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## ***Electromagnetic Compatibility (EMC)***



This product complies with Council Directive 89/336/EEC when installed and used in accordance with the relevant instructions.

## ***Service and Technical Support***

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## 1.1 Introduction

The Loadmaster 9000i DMM is designed for Weights and Measures approved operation, for either automatic weighing (AWI) or non-automatic weighing (NAWI).

The relevant Trading Standards Type Approval is: -

- Class III OIML R76 (EN45501) Directive 90/384/EEC for a non-automatic weighing Instrument (NAWI).
- OIML R51 European Type Approval Agreement (WELMEC) for an automatic weighing instrument (AWI).
- MID Directive 2004/22/EC for an automatic weighing instrument (AWI)

The system can also operate in a Non-Approved weighing mode i.e. as a Loadmaster 8000i instrument. Switching between Non-Approved Mode and Approved Mode (NAWI or AWI depending on the installation setup) can be done by the operator as required, however, the Secondary Software Module must be installed to access the Approved Mode.

The instrument is based primarily on the Loadmaster 8000i weighing system. Two pressure sensors are mounted on each side of the hydraulic lift system. They provide an increase of frequency signal as the load increases. The average frequency is captured at a set weighing point provided by the Reference/Direction sensor assembly. Calculated with a factor, the system weighs the contents in the bucket being lifted. This information can then be saved to a certain customer or product memory store.

This instruction manual covers operation for NAWI and AWI weighing modes. It does not cover use in non-approved weighing mode. For non-approved weighing, please refer to the Loadmaster 8000i instruction manual.

### ***What is the difference between these two Approvals?***

**CLASS III (NAWI)** - This is a European Approval allowing the use of the LM 9000i in any EEC country for sale of goods, with no further Approval required from the Trading Standards Body in the relevant EEC Country. Mode of operation is "Non-Automatic" and therefore Static weighing procedure should be used, using Manual confirmation of the displayed weight.

**CLASS Y(b) (AWI)** - This is a UK Approval allowing the use of the LM 9000i in the UK for sale of goods. Use of this instrument in other EEC countries with this Standard is possible, providing Approval has been acquired from the Trading Standards Body in the relevant EEC country. Contact your local RDS Distributor for the relevant details. This "Automatic" mode allows both Dynamic or Static operation, together with Automatic entry of the displayed weight.

**CLASS Y(b) (AWI) - conforming to Directive 2004/22/EC (MID):** This a European Approval allowing the use of the LM9000i in any EC country, for sale of goods, with no further approval required from the Trading Standards Body in the relevant EC country. This "Automatic" mode allows both Dynamic or Static operation, together with Automatic entry of the displayed weight.

## 1.2 System Technical Details

- 6 User-definable store entries with extended reference capability
- Hydraulic Pressure Sensing Technology
- Angle Sensing Technology (compensation & inhibition)
- Automatic Dynamic Weighing System with 2 arms
- Static weighing
- Temperature sensing inhibition
- Bucket crowd inhibition
- ICP and memory card compatible
- Memory Store Upload Facility
- Anti Bounce Inhibition.

### 1.3 Calibration

For approved mode operation, all calibration is done on installation prior to NAWI or AWI certification. No further calibration is permissible.

For calibration in non-approved mode, please refer to the Loadmaster 9000i Calibration manual.

### 1.4 Weighing Units

**For NAWI and AWI approved modes:** The units are 't' for tonnes or 'kg' for kilograms, with a resolution ('e') according to the certification as defined on the label on the head unit

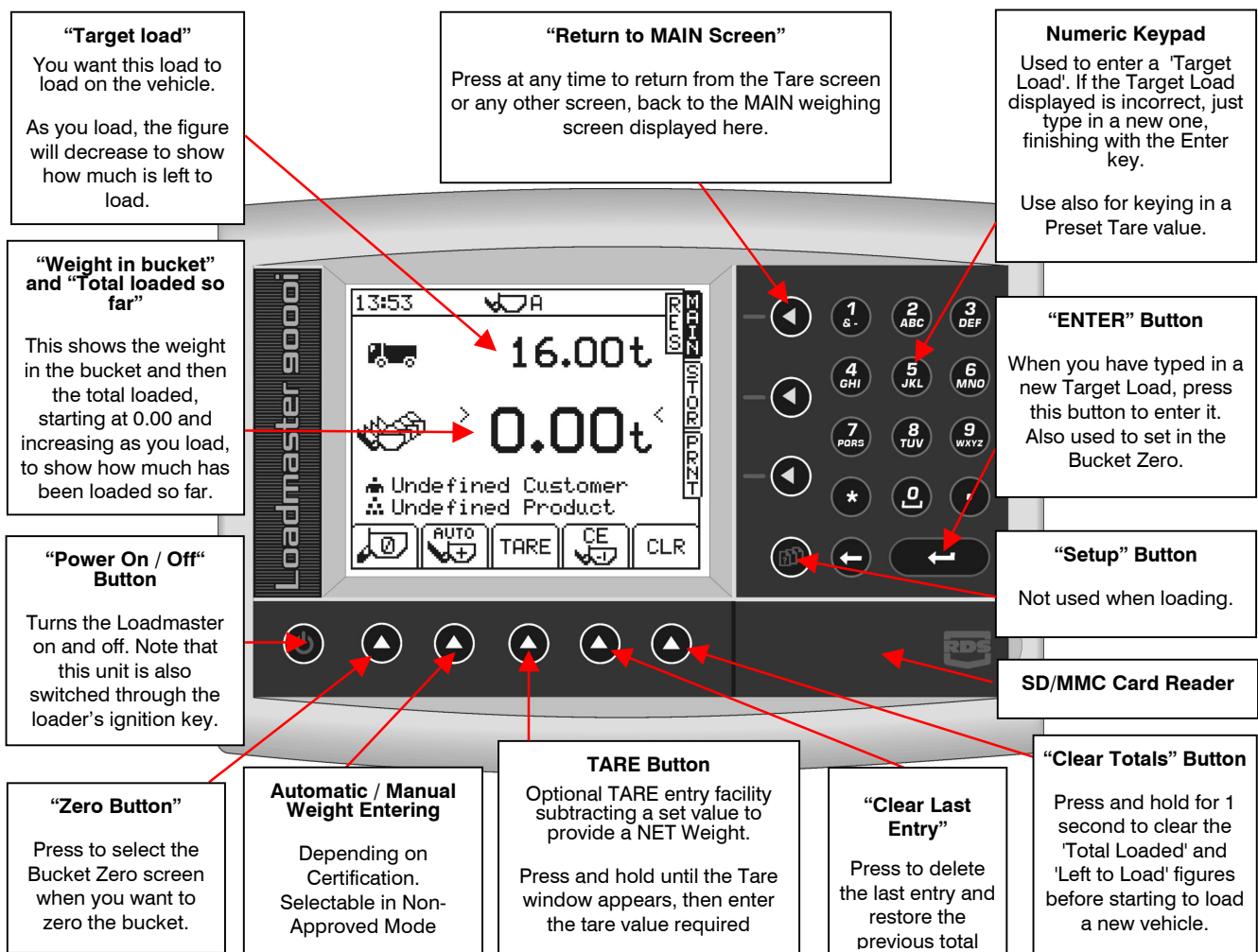
**In non-approved mode:** Metric or imperial units (kgs, tonnes, m<sup>3</sup>, UK tons, US tons, lbs), and the resolution can be selected via the 'CALIBRATION' menu. If weighing volumetrically, you must set the density.

On a Loadmaster 8000i, the units are normally displayed on screen and on printouts. If a Loadmaster 9000i Class III approved weighing system is used in non-approved weighing mode (i.e. as a Loadmaster 8000i), then units are not displayed on screen or included on a printout in compliance with the requirements for Weights and Measures Approval.

Also, the text "Not for Trade use or Applications under Article 1.2(a) 90/384/EEC" will appear on every printout.

### 1.5 The Head Unit

Figure 2



## 1.6 Approved Weighing Mode Certification

There are currently 2 main Approval Certifications: -Class IIII - NAWI (Non-Automatic weighing Instrument) and y(b) - AWI (Automatic Weighing Instrument). Within each Approval type (Class IIII or y(b)), the Loadmaster 9000i can be certified for maximum weights from 1 to 25 tonnes. For ease of setup, the instrument is configured for certification in the range 1 to 25 tonnes via a menu of 22 presets (see below). It is also possible to configure the Loadmaster 9000i for any maximum weight from 16 to 25 tonnes, but not via presets.

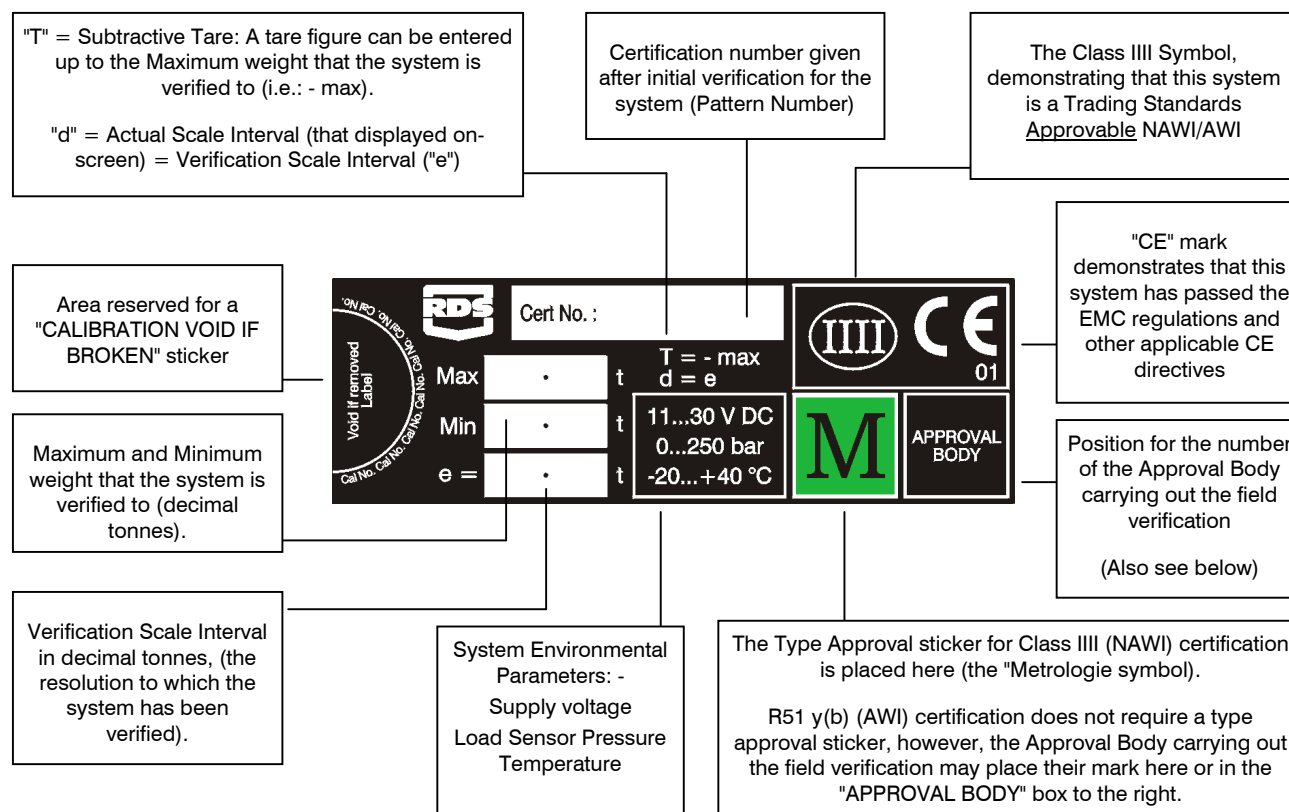
### Presets (Class IIII and y(b)):

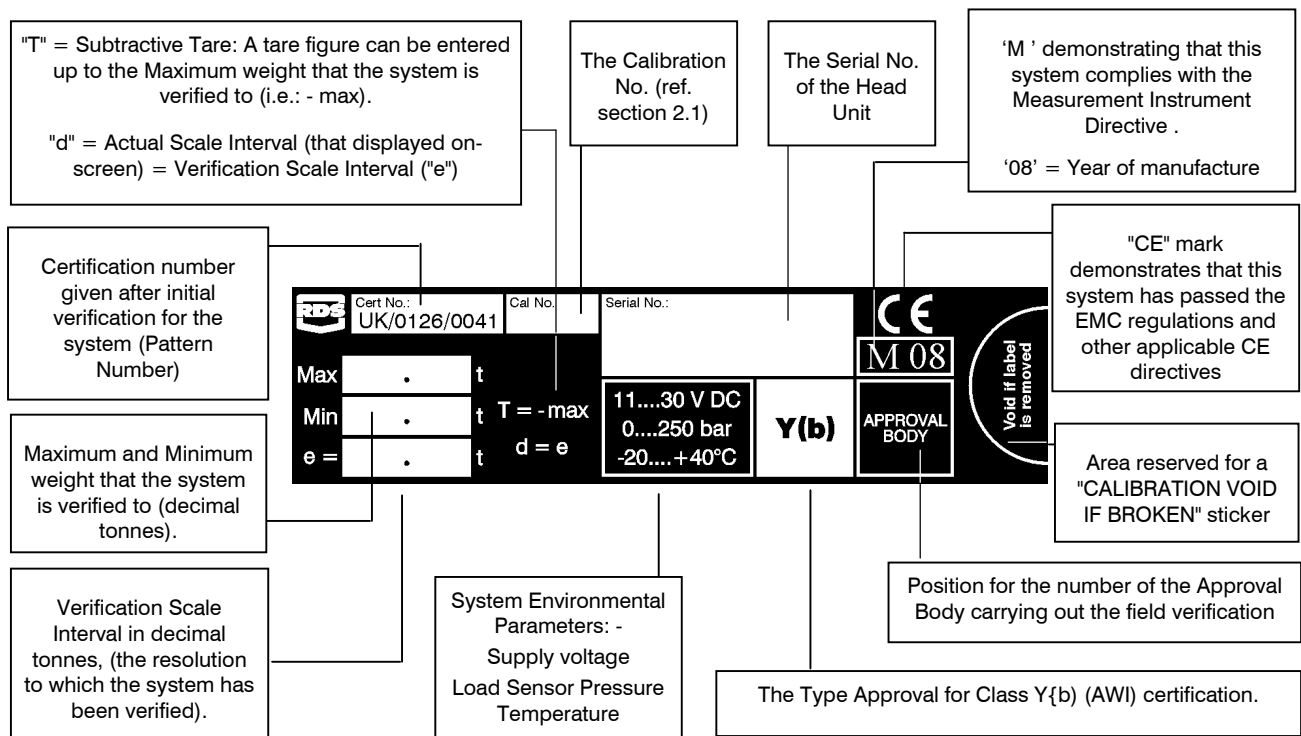
Max weight: Resolution (e):

1000 kg	10kg (10e)
2000 kg	20kg (20e)
3000 kg	
4000 kg	
5000 kg	
5000 kg	50kg (50e)
6000 kg	
7000 kg	
8000 kg	
9000 kg	
10000 kg	
11000 kg	
12000 kg	
10000 kg	100kg (100e)
11000 kg	
12000 kg	
13000 kg	
14000 kg	
15000 kg	
17000 kg	
20000 kg	
25000 kg	

The certification details are given on the appropriate plate fixed on the left hand side of the Head Unit (fig. 3a, 3b). The label is completed with the certification details, after field verification of the weighing system by the local approval body.

**Figure 3a OIML R51 (Class IIII) Data Plate**



**Figure 3b : MID Y(b) Data Plate**

## 1.7 Loading Attachments

The system can be calibrated for up to 8 different attachments.

## 1.8 Menu keys

Nine menu keys adjacent to the LCD display access all instrument functions.

The four menu keys to the right of the screen access the primary screen pages (those viewed during normal operation). There are three primary screens MAIN, STOR and PRNT for normal operating functions, and a SETUP screen for calibration functions.

The five sub-menu keys below the screen control the various display functions and settings for each of the primary screen pages. Text or icons are displayed adjacent to the sub-menu keys to denote their function.

## 1.9 Data Entry

Alphanumeric values are entered via the right-hand keypad. You must press the key from 2 to 5 times to select the required letter. (Some keys have additional special characters not shown on the key legend).

The key will either toggle between lower and upper case characters or when preceding a numerical entry, will set a MINUS value.

The key will toggle between 0 and a SPACE.

The key will BACKSPACE the screen cursor if you need to re-enter a character.

The key is the RETURN key and is normally pressed to confirm the data entry into memory.



## 2 Startup

Before you start to load you need to check a few things,

- Select Approved or Non-approved mode
- Work the hydraulics to get up to normal operating temperature, otherwise the screen displays the message "Oil too Cold" and weighing is inhibited.
- Set Zero Weight
- Set the Target load.
- Set Preset Tare (if required)
- Set Load Enter Mode
- Set the Customer and/or Product Store to which totals will be recorded (section 4).



Figure 4



### 2.1 Switch On

On switch on, the following screen is shown (fig. 4).

The **Cal No.** is zero after a software reset. It increments each time the calibration is entered by using the FACTORY PIN number.

**NOTE:** THIS NUMBER SHOULD MATCH THE NUMBER ON THE PLATE ON THE SIDE OF THE INSTRUMENT. IF NOT, LOCAL CERTIFICATION HAS BEEN VOIDED.

### 2.2 Set Weighing Mode

Press the  key then the  key (fig. 5).

The instrument prompts you to choose the approved mode (NAWI / AWI) or non-approved mode.

Press 'YES' or 'NO' and wait as the instrument is re-configured. You must zero after selecting the weighing mode.


**NOTE:** Please refer to the Loadmaster 8000i manual for weighing in non-approved mode.




Figure 5

### 2.3 Zero Prompt

The "CHECK ZERO" screen (fig. 6a) occurs if the system has been switched off or has not recognised any lifts for more than 15 minutes. Three beeps occur and are repeated every 60 seconds thereafter when in this state.

Lift and lower the empty bucket 3 times. "**Lift & Lower 3 Times**" is prompted, with the number shown, and decrements one number after each lift has been achieved. When the third lift has been completed, press the  button and the screen automatically moves to the "Dynamic Zero" screen (with AWI set-up) or "Static Zero" screen (NAWI).

The  symbol (fig. 6b) denotes that this is the first dynamic/static zero after switch-on.

**After the first 10 minutes from switch on**, when the first "CLR" is performed, the "CHECK ZERO" routine must be repeated, and again after another 10 minute period has passed. After that, the routine should occur every 30 minutes.

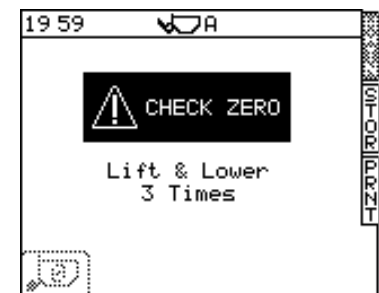



Figure 6a



Figure 6b

## 2.4 Zero

### 2.4.1 Dynamic Zero (Dynamic Mode)

Pressing the  key displays the "Dynamic Zero" screen when dynamic weighing is selected in AWI mode (fig. 7).

Lift the empty bucket at medium lift speed. The weight will display very briefly and then the instrument zeros automatically before returning to the MAIN screen. The ">" and "<" signs (fig. 9) confirm that the instrument has zeroed to with 0.25e, i.e.: -

- for 2000kg certification, "e" = 20kg, zero is within  $\pm 5$ kg.
- for 5000kg certification, "e" = 50kg, zero is within  $\pm 12.5$ kg.
- for 10000kg certification, "e" = 100kg, zero is within  $\pm 25$ kg.



Figure 7

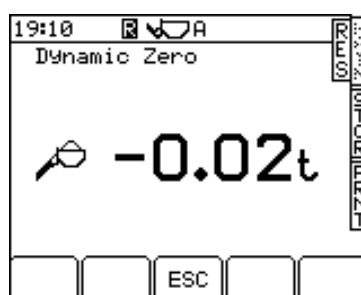


Figure 8

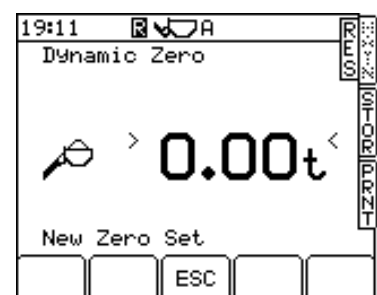




Figure 9

The  symbol denotes that this is a zero done during normal operation.

**NOTE:** If the "live last bucket" is used, the dynamic zero is followed by the static zero (as described below).

### 2.4.2 Static Zero (NAWI Mode)

Pressing the  key displays the "Static Zero" screen (fig. 10) if the Loadmaster is in NAWI Mode (or if static weighing is selected in AWI mode).

Raise the bucket to the reference position. The loader kickout operates, stopping the lift. A short delay will occur as a weight reading is taken (fig. 11). The instrument will then sound a single bleep and zero automatically before returning to the MAIN operating screen.

The ">" and "<" signs (as in fig. 9) confirm that the instrument has zeroed to with 0.25e as for dynamic zero.

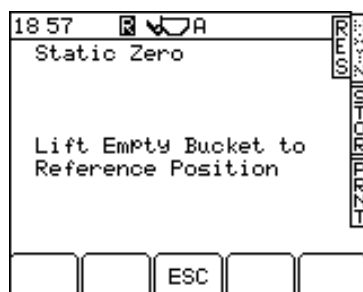


Figure 10



Figure 11

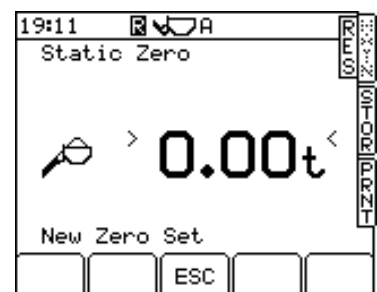


Figure 12

### 2.4.3 Error Messages

#### (i) Angle of Slope



This indicates that the angle of slope is too great in a particular direction - move to a more level area.

#### (ii) Low Oil Temperature / Sensor Faults

The instrument also warns you of low oil temperature or a sensor fault and inhibits the zero routine.

#### (iii) Crowd Bucket



You must crowd the bucket right back before weighing can take place.

#### (iv) Boom Sensor (Telehandlers only)



You must retract/extend the boom to the correct position.

## 2.5 Set Target Load

You want this weight to load on the vehicle (fig. 13).

From the MAIN screen, simply key-in the target weight and then press the ENTER key to confirm. As you commence the loading cycle, the figure will decrease to show how much is left to load.

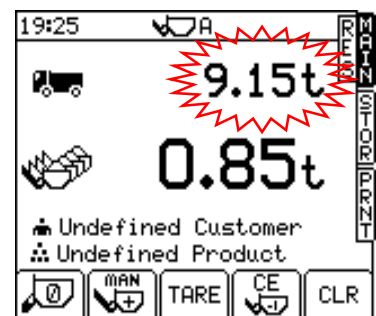


Figure 13

## 2.6 Set Preset Tare

This facility is used to display the NET weight of a product within a lifted container. The normal gross weight is taken, from which the pre-programmed empty weight of the container is automatically subtracted.

From the MAIN screen, press and hold the TARE key (fig. 14). Key-in the empty container weight and press ENTER to confirm.

The Preset Tare (PT) is then displayed on the MAIN screen (fig 15a). With a tare set, each bucket weight is displayed with the **NET** symbol above it (fig. 15a) and any printout will be identified with the letters

The Tare facility may be switched off from the SYSTEM SETTINGS menu in which case the TARE key will no longer appear on the screen.



Figure 14

### 2.6.1 Cancel Preset Tare

To CANCEL a preset tare, simply press and hold the TARE key again, then release. After a few seconds the "Tare" window will disappear, canceling the preset tare setting.

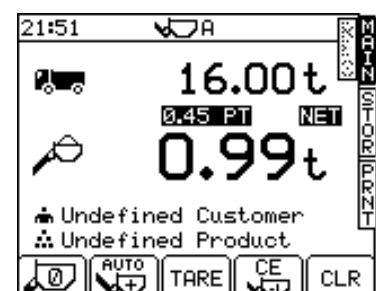


Figure 15a

### 2.6.2 Re-weigh function (Tare –1)

The loader operator may wish to tip a partial amount off the last bucket load to “top-off” the truck load. The “re-weigh” function enables the weight of this surplus material to be subtracted from the truck total, ensuring the recorded total matches the actual weight loaded into the truck.

The re-weigh function must be enabled from the SETUP menu (ref. section 5.3).

1. Lower the bucket load with the remaining material.
2. Press the “Tare –1” key (fig.15b).
3. Lift to re-weigh and then press ENTER. The remaining material weight is then subtracted from the total.

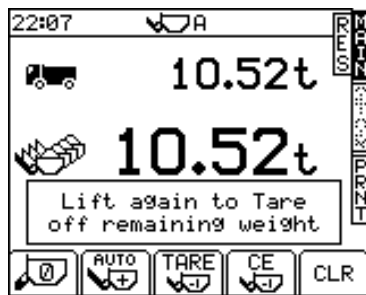


Figure 15b

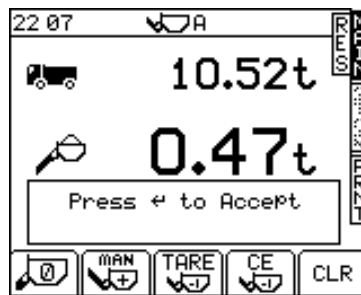


Figure 15c

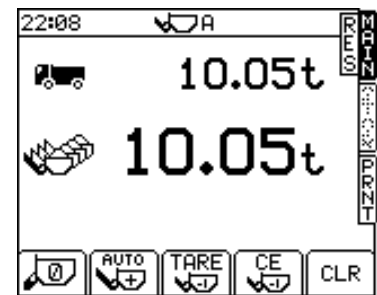




Figure 15d

### 2.7 Set the Load Enter mode (AWI only)

The Load Enter mode should normally be set to . The load will be automatically entered as the bucket is lifted above the weighing position.

Alternatively, if you prefer to manually enter the bucket weight on every lift, then hold the SUB MENU key to select .

### 3 Weighing in Approved Mode



In approved mode (NAWI or AWI), weighing will be inhibited unless the machine is up to normal operating temperature and the bucket is crowded right back. These restrictions do not apply in non-approved mode. The system also has several compensatory features allowing for varying lift speed, weighing 'on the move', and weighing on a slope while maintaining the accuracy required. Warnings will be displayed if you exceed the operating parameters of the system.

#### 3.1 Dynamic Weighing


With dynamic weighing, the load is lifted without any interruption. Weighing can be fully automatic and quick, and weighing 'on the move' is possible.

Fill the bucket as normal and crowd it right back. Hold the lift lever back. Lift the bucket smoothly at a constant speed through the reference position, keeping the loader as steady as possible while the weight is taken.


If the display shows   this indicates that the lift speed was too slow - try again.


If the display shows   this indicates that the lift speed was too fast - try again.

Avoid excessive bounce if weighing on the move. The system is designed to compensate for vehicle movement within certain limits, beyond which a warning is displayed and weighing is inhibited.

The bucket weight  is then displayed (fig. 17) and if AUTO ENTER is set (as shown), the weight is automatically stored in memory.

If MANUAL ENTER is set, then PRESS the LOAD ENTER BUTTON to store the weight reading in memory.

The target weight  will decrease by the bucket weight to show how much is left to load (fig. 18).

The  figure then indicates the total of all bucket weights entered so far. Continue loading until you get to the last bucketful.

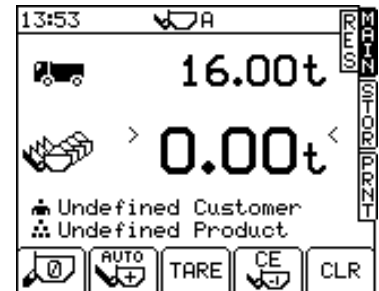


Figure 16

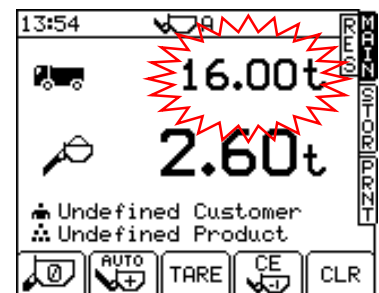


Figure 17

#### 3.2 "Live Last Bucket" Weighing (Dynamic only)

The "live last bucket" mode must have been enabled from the SETUP menu.

Lift the arms up to the weighing position and the instrument then switches automatically to "last bucket" static weighing mode. When the target weight is reached or surpassed, the bucket weight display will flash and the display will give a "live" readout. You can tip off a little as required, allowing the live display to settle down.

YOU CANNOT MANUALLY ENTER THE LAST BUCKET WEIGHT. Instead, lower the bucket and then lift dynamically. The final bucket weight is then automatically added to the total.

NOTES: The ">" and "<" signs (figure 16) confirm the instrument is zeroed to within 0.25e (Section 2.4.1, where 'e' = Scale Interval.).

For AWI only, if the individual bucket weight is below the minimum weight specification, the calculated lift weight will NOT be added to the totals. The screen will display the message "Below Minimum Weight".

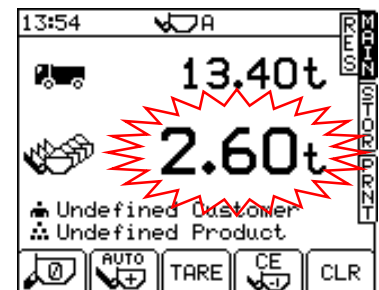


Figure 18

### 3.3 Static Weighing


This uses the loader's auto-kickout system to automatically stop the lift arms in the reference position before sampling the weight.

The weighing screen (fig. 19) will appear the same as for AWI Mode, other than that AUTO ENTER is not selectable.

Fill the bucket as normal and crowd it right back. Pull the lift lever back to it's held position. As the loader reverses the bucket will come up to the weighing point and the lift lever kickout will operate automatically.

**NOTE:** Best accuracy is achieved with the vehicle stationary. The system will display a warning if excessive movement occurs, and weighing will be inhibited.

Keep the loader as steady as possible while the weight is taken.

The display will show two 'bars', which fill up, indicating that the weight is being sampled (fig. 20) and the bucket weight  is then displayed.

There is no AUTO ENTER option. The weight reading will be logged and stored only when the LOAD ENTER button is pressed.

As with dynamic weighing, when the bucket weight is entered, the target weight figure will decrease by that amount.

Continue loading until you get to the last bucketful. The instrument does not switch to 'last bucket' Static weighing mode as it does in non-approved Mode. Instead, if the last bucket weight is more than the target weight, the bucket weight will start flashing. Either press the REMOTE ENTER BUTTON to enter the weight, or lower the bucket below the reference/direction sensor to cancel it.

**NOTE:** The ">" and "<" signs (figure 19) confirm the instrument is zeroed to within 0.25e (Section 2.4.1).

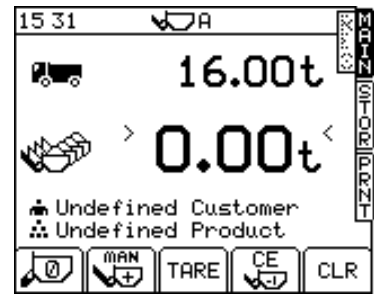


Figure 19

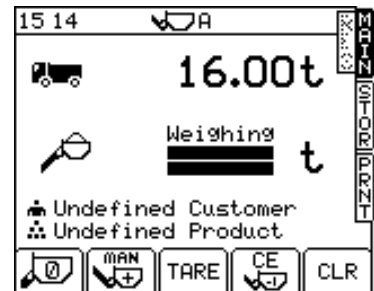




Figure 20

### 3.4 Selecting Stores Index

Until a data card containing the reference files is inserted into the Data Module, the instrument will alternately display a black screen and the message "Data Card Module Needed".

1. Select the STOR screen, then select the index required for store 1, using the  key or the search function (fig. 21a).

NOTE: Press  to go step back 1 index, or press the '0' key to return to Index '0'.

2. Press the ENTER key to confirm the store 1 entry and select store 2 (fig. 21b).
3. Repeat step 2 for further stores as applicable.

NOTE: Only the stores enabled from the 'Stores Setup' screen (section 4.1.6) will appear above.

On confirming the last store, the instrument then reverts to the MAIN screen. Only the first 3 stores can be displayed.



Figure 21a: (Store Ref 1)



Figure 21b: (Store Ref 2)




Figure 21c: (Store Ref 3)

Search facility  
Add new index entry (ref. section 4.3)

On completing the load, when the CLR button is pressed the load data is automatically saved to the data card.

#### 3.4.1 Store Index Search Function



Instead of entering the Index No. , from any of the 'SELECT <Store Reference>' screens (figs. 21a - 21c), press the  key.

Enter one or more characters from the Index name or Extended reference and press the enter key to begin the search.

Index name  
Extended Reference



UK506-31.PCX

Indexes containing those characters are then listed. Select the appropriate one using the  key, and then press the  key.

If no information matches the search criteria, the screen remains blank.

### 3.4.2 Set Target Weight

The target weight is set automatically to the value programmed in field 2 of the selected 'Truck' index (a blank field sets a zero target weight).

After completing the store selection and returning to the MAIN screen, you can manually enter a different target weight if required.

## 3.5 Error Messages

### 3.5.1 Angle of Slope



This indicates that the angle of slope is too great in a particular direction - move to a more level area.

### 3.5.2 Low Oil Temperature / Sensor Faults

The instrument also warns you of low oil temperature or a sensor fault and inhibits the zero routine.

If an oil temperature warning appears, work the machine for a few minutes until the oil has reached a suitable operating temperature.

The error will disappear automatically at this point.

This prevents errors occurring with cold oil

### 3.5.3 Anti-bounce

Caused by excessive bouncing of the loader whilst weighing. The screen prompts "To Much Bounce - Lift Again".

### 3.5.4 Maximum Weight Exceeded



flashes on-screen with a 3-second continuous beep when the maximum weight limit is exceeded. This will occur 9 divisions (9 x e) above the stated maximum figure that the system is certified to. Weighing is inhibited in NAWI or AWI mode.

Example: If Max weight = 10.0t and 'e' = 0.05t, the Alarm weight = 10.45t.

## 3.6 Zero Alarms



### Zero Limit Exceeded (more than $\pm 2\%$ drift)

When a zero procedure is performed in normal use, the instrument automatically detects if the Zero readings have moved more than  $\pm 2\%$  of the maximum weight, from the Zero set at the first Zero after switch on (fig. 22b).

This prompt is designed to alert the operator that there could be a build up of material in the bucket, and automatic confirmation of the Zero is inhibited. Clean out the bucket as necessary.

Example zero limits are:

for 2000kg max. weight:  $\pm 40$ kg

for 5000kg max. weight:  $\pm 100$ kg

for 10000kg max. weight:  $\pm 200$ kg

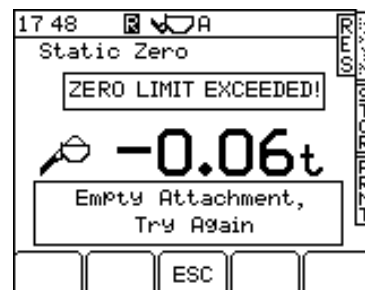


Figure 22b



### Zero Error (more than $\pm 10\%$ )

When the system is initially switched on, or if the unit has not been used for 15 minutes, the figure resulting from the Zero procedure is compared to the initial Zero's logged during the systems initial verification. If these figures are different by more than  $\pm 10\%$  of the maximum weight, the Zero confirmation will be inhibited, and the following screen will be shown (fig. 22c).

Example limits are:

for 2000kg max. weight:  $\pm 200\text{kg}$

for 5000kg max. weight:  $\pm 500\text{kg}$

for 10000kg max. weight:  $\pm 1000\text{kg}$

**If a "Zero Error" cannot be rectified, re-calibration is necessary.**

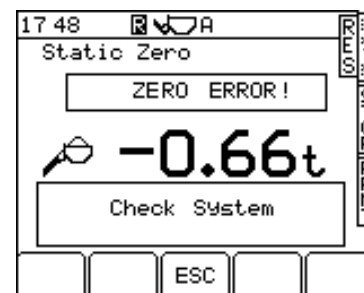




Figure 22c

### 3.7 Clear Last Entry

If the last bucket weight was entered in error, then press the  key to delete it.

Only the last entry can be cleared.

### 3.8 Reset for next load

Press the  key.

or

Press and hold the LOAD ENTER BUTTON for five bleeps.

The load record is then stored to the pre-selected product / customer stores.

If the printer mode is set to 'REC' (Record) or 'ROLL' then a printout is produced automatically when the CLR key is pressed.

The instrument resets to the preset target load. If a different target load is needed for the next load, simply key-in the new value for the target load and press the ENTER key.

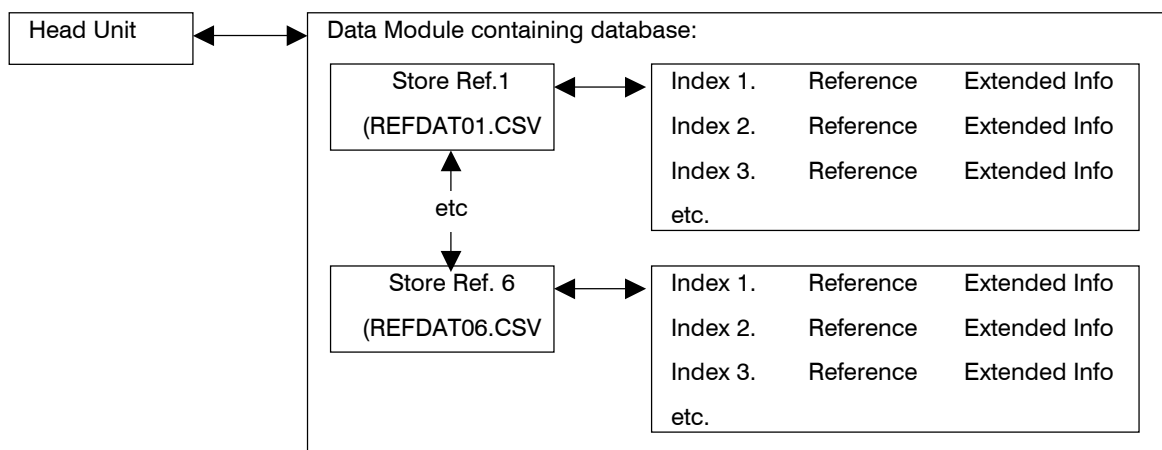
**NOTE:** The printer output mode 'OFF', 'ROLL' or 'REC' is selected from the PRNT screen.

## 4 Store Functions

There are 6 separate Reference stores which to which you can programme whatever information you require e.g. Customers, Products, etc. All data is stored on the internal SD Card - Data Management Module (DMM), as .CSV (Comma Separated Variable) text files. No data is held in the head unit memory. The data module therefore, must be connected and a data card inserted *with the correct system files* (section 4.1.1), for the store functions to operate.

New stores information can be added in MS Excel, or via the instrument keypad. Existing store information however, can only be edited in MS Excel, and not via the instrument. Each store can up to 10,000 entries.

**NOTE:** Each entry has an "Index No". The index no is the primary reference that the instrument uses to search the database, for printing a load summary, or saving the store reference data with each completed load. It is the index no's and not the text entries, that appear in the load data file LMTOTALS.CSV.



- Once each load is entered, the data (bucket weight, total weight, time/date etc) along with the selected store reference information (in a shorthand form using just the Index No's of each store) is saved to the data module.
- Print out a load ticket each time the load is entered.
- Search the database by store reference, dates, etc and print out a summary of the loads found within your search criteria.
- Transfer load records into your own accounting /data management software on the PC, for billing and traceability purposes.

### 4.1 Stores Setup

Section 4.1 explains everything you need to know to begin using the store functions on the Loadmaster including,

- Hardware Setup - Data Module (4.1.1) and Printer (4.1.2)
- Instrument Software Setup (4.1.3)
- Data Card format and file transfer (4.1.4 - 4.1.5)
- Programming your own Stores Data (e.g. Customers, Products etc - 4.2, 4.3)

#### 4.1.1 Hardware Setup - Data Module

Simply insert a formatted SD card containing the required files (ref. Sections 4.1.4 - 4.1.5). Any SD card up to 2Gb is compatible. SD-HD (> 2Gb) cards are not compatible. The SD card is inserted as shown below.

**Figure 25:** SD Data Card Module



SD CARD MODULE-GS.JPG

The instrument will take several seconds after switching on to establish communication with the module.

**NOTE:** Until communication is established with the module the error message "Data Card Module Needed" will be regularly displayed. If the required files are not found on the inserted card, the error message "Data Card or File Error" will be regularly displayed.

#### 4.1.2 Hardware Setup - ICP 300 Printer

The top port is factory set for connecting an RDS ICP printer, without further configuration being necessary. If another printer is used (or you want to select an option other than a printer), you can configure the settings from the 'SETUP' menu. Connect the printer to the **TOP** port using cable S/CB/268-1-049 that also provides a power supply from the head unit (fig 25).

**NOTE:** For more information on the printer, please refer to the ICP300 printer manual.

#### 4.1.3 Software Setup for Printers (in Approved Mode)

From the SETUP menu, press,

3. System Settings

1. Printer Setup (enter PIN)



UK506-26.PCX

**Figure 26**

The default settings suit the RDS ICP 300 In-Cab Printer. If you are using an existing printer from another manufacturer, it may operate with a different protocol. If it does not work with the default settings, please refer to the printer instructions.

The default settings (fig. 26) are for the RDS ICP 300 In-Cab Printer.

**Print Order Setup:** See below

**Print Control** Off = Instrument sends all jobs as a continuous data stream - e.g. when using a roll printer

**On** = Instrument sends one job at a time to printer and the operator must manually initiate the next print job, e.g. when printing individual sheets with an Epson slip printer.

**Print Logo:** **Off / On** : Prints your company logo on a load ticket.

**Bucket List:** **Off / On** : Enables an itemised list of each bucket making up a load total.

**Baud rate:** 110 / 150 / 300 / 600 / 1200 / 2400 / **4800** / 9600 / 19,200 / 31,250 or 38,400.

**Data Bits:** 7 / 8  
**Stop Bits:** 1 / 2  
**Parity:** None / Odd / Even  
**Handshake:** RTS / XON


**NOTE:** *Print Inhibit: (LM 9000 y(b) (AWI) mode only). In AWI mode, printing is inhibited when the weight total is less than 10e, and cannot be added to the totals.*

### Print Order - Setup

To select the 'Print Order Setup' screen, from the 'Printer Setup' screen (fig. 26), press the  key.

Print Order Setup determines the order in which the information is listed on the load ticket. The default order (if all stores are enabled) is,

1. <Store Reference 1>
2. <Store Reference 2>
3. <Store Reference 3>
4. <Store Reference 4>
5. <Store Reference 5>
6. <Store Reference 6>
7. Weighing Data (Bucket List and Preset Tare if switched on)
8. Date / Time

Using the up/down arrow keys, select the first store and press the  key to confirm. This store reference will appear first on the ticket. Repeat for the remaining store references **in the order you want them to be listed on the ticket**.

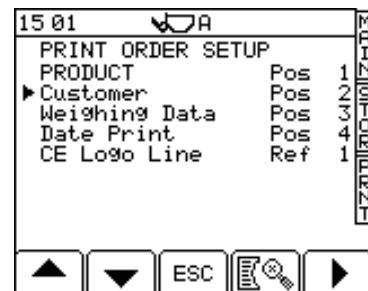


Figure 27

UK506-27.PCX

### 'CE Logo Line'


The CE Logo only appears for *one* of the reference stores on the printout. For example, in Figure 27 the CE Logo is set to appear next to the 1st reference store ("Product").


For the reference store selected above, you can then set the *line position* for the CE logo (refer to the following section).

### Reference text order - Setup

For each Reference store listed on the 'Print Order Setup' screen, you can set the order in which the reference text and extended reference text fields (i.e. columns 3 and 4 of the table in section 4.2) are listed.

Also, you can set the position of the CE logo on the printout. In figure 28a, the logo is set to print after data field 3 (the reference text line).

With the appropriate store selected on the 'Print Order Setup' screen, (fig. 27), press the  key. The data fields are then displayed for the selected store.

Using the up/down arrow keys, select the data field that you wish to appear first on the printout, and then press the  key to confirm.

Repeat for the remaining data fields **in the order you want them to be listed on the ticket**.

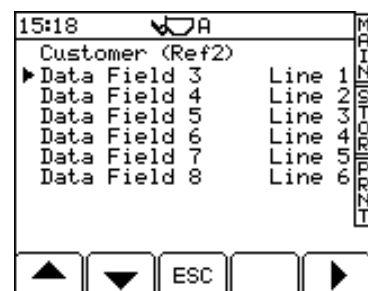


Figure 28a

UK58928A.PCX

**NOTE:** Using commas in either column 3 or 4 of the REFDATxx.CSV file will create up to 4 additional data fields 5 - 8 (as shown in fig. 28a)

Data fields 1 and 2 are for the Index No. and the Target Weight respectively (fig. 28b), and are not printed out.

Diagram illustrating the data fields and their corresponding printout positions:

```

    Data field 1  →
    Data field 2  →
    Reference Data (Field 3) →
    Extended Reference Data (Field 4) →
  
```



Figure 28b

UK58928B.PCX

#### 4.1.4 Data Card Compatibility and Formatting

The SD data card conforms to the ATA interface standard. The head unit will not recognize a card larger than 2Gb. Cards supplied by RDS are pre-formatted with the correct files ready for use.

If you are using a card not supplied by RDS, then format it in Windows Explorer i.e. if it is Drive D:,

1. Right-click on "Removable Disk (D:) and select **"Format"**.
2. From the "Format" window, select the **"Full"** checkbox for the format type, enter a volume description if desired, and then press **"Start"**.

Cards must have a directory called **"Rds\_data.xxx"** in which all data is stored and retrieved. This directory should be automatically created when you first insert the card into the Data Module. All data is written to this directory. If the folder "Rds\_data.xxx" is not created automatically, manually create it in the normal way from Explorer.

#### 4.1.5 Data Card files required to enable the Store Functions

The following files must be stored on the Data Module within a directory named RDS\_DATA.XXX. (if necessary, create this directory using Windows Explorer).

LM9KPLOG.CSV Saved Print record (this file is created automatically if it does not exist).

LMSETUP.CSV Main Configuration file for the instrument

LM9KTOTL.CSV Individual Load Data (fig. 26). Each line within the file is a dated, individual load entry with up to 6 user-defined data fields termed 'References' (see below). (this file is created automatically if it does not exist).

REFDAT01.CSV

REFDAT02.CSV

REFDAT03.CSV

REFDAT04.CSV

REFDAT05.CSV


REFDAT06.CSV

User-definable store index files including any extended information (REFDAT01 and REFDAT02 are configured 'Product' and 'Customer' by default). The files can be edited in MS Excel.

TICKET.NUM This file is necessary for the instrument to print consecutive ticket numbers (this file is created automatically if it does not exist).

#### 4.1.6 Enable Store Functions

The store references 1 - 6 are disabled with the factory default settings. To enable them,

1. From the SETUP screen, press **"2. Stores Data"** and enter the PIN (default = 1234) to display the STORE SETUP screen (fig. 29).
2. Select the respective store reference and press the  key to enable/disable the store.

NOTE: (The factory default store references 1 and 2 are titled **"1. Product (Ref 1)"** and **"2. Customer (Ref 2)"** are shown in the example, unless the REFDATxx.CSV files have been edited otherwise).

3. Press the MAIN key to return to the operating screen.

NOTE: The store icons are pre determined by the settings in the configuration file LMSETUP.CSV on the data card. They cannot be set from the instrument.



Figure 29

UK506-29.PCX

## 4.2 Programming Stores Data (Files REFDAT01 - REFDAT06) via a PC

All store names and extended information are contained in the index files REFDAT01 - REFDAT06. There is 1 file for each e.g. for 'Product', 'Customer' etc. New store information can be added in MS Excel, or via the instrument keypad. Existing store information however, can only be edited in MS Excel, and not via the instrument.

Here is an example file (REFDAT02.CSV for Customers - Store Reference 2) opened in MS Excel.

Store Reference name appearing on the instrument and printout		Target Load (followed by command to print 'CE'). See Note 2		Reference Index Name	Extended Reference Index Name (unlimited characters)
Index #	Customer (Ref 2)				
0	0	0	0	Undefined Reference 2 Type Data	Extended Reference for Index 0 Undefined Reference 2 Type Data
1	0-CE	1	0	Shire Developments Ltd	13 Eagle House, Gloucester GL1 3FG, Tel: 01452 678456, Fax: 01452 678457
2	0	1	0	R. Bird & Son	145 Birmingham Road, South Stow, Glos GL45 9HY
3	0	0	2	Cosy Homes Ltd	16 Bentford Avenue, Wotton u Edge, Glos GL9 5BN
4	0	0	0	DRG Properties Ltd	The Copse, Shurdington Lane, Cheltenham, Glos GL52 6QZ, Tel: 01452 877987 Fax: 01452 877988
5	0	0	0	McPhee plc	Andrews Lane, Chippenham, Wilts KD3 8LL, Tel: 01467 956324, Fax: 01467 956325
6	0	0	0	Axion Maintenance Ltd	Unit 4, Whitminster Ind. Estate, Whitminster, Glos GL4 3WS, Tel: 01453 866677
7	0	0	0	J.Robertson	6 Park Business Centre, Ryeford, Glos GL6 8WS, Tel/Fax: 01453 866677
8	0	0	0	Styles and Allen Ltd	The Old Coachhouse, Witney, Glos GL11 3FG, Tel: 01689 453332, Fax: 01689 453330

Parent no.      Child no.      Column 6 - 10 (a comma = hard return) See Note 1

The Information in the "Extended Reference" field of the .CSV file appears inside quotes on the STOR screen. Using commas in the extended reference field acts as a 'return' to position the next line on the screen.

The instrument displays a maximum of 8 lines (20 characters per line) of store information.

Scrolling line



Figure 30a

**NOTE 1:** If any comma delimited text string exceeds 20 characters, that text will scroll across the screen page. Also, any extended information beyond 4 delimited text strings (e.g. as per the example above) will scroll across line 8.


**NOTE 2:** Column 2 is for programming a target weight preset, to which the instrument will default for the next load. The target weight should be entered in the 'truck' store reference, for each truck. For other store references this column is left at zero, and line 2 on the STOR screen stays blank.

**NOTE 3:** Column 3 & 4 is the parent and child selection. This associates selected indexes from one Refdat file to another. Example: In Refdat 2 (above), Customer 1 & 2 have a 1 marked in column 3. If the following Refdat file (Refdat 3, i.e. Trucks in this case) has it's indexes marked in column 4 with the number 1, this will force only those Indexes (trucks) to appear in the list if Refdat 2 indexes 1 or 2 have previously been selected.

After completing the required entries, simply save the .CSV file back onto the data card.

### 4.3 Programming Stores Data (Files REFDAT01 - REFDAT06) via the Head Unit

Only new store information can be added via the instrument keypad.  
Existing store information can only be edited in MS Excel.


1. Press the STOR key to select the first Reference store screen (Product) - fig. 30b.
2. Press and release the ENTER key once or more to reach the Store Reference you want to add to.
3. Press the  key to open the 'CREATE' screen. The instrument then searches the data card and displays the next available index number (fig. 30c).


**NOTE:** The larger the number of indexes already programmed, the longer it will take longer to open the screen)



Figure 30b

UK506-30b.PCX

4. Press ENTER to select the index number. The cursor then moves to line 2 (Target Weight).
5. Enter the desired target weight in the 'Truck' Store, otherwise ignore line 2.
6. If the 'CE' logo is required on printouts, move the cursor to the 'Logo:' line and press the  key.

Then press the  key until 'CE' is displayed, and press the ENTER key to confirm. The cursor then moves to line 4 (Extended Reference).

**NOTE:** The logo will appear on a printout next to the first line of that Store Reference. Up to 4 logos with the reference 'AE', 'BE', 'CE' and 'DE' ('CE' being the 'CE1137' logo), can be selected to appear on the printout in the order that they are displayed on the 'Logo:' line (fig. 30c).

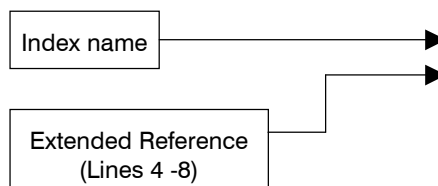
The logo data is stored in the main configuration file 'LMSETUP.CSV' on the SD card.

7. Using the arrow keys to position the cursor, enter the index name (line 3) and up to 5 lines of text for an extended reference (lines 4 - 8) - fig. 30d.



Figure 30c

UK58930c.PCX




8. Press the  key when finished. The instrument then displays the next Reference Store.



Figure 30d

UK58930d.PCX

#### 4.4 How to read the Load Data file (LM9KTOTL.CSV)

1. Transfer the flash card to the card slot on your PC card reader.

Under Windows® 95/98, the SD card will normally appear in either the 'My Computer' window, or Explorer as 'Removable Disk [D:]'.

2. Double-click on this drive to access the card and the folder "Rds\_data.xxx".
3. From the **File** menu in Explorer, transfer files using the normal commands e.g. **Cut** or **Copy** and **Paste**, or 'drag and drop' the files.

**NOTE:** *Never remove the card if data is being written to it (i.e. when the red LED is on).*

All load data is stored in the file LM9KTOTL.CSV. Each line in the file records an Individual load as shown in figure 26a.

**TIP:** *As load records are added, the search function on the PRNT menu will become progressively longer. You may wish therefore, to periodically move the file from the data card onto the PC, replacing it with an empty LM9KTOTL.CSV file.*

**Figure 31: Load Data File Example**

CN																			
CN	THIS FILE LOGGED VIA AN RDS MMC/SD CARD ADAPTOR DMA100-013																		
CN																			
0	2	1	0	0	0	6	n1	n2	n3	28/10/2004	16:26A	0	1	0	19.2	4.8	4.8	4.8	4.8
1	2	3	4	0	0	5	n1	n2	n3	28/10/2004	17:10A	0	1	0	19.2	4.8	4.8	4.8	4.8
2	1	2	3	0	0	6	n1	n2	n3	28/10/2004	17:11A	0	1	0	4.8	4.8			
3	2	2	2	0	0	2	n1	n2	n3	29/10/2004	08:56A	0	1	0	9.6	4.8	4.8		
4	1	2	3	0	0	1	n1	n2	n3	29/10/2004	11:39A	0	1	0	19.2	4.8	4.8	4.8	4.8
5	0	0	0	0	0	0	n1	n2	n3	29/10/2004	13:31A	0	1	0	19.2	4.8	4.8	4.8	4.8
6	2	3	4	0	0	1	n1	n2	n3	29/10/2004	13:32A	0	1	0	4.8	4.8			
7	2	3	4	0	0	1	n1	n2	n3	29/10/2004	13:33A	0	1	0	9.6	4.8	4.8		
8	2	3	4	0	0	1	n1	n2	n3	29/10/2004	13:58A	0	1	0	14.4	4.8	4.8	4.8	
Job Number	Index No. - (ref. file REFDAT01.CSV)	Index No. - (ref. file REFDAT02.CSV)	Index No. - (ref. file REFDAT03.CSV)	Index No. - (ref. file REFDAT04.CSV)	Index No. - (ref. file REFDAT05.CSV)	Index No. - (ref. file REFDAT06.CSV)	Note 1	Note 2	Note 3	Date	Time	Attachment Ref.	Unit (see note below)	Density	Preset Tare	TOTAL WEIGHT	The last columns (shaded) indicates the individual bucket weights		

**NOTE:** The unit column is as follows,

0 = tonnes, 1 = M<sup>3</sup>, 2 = Kg, 3 = lbs, 4 = UK Tons, 5 = US Tons, 6 = Yards<sup>3</sup>

**WARNING!** The Load Data file contains checksums. Should any data be deleted or modified, the information will become invalid, and will not be able to be used for invoicing purposes.



## 4.5 How to read the Print Log file LM9KPLOG.CSV

LM9KPLOG.CSV is a record of all paper printouts that have been made from the instrument.

Figure 32: Print Log File Example

CN	CN THIS FILE LOGGED VIA AN RDS MMC/SD CARD ADAPTOR DMA100-013																					
CN																						
9T	1	1	2	3	0	0	0	n1	n2	n3	16/02/2006	14:44	16/02/2006	14:44:39	A	0	1	0	10.90	5.45	5.45	
10T	2	5	3	4	0	0	0	n1	n2	n3	16/02/2006	14:45	16/02/2006	14:45:33	A	0	1	0	16.27	5.45	4.19	6.63
11S	1	2	3	0	0	0	n1	n2	n3	16/02/2006	14:44	16/02/2006	14:45	16/02/2006	14:46:25	0	1	0	10.90			
12S	5	3	4	0	0	0	n1	n2	n3	16/02/2006	14:44	16/02/2006	14:45	16/02/2006	14:46:35	0	1	1	16.27			

### Load "Ticket" Print Record

Load Ticket Print Record																							
Ticket No.	10T	2	5	3	4	0	0	n1	n2	n3	0	16/02/2006	14:45	16/02/2006	14:45:33	A	0	1	0.00	16.27	5.45	4.19	6.63
T = Ticket		Job No.	Ref 1	Ref 2	Ref 3	Ref 4	Ref 5	Note 1	Note 2	Note 3	Ref 6	Load Date	Load Time	Date printed	Time printed	Attachment Ref.	Unit (see note below)	Density	Preset Tare	Total weight	Lift 1	Lift 2	Lift 3

### Summary Print Record

Summary Print Record																							
Ticket No.	11S	Ref 1	2	3	0	0	0	Note 1	n1	Note 2	n2	Note 3	n3	16/02/2006	14:44	16/02/2006	14:45	16/02/2006	14:46:25	0.00	1.00	0.00	10.90
	'S' = Ticket		Ref 2	Ref 3	Ref 4	Ref 5	Ref 6							Date from:	Time from:	Date to:	Time to:	Date printed	Time printed:	Unit (see note below)	Density	No. of loads	Total weight:

NOTE: The unit column is as follows,

0 = tonnes, 1 = M<sup>3</sup>, 2 = Kg, 3 = lbs, 4 = UK Tons, 5 = US Tons, 6 = Yards<sup>3</sup>

**WARNING!** The Load Data file contains checksums. Should any data be deleted or modified, the information will become invalid, and will not be able to be used for invoicing purposes.

## 4.6 Search / Print Load Records

### 4.6.1 Select Printer Output Mode

By default, the print mode is OFF.

Select the PRNT screen and set the print mode using the **OFF** **MODE** key (fig. 39a).



A Job Record is printed out (fig. 38a) when you press CLR to reset for the next load.



A job record including space for the customer name address and signature is printed out (fig. 38b).

**NOTE:** If the "Bucket List" function is switched on via the "Output Port Setup" menu, a list of all bucket lifts is printed on the ticket (only when in "Customer" mode).



A lift record is printed out automatically to the printer and card module after each entered lift.



Each lift record is saved to the card automatically, but output to the printer is manual.

<pre> ===== Job Number: ABC3 RDS Loadmaster 9000 DMM Inchbrook Aggregates Ltd Chemical Lane Inchbrook Glos GL52 9GF Tel 01453 568346 Status: ===== Truck (Ref1): (1) VX02TWS Extended Reference for Index 1 Entry of Referen ce 3 Type Data Weight 18.78 t Date 18/07/2006 Time 15:59 Product (Ref1): (2) GRAVEL 20mm Down Customer (Ref2): (1) Shire Developments Ltd "13 Eagle House Gloucester GL1 3FG Tel: 01452 678456 Fax: 01452 678457" 15:59:41 on 18/07/2006 Ticket Number: ABC1059 ===== </pre>	<pre> =====Duplicate Copy===== Job Number: ABC3 RDS Loadmaster 9000 DMM Inchbrook Aggregates Ltd Chemical Lane Inchbrook Glos GL52 9GF Tel 01453 568346 Status: ===== Truck (Ref3): (1) VX02TWS Extended Reference for Index 1 Entry of Referen ce 3 Type Data Weight 18.78 t Date 18/07/2006 Time 15:59 Product (Ref1): (2) GRAVEL 20mm Down Customer (Ref2): (1) Shire Developments Ltd "13 Eagle House Gloucester GL1 3FG Tel: 01452 678456 Fax: 01452 678457" 15:59:52 on 18/07/2006 Ticket Number: ABC1060 =====Duplicate Copy===== Name: Address: Sign: </pre>
---	--

**Figure 34a :**  
**Job (REC) Record**

**Figure 34b : ROLL Record**

### 4.6.2 View / Print Last Load Record

Press "PRNT LAST" (fig. 35) to print out the last load record.

Printing the same load a second time will produce the same information again. A secondary print is marked by the words "duplicate copy". The first copy is generally used for the customer receipt. Any further "duplicate copies" are kept for data records (ICP 200 printer only).

```

82 34  WA
[Icon] 3
Date 127/140/2000
[Icon] 80:12
Weight 10.10t
[Icon] 7 COT20M
[Icon] 3 Cosy Homes Ltd
[Icon] 3 VE52DEF
[Icon] [Icon] REC PRNT PRNT
MODE RANGE LAST

```

**Figure 35**

UK506-35.PCX

### 4.6.3 View / Print Multiple Load Records

The instrument has the facility to search the database and print all load records matching a given *Date /Time* and *Store references* specification.

NOTE: If there are more than 200 index entries for each store reference, the search procedure becomes slower.

- Press the "PRNT RANGE" key for the "PRINT RANGE" screen (fig. 36). There are 4 Date/Time search options,
  - "Today"           Records from 00:00 hrs to the present time
  - "Yesterday"       Records from yesterday 00:00 hrs to 24:00 hrs
  - "Last Week"        Previous 7 days up to present time
  - "Select Range"     Records between the specified dates (press ENTER and then key in the required dates).

Figure 36

83:06   A  
PRINT RANGE  
Select:  
▶ Today  
Yesterday  
LastWeek  
Range  
From: 07/05/2000  
To: 07/05/2000  
Press ← to Accept

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Figure 37

16 41   A  
PRINT RANGE  
Select: 0  
Product (Ref1)  
▶ Any  
Press ← to Accept

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Figure 38

16:42   A  
PRINT RANGE  
Select: 2  
Product (Ref1)  
▶ Index: 2  
GRAVEL  
20mm Down  
Press ← to Accept

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- Select the required *Date/Time* search option and press ENTER.

You now have two options to specify the store indexes(s) for store 1 (store 1 is "PRODUCT" in this example). The default setting is "Any" (the instrument will search for records for all products within the Date/Time specified - fig. 37), in which case simply press ENTER to confirm. *Go to step 4.*

- Otherwise press the key to select a specific store index (fig. 38), or use the key to select a specific store alphanumerically. Press ENTER to confirm the selection.
- Select the store index(s) for the remaining stores 2 to 6 as applicable

83 46   A  
PRINT RANGE  
▶ Summary  
Individual Loads

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Figure 39

83 53   A  
PRINT RANGE  
07/05/2000 to 07/05/2000  
PRODUCT           Any  
Customer           Any  
Truck               Any  
Checking Line:     12

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Figure 40

"Searching" indicator

- Select the type of printout (individual REC ticket(s) or a single "Summary" printout - fig. 41).

The instrument then displays the search specification (fig. 40), searches all records (this may take some time if there is a large number of load records saved on the card) and generates the printout.

**Example Search:**

All product data in conjunction with the following criteria:

- Reference 1: Customer 0 (0)
- Reference 2: Undefined Site (0)
- Reference 3: Haulier 1 (1)
- Reference 4: Truck ABC123 (2)
- Reference 5: Destination XYZ789 (3)
- Between the dates 16:11 28/04/04 and 15:11 29/04/04

```

=====
RDS Loadmaster 9000 DMM

Inchbrook Aggregates Ltd
Chemical Lane
Inchbrook
Glos
GL52 9GF
Tel 01453 568346
-----
Status:
Number:
-----
Truck (Ref3): (1)
VX02TWS
Extended Reference for
Index 1 Entry of Referen
ce 3 Type Data
-----
Loads      2
Weight     29.66 t
-----
Date From:  18/07/2006
Time:       15:52
Date To:    18/07/2006
Time:       16:48
-----
Product (Ref1): (2)
GRAVEL
20mm Down
-----
Customer (Ref2): (1)
Shire Developments Ltd
"13 Eagle House
Gloucester GL1 3FG
Tel: 01452 678456
Fax: 01452 678457"
-----
16:48:55 on 18/07/2006
Ticket Number: ABC1063
=====

```

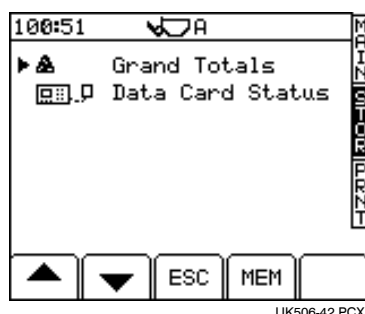
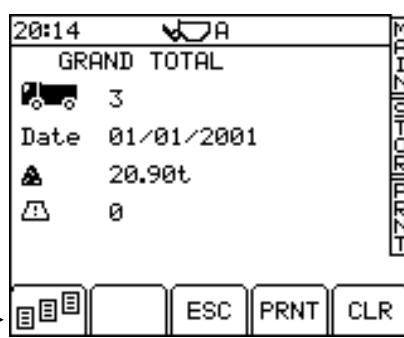
**Figure 41 : Summary Printout****4.6.4 View / Print / Clear the Grand Total**

Press the STOR key **twice**.

From the "Grand Totals" line (fig. 42), press MEM to view the grand total number of loads and amount recorded since the date displayed.

Press PRNT to print a (Grand) Total Summary (fig. 44).

Press CLR to clear the Grand Total.

**Figure 42****Figure 43**

```

=====
RDS Loadmaster 9000 DMM
Total Summary

Inchbrook Aggregates Ltd
Chemical Lane
Inchbrook
Glos
GL52 9GF
Tel 01453 568346
-----
Totals Since 08/06/2006


Loads      25
Weight     121.30 t
-----
16:52:42 on 18/07/2006
=====

```


**Figure 44**

#### 4.6.5 Overload logging facility

The instrument can log any weight entered over and above the target weight. This facility is enabled/disabled from the "System Settings" » "Weighing Units" menu.

The accumulated overload weight (  ) is displayed on the GRAND TOTAL page (fig. 35). It is reset when you press the CLR button.

#### 4.6.6 View / Print the 7-day Total

From the GRAND TOTAL screen (fig.43), press the  key to view the daily totals of the last seven days.

Press PRNT to print the 7-day total summary (fig. 45).

```

=====
RDS Loadmaster 9000 DMM
7 Day Total Summary
=====
Inchbrook Aggregates Ltd
Chemical Lane
Inchbrook
Glos
GL52 9GF
Tel 01453 568346
=====
Date      Loads   Weight
18/07/06   3  45.31 t
=====
16:52:53 on 18/07/2006
=====


```

Figure 45

UK589-45.TIF

#### 4.6.7 View Data Card Status

Press the STOR key **twice**.

Select the "Data Card Status" line (fig. 42) and press the  key to view the data card capacity and remaining space for load data.

## 5 System Settings Menu

A number of settings can be programmed by the operator from the SETUP menu. These settings are accessible without a PIN number.

**NOTE:** Certain menus