Allow the print head to cool. Contact Avery Berkel if the fault persists.

SERIAL FAILED

Communications failure with PC. Check connectors and serial cable.

TRANSMIT ERROR

The machine and the DCU cannot communicate with each other. Switch off the machine and switch it back on. Contact Avery Berkel if the fault persists.

The DCU has no spare memory.

WEIGHT BELOW MIN

You are trying to complete a transaction with no goods on the machine or the goods weigh less than the minimum permitted.

ZERO TOTAL PRICE

Total price is zero. If you are using an open PLU, check that you have entered the unit price.

9.3   If things go wrong

M series machines are sophisticated computers that employ the latest techniques and components that are commercially available. Reliability and accuracy have been designed into the machines which should give you trouble free use.

They will not operate as expected if set up incorrectly. The following section lists some problems which may occur and the action you should take.

Wrong scroll message or store name

Check that you have programmed the correct information and the reference for the scroll message has been assigned correctly.

No barcode

Ensure you have programmed the correct assignments.

Function key does not operate

Function not configured. Contact Avery Berkel.

Cannot print continuous labels

Ensure that **Continuous** is selected for **Label Type**.

Machine not at zero

Ensure that there are no goods on the weigh plate. Check that no food has accumulated on or under the weigh plate or under

the machine. Press   →0← .

Blank or unreadable display

Check that the display contrast is correctly adjusted, see **Part 1** section 5.6, page 112.

Should your machine fail to operate correctly check that:
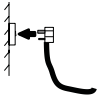
● the machine is connected

● the machine is switched on

● the fuse in the plug is the correct rating and is working

● there is power to the socket outlet (plug in an electrical appliance that is known to be working)

● you have followed the correct procedure for the operation you are trying to perform

● you have looked up any error message to see if it is a situation you can resolve for yourself.

Should the machine still fail to operate correctly, contact Avery Berkel for expert advice and prompt attention.

10   Appendix

10.1 Extended character sets

10.2 Supported AI codes

10.3 Substitution codes

10.4 Nutrient facts

10   Appendix

10.1   Extended character sets

When creating or editing printable text such as sales messages or PLU text, you can create additional text characters using the extended character facility. Enter the appropriate numeric code for the character you require from the tables in this section.

To enter a character:

• press ⬚ Shift then ⬚ X X x followed by the numeric code keys for the character required.

Roman character set

*Example1:   To enter the character **Æ***.

To determine the code for the character you require:

• Read the number in the left hand column of the row (112)

• then add the number in the top row of the column (11)

This gives you the code for **Æ** - 123.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
000											LF	FONT	CLF			
016																
032	SP	!	°	#	$	%	&	'	(	)	*	+	,	-	.	/
048	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
064	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
080	P	Q	R	S	T	U	V	W	X	Y	Z	Ä	Ö	Å	Ü	Ø
096		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
112	p	q	r	s	t	u	v	w	x	y	z	Æ	£	ƒ	€	
128	Ç	Ĝ	Ý	Ş	±	ä	ö	å	ü	ø	æ	ç	ğ	Ì	ş	ł
144	Á	Á	Â	Ą	Ć	Č	Đ	Ď	É	Ě	Ê	Ę	Í	Ł	Ļ	Ń
160	Ň	Ó	Ò	Ö	Ô	Ř	Ś	Š		Ú	Ü	Ű	Û	Ý	Ż	Ž
176	Ž	Á	Ó		Ŭ	Ń	Ľ	Ĺ	Ŕ	µ						
192																
208																
224																
240																

The following special characters are also available:

Char	Code	Description
À	200	a grave
Á	201	a acute
Â	202	a circumflex
Ã	203	a tilde
È	204	E grave
è	205	e grave
é	206	e acute
ê	207	e circumflex
ë	208	e umlaut
ì	209	i grave
í	210	i acute
î	211	i circumflex
ï	212	i umlaut
ñ	213	n tilde
ò	214	o grave
ó	215	o acute
ô	216	o circumflex
õ	217	o tilde
ö	218	o umlaut
ù	219	u grave
ú	220	u acute
û	221	u circmflex
ü	222	u umlaut
y	223	y acute
ÿ	224	y umlaut
"	225	Quotation / inch symbol
_	226	Underscore

Greek character set

Example2:   *To enter the character* **Y**.

To determine the code for the character you require:

- Read the number in the left hand column of the row (080)

- then add the number in the top row of the column (7)

This gives you the code for **Y** - 087.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
000											LF	FONT	CLF			
016																
032	SP	!	°	#	$	%	&	'	(	)	*	+	,	-	.	/
048	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
064	@	A	B	Γ	Δ	E	Z	H	Θ	I	K	Λ	M	N	Ξ	O
080	Π	P	Σ	T	Y	Φ	X	Ψ	C	D	Ω	F	G	J	L	Q
096		α	β	γ	δ	ε	ζ	η	θ	ι	κ	λ	μ	ν	ξ	o
112	π	ρ	σ	τ	υ	φ	χ	ψ	R	S	ω	U	V	W		g
128																
144																
160																
176																
192																
208																
224																
240																

Lithuanian character set

Code	Character	Code	Character
185	Ā	197	Ū
187	Ē	198	Ų
188	Ė	189	Ģ
190	Ī	193	Ķ
191	Į	194	Ņ
195	Ō	196	Ŗ

Latvian character set

Code	Character	Code	Character
185	Â	189	Å
187	È	193	Æ
190	Ì	194	Đ
195	Ò	196	Ç
197	Ú		

Romanian character set

Code	Character	Code	Character
186	Ã	199	Þ
192	Î		

10.2   **Supported AI codes**

AI (EAN128 only)	Carcass Code (%%)
00	
01	A
10	0
15	
17	
251	I
422	1
423	2
424	3
425	E
426	J
950	Z
953	Q
3103	W
3303	
3902	P
7030	K0 (3, 9)
7031	K1 (A, E)
8005	

10.3   **Substitution codes**

There are two types of substitution code supported by the software:

• the Avery Berkel code system

This is a fixed system using the start code %%% followed by a character representing the associated data.

• a Dewey Decimal based system

The Dewey Decimal based system divides information into classes, divisions and subdivisions to the number of levels needed to give the required amount of detail. The number of levels supported by the software is four.

For each class, division etc. you can include a parameter to specify a particular reference. In the table of codes, a parameter is indicated by the characters #pp where pp is a numerical value.

Each code string requires the start characters %%+ and closing characters %%. The closing characters are entered automatically when you finish selecting the class and divisions you require.

Example3: To include the name of nutrient 21 from the nutrients list.

Dewey decimal code:%%+1.1#21.1%%

$$\%\%+1.1\#21.1\%\%$$

Class:	**Section:**
Nutritional Data	Name

Division:	**Parameter:**
Nutrients	Nutrient number
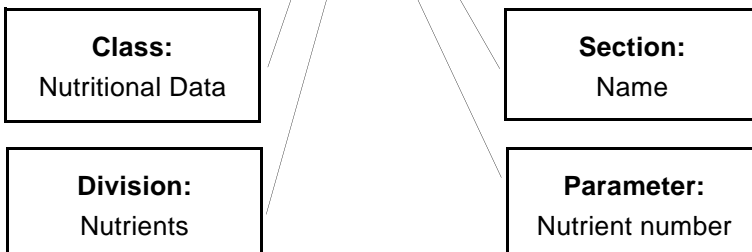
Dewey substitution codes

Substitution data (parameter	Dewey code	Avery Berkel code	AI code
	General form	General form	
Nutritional data	%%+string%%	%%string	( )
Nutrient name (nutrient number)	1.1#pp.1		
Nutrient RDA No units (nutrient number)	1.1#pp.2.1		
Nutrient RDA With units (nutrient number)	1.1#pp.2.2		
Nutrient RDA units only (nutrient number)	1.1#pp.2.3		
Serving size No units	1.2.1.1		
Serving size With units	1.2.1.2		
Serving size units only	1.2.1.3		
Std Measure size No units	1.2.2.1		
Std Measure size With units	1.2.2.2		
Std Measure size units only	1.2.2.3		
Servings per container	1.2.3	%%C	
Amount nutrient per serving measure No units (nutrient number)	1.2.4#pp.1		
Amount nutrient per serving measure With units (nutrient number)	1.2.4#pp.2		
Amount nutrient per serving measure units only (nutrient number)	1.2.4#pp.3		
Amount nutrient per std measure No units (nutrient number)	1.2.5#pp.1		
Amount nutrient per std measure With units (nutrient number)	1.2.5#pp.2		
Amount nutrient per std measure units only (nutrient number)	1.2.5#pp.3		
ServingSsize Txt	1.2.6		
Servings/Contnr	1.2.7		
Per serving guide message	1.2.8		
Per std measure guide message	1.2.9		
Nutrient serving % RDA (nutrient number)	1.3.1#pp		
Nutrient std measure % RDA (nutrient number)	1.3.2#pp		
Nutri text 4	1.4		
Autogen nutrients per serving No units (nutri data ref)	1.5#pp.1		

Substitution data (parameter	Dewey code	Avery Berkel code	AI code
Autogen nutrients per serving With units (nutri data ref)	1.5#pp.2		
Autogen nutrients std measure No units (nutri data ref)	1.5#pp.3		
Autogen nutrients std measure With units (nutri data ref)	1.5#pp.4		
Autogen nutrients serving %RDA (nutri data ref)	1.5#pp.5		
Autogen nutrients std measure %RDA (nutri data ref)	1.5#pp.6		
Traceability			
Trace lot num	2.1	%%0 or %%I	(10) or (251)
Trace slaughter ref	2.16#0	%%4	7030
Trace slaughter num	2.3	%%9	
Trace cutting ref	2.4	%%5	
Trace cutting num	2.5	%%A	
Trace origin 2.1	2.23.2.1	%%2	(423)
Trace origin 2.2	2.23.2.2	%%2	(423)
Trace origin 2.3	2.23.2.3	%%2	(423)
Trace origin 2.4	2.23.2.4	%%2	(423)
Trace origin 2.5	2.23.2.5	%%2	(423)
Trace origin 4.1	2.23.4.1	%%E	(425)
Trace origin 4.2	2.23.4.2	%%E	(425)
Trace origin 4.3	2.23.4.3	%%E	(425)
Trace origin 4.4	2.23.4.4	%%E	(425)
Trace origin 4.5	2.23.4.5	%%E	(425)
Trace origin 4.6	2.23.4.6	%%E	(425)
Trace origin 4.7	2.23.4.7	%%E	(425)
Trace origin 4.8	2.23.4.8	%%E	(425)
Trace origin 4.9	2.23.4.9	%%E	(425)
Cutting Number 1	2.24.1	%%A	(425)
Cutting Number 2	2.24.2	%%A	(425)
Cutting Number 3	2.24.3	%%A	(425)
Cutting Number 4	2.24.4	%%A	(425)
Cutting Number 5	2.24.5	%%A	(425)
Cutting Number 6	2.24.6	%%A	(425)
Cutting Number 7	2.24.7	%%A	(425)
Cutting Number 8	2.24.8	%%A	(425)
Cutting Number 9	2.24.9	%%A	(425)

Substitution data (parameter	Dewey code	Avery Berkel code	AI code
Trace breed of Father	2.7.1	%%T	
Trace breed of Mother	2.7.2	%%U	
Trace breed if mixed	2.7.3	%%V	
Trace date 1	2.8.1	%%6	
Trace date 2	2.8.2	%%7	
Trace date 3	2.8.3	%%8	8
Trace species	2.9	%%L	
Trace text 3	2.10	%%B	
Trace category	2.11	%%W	
Trace type	2.12	%%Y	
Trace scheme license	2.13	%%Q	(953)
Trace Custom (Scheme) Data	2.14	%%Z	
Trace (Carcass) Reference Number	2.15	%%I	
Trace scheme Processor	2.16#p	%%Kp	
Trace GTIN	2.20		
Operator Details			
Operator number	3.1	%%V1	
Operator name	3.2	%%V2	
Date and Time			
Date std	4.1	D	
Date Julian (days from start of year offset)	4.2#pppppp	DC+pppppp	
Time format 1	4.3	Z1	
Time format 2	4.4	Z2	
Time format 3	4.5	Z3	
Key tracker	4.6	K	
Promotions			
Price with promo	5.1	N	(3902)
Price without promo	5.2	G	
Promo saving	5.3	S	
Promo amount free	5.4	F	
Unit or item price	5.5		(8005)

Substitution data (parameter	Dewey code	Avery Berkel code	AI code
PLU batch start date	5.6.1	PS	
PLU batch end date	5.6.2	PE	
PLU batch text	5.6.3	PT	
Promo batch start date (batch number)	5.6.4#pp	PSpp	
Promo batch end date (batch number)	5.6.5#pp	PEpp	
Promo batch text (batch number)	5.6.6#pp	PTpp	
Alternate currency (NB if pp is 0, prints local currency; if non zero, prints currency associated with payment key #pp)	5.7#pp		
Voucher Promo Expiry Date	5.8		
Promo Trip	5.9		
PLU Amount Free	5.10		
PLU Prices)	5.11		
PLU Data			
PLU number	6.1		
Department number	6.2		
Group number	6.3		
Article number	6.4		(01)
PLU Display Text	6.5.1		
PLU Text 1	6.5.2		
PLU Text 2	6.5.3		
PLU Text 3	6.5.4		
PLU Text 4	6.5.5		
PLU GTIN	6.7		
Miscellaneous Messages			
Message machine	7.1	M	
Message code key	7.2	H	
Message sales (sales message number)	7.3#pp	Rpp	
Barcode format text (barcode format number)	7.4#pp		
Network Details			
Network machine ID	8.1	MCID	
Network network ID	8.2	NTID	
Cooking and Points			
Points (per lb or kg)	9.1#ppp		
Cooking time (minutes per lb or kg)	9.2#ppp.1#ppp		
Transaction			
Gross weight	10.1.1		(3303)
Net weight	10.1.2		(3103)

Substitution data (parameter	Dewey code	Avery Berkel code	AI code
Tare weight	10.1.3		
PLU date (1 or 2)	10.2#p		
Receipt			
Receipt sequence number	11.1		
Pack Runs			
Pack run data name	12.1#p		
Order number	12.2		
Pack run description	12.3		
Pack run origin	12.4		
Total packs	12.5.1		
Total cartons	12.5.2		
Total boxes	12.5.3		
Total target 1	12.5.4		
Total target 2	12.5.5		
Total target 3	12.5.6		
Total tare	12.5.7		
Total net weight	12.5.8		
Total items	12.5.9		
Customer ref	12.6.1		
Account name	12.6.2		
Miscellaneous Numbers			
Label consecutive number	13.1		
SSCC Barcode	13.2		(00)
SSCC Human Readable Form	13.3		

Using Dewey substitution codes

In text entry mode, as soon as you type in the start characters '%%+', the system will prompt you to select the class. Use

[↖] and [↘] to move between the options.

Press **ENTER** to confirm the selection. When you have selected the class the system will prompt for a division within that class and subsequently for the section.

Press **ENTER** to confirm each selection. To enter a parameter, just type in the value and the system will insert the '#'. When all the codes and parameters have been entered the system will automatically add the closing '%%' characters.

Example:Programming the code for the nutrient name to be printed in the nutri panel.

1 System Data ▶1 Products

11 Nutrifacts ▶ 1 Nutrient Defs ▶ 1 Nutrient Edit
              2 Nutri Data Texts   2 Nutrient Reset

Nutrients 1

⬇

Enter Text *

Type in text required and %%+

⬇

1   ▶   Misc. Numbers 13

⬇

Nutrients 1_1 ▶▶ Nutri Auto-gen 1_5

⬇

1 Select Nutrient 1
Type in parameter value (eg. 21)
(# is entered automatically)

⬇

Nutrient Name 1_1-21_1 ▶ Nutrient RDA 1_1-21_2
Type in parameter value
(# is entered automatically)
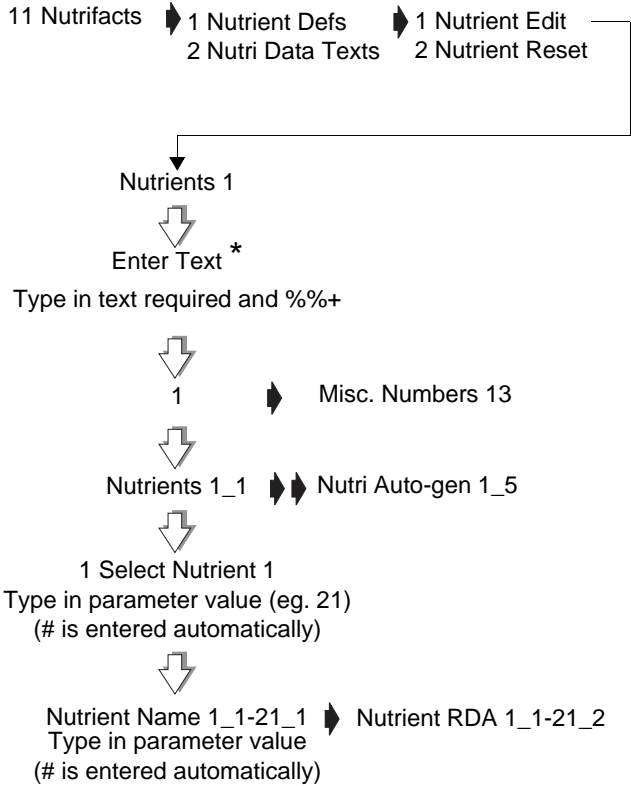
*If no text has previously been entered you will see the message Enter Text

10.4   Nutrient facts

Nutrient definitions define the nutrients that will appear on the nutri panel and will be listed when creating or editing the PLU.

Nutrient Data texts define the text that will be printed on the nutri panel.

Standard nutrient definitions

Standard nutrient definitions and the associated values, as advised by the UK Food Standards Agency, are already programmed in the machine. You can add to or edit these as required.

Ref	Nutrient name	RDA	Units of measure	Decimal places
1	Energy	10,400	(kJ)	0
2	Energy	2,500	(kcal)	0
3	Protein	60	(g)	0
4	Fibre	30	(g)	0
5	Total Fat	80	(g)	0
6	Saturated Fat	25	(g)	0
7	Cals from fat	0	(kcal)	0
8	Cholesterol	300	(mg)	0
9	Sodium	500	(mg)	0
10	Carbohydrates	375	(g)	0
11	Sugars	0	(g)	0
12	Vitamin A	800	(µg)	0
13	Vitamin B1	1.4	(mg)	1
14	Vitamin B2	1.6	(mg)	1
15	Vitamin B6	2.0	(mg)	1
16	Vitamin B12	1.0	(µg)	1
17	Vitamin C	60	(mg)	0
18	Vitamin D	5.0	(µg)	1
19	Vitamin E	10	(mg)	0
20	Vitamin K	70	(µg)	0
21	Vitamin H	150	(µg)	0
22	Calcium	800	(mg)	0
23	Iron	14	(mg)	0
24	Folic acid	200	(µg)	0
25	Niacin	18	(mg)	0
26	Trans Fat	2	(g)	0
27 - 50		0	(g)	0

Standard data texts

Standard data texts already programmed in the machine. You can edit these as required.

Ref	Text (400 chars)	Comments
1	Nutrient %%+1.1#2.1%% %%+1.1#3.1%% %%+1.1#4.1%% %%+1.1#5.1%% %%+1.1#6.1%% %%+1.1#7.1%% %%+1.1#8.1%% %%+1.1#9.1%% %%+1.1#10.1%% %%+1.1#11.1%% %%+1.1#12.1%% %%+1.1#13.1%% %%+1.1#14.1%% %%+1.1#17.1%% %%+1.1#22.1%% %%+1.1#23.1%% %%+1.1#24.1%%	Provides a column, headed with "Nutrient", showing the name of nutrients 1-14, 17 and 22-24. This nutri data text provides the template for the following four. These five nutri data texts provide the example nutri panel, in conjunction with default label format 99.
2	Per Serving %%+1.5#1.2%%	Column headed with "Per Serving", showing the amount of each nutrient per serving. This achieved using the auto-gen feature based on the nutrients listed in nutri data 1.
3	Per Std Meas %%+1.5#1.4%%	Column headed with "Per Std Meas", showing the amount of each nutrient per standard measure (normally per 100g or per 100ml). This achieved using the auto-gen feature based on the nutrients listed in nutri data 1.
4	Serv %RDA %%+1.5#1.5%%	Column headed with "Serv %RDA", showing the percentage of the recommended daily allowance that will be satisfied by eating a serving of this product. This achieved using the auto-gen feature based on the nutrients listed in nutri data 1.

5	Std Meas %RDA %%+1.5#1.6%%	Column headed with "Std Meas %RDA", showing the percentage of the recommended daily allowance that will be satisfied by eating the standard measure (normally 100g or 100ml) of this product. This achieved using the auto-gen feature based on the nutrients listed in nutri data 1.
6 - 28		Defaulted to null string.
28>	%%+1.2.4#26.2%%	Trans Fat
29	%%+1.2.1.2%%	The following texts provide an emulation of the old US style nutri panel, in conjunction with label field 100, 101, 102 or 103. This text inserts servings size with units.
30	%%+1.2.3%%	This text inserts servings per container.
31	%%+1.2.4#2.1%%	This text inserts energy (kCal) per serving with units.
32	%%+1.2.4#7.1%%	This text inserts calories from fat per serving with units.
33	%%+1.2.4#5.2%%	This text inserts total fat per serving with units.
34	%%+1.3.1#5%%	This text inserts the percentage RDA for total fat satisfied by a serving of this product.
35	%%+1.2.4#6.2%%	This text inserts saturated fat per serving with units.
36	%%+1.3.1#6%%	This text inserts the percentage RDA, for saturated fat, satisfied by a serving of this product.
37	%%+1.2.4#8.2%%	This text inserts cholesterol per serving with units.
38	%%+1.3.1#8%%	This text inserts the percentage RDA, for cholesterol, satisfied by a serving of this product.
39	%%+1.2.4#9.2%%	This text inserts sodium per serving with units.
40	%%+1.3.1#9%%	This text inserts the percentage RDA, for sodium, satisfied by a serving of this product.
41	%%+1.2.4#10.2%%	This text inserts carbohydrates per serving with units.
42	%%+1.3.1#10%%	This text inserts the percentage RDA, for carbohydrates, satisfied by a serving of this product.
43	%%+1.2.4#4.2%%	This text inserts fibre per serving with units.

44	%%+1.3.1#4%%	This text inserts the percentage RDA, for fibre, satisfied by a serving of this product.
45	%%+1.2.4#11.2%%	This text inserts sugar per serving with units.
46	%%+1.2.4#3.2%%	This text inserts protein per serving with units.
47	%%+1.3.1#12%%	This text inserts the percentage RDA, for vitamin A, satisfied by a serving of this product.
48	%%+1.3.1#17%%	This text inserts the percentage RDA, for vitamin C, satisfied by a serving of this product.
49	%%+1.3.1#22%%	This text inserts the percentage RDA, for calcium, satisfied by a serving of this product.
50	%%+1.3.1#23%%	This text inserts the percentage RDA, for iron, satisfied by a serving of this product.

Index

Index

WORLDWIDE AVERY WEIGH-TRONIX COMPANIES

For information please contact your local Avery Weigh-Tronix support centre
or one of the addresses shown below.

Europe

Austria
Schember Berkel Ges.m.b.H.
2355 Wiener Neudorf
Industriezentrum NÖ-Süd
Strasse 3,Objekt 30
Tel: +43 2236 626310
Fax: +43 2236 626316
Email: schemberberkel@awtxglobal.com
Web site:www.averyweigh-tronix.com

France
Berkel S.A.
36 Avenue de l'Europe
95335 Domont Cedex
Tel: +33 1 39 35 57 00
Fax: +33 1 39 35 57 57
Email: averyweigh-tronix-france@
         awtxglobal.com
Web site:www.averyweigh-tronix.com

Ireland
Berkel (Ireland) Limited
Western Industrial Estate
Naas Road
Dublin 12
Tel: +353 1 4600088
Fax: +353 1 4600096
Email: info@awtxglobal.com
Web site:www.averyweigh-tronix.com

United Kingdom
Avery Berkel Limited
Foundry Lane
Smethwick
West Midlands
England
B66 2LP
Tel: +44 870 90 34343
Fax: +44 121 224 8183
Email: info@awtxglobal.com
Web site:www.averyweigh-tronix.com

Avery Berkel Consumables (UK)
Tel: +44 870 90 30108
Fax: +44 870 90 00366
Email: info@awtxglobal.com
Web site:www.averyweigh-tronix.com

WORLDWIDE AVERY WEIGH-TRONIX COMPANIES

For information please contact your local Avery Weigh-Tronix support centre
or one of the addresses shown below.

Americas

Canada
Industrial products
Avery Weigh-Tronix Canada, ULC
217 Brunswick Boulevard
Pointe Claire
QC H9R 4R7 Canada
Tel: +1 514 695 0380
Toll free:+1 800 561 9461
Fax: +1 514 695 6820
Email: bmintz@weigh-tronix.ca
Web site:www.averyweigh-tronix.com

Mexico
Constructa de Basculas S.A. de C.V.
Norte 59 No 880-B Local B
Col. Industrial Vallejo
02300 Mexico DF
Tel: +52 5 36 84033
Fax: +52 5 58 70156
Email: maluna@berkel.com.mx
Web site:www.averyweigh-tronix.com

USA
Industrial products
Weigh-Tronix, Inc
1000 Armstrong Drive
Fairmont
MN 56031 USA
Tel: +1 507 238 4461
Fax: +1 507 238 4195
Web site:www.averyweigh-tronix.com

Africa

Kenya
Avery Kenya Limited
Factory Street
P.O. Box 30417
00100 Nairobi
Tel: +254 2 559004
Fax: +254 2 543956
Email: avery@swiftkenya.com
Web site:www.averyweigh-tronix.com

Asia and Pacific

India
Avery India Limited
Ballabgarh Works
Plot Nos 50 - 59
Sector 25
Ballabgarh
Haryana
Tel: +91 129 223 4625
Fax: +91 129 223 2557
Email: stomar@averyindia.net
Web site:www.averyweigh-tronix.com

Malaysia
Avery Malaysia Sdn. Bhd
No 8A Jalan 213
46050 Petaling Jaya
Selangor
Tel: +60 3 7781 4344
Fax: +60 3 7781 5623
Email: adm@avery.po.my
Web site:www.averyweigh-tronix.com

The address of your Avery Weigh-Tronix centre is:

Avery Weigh-Tronix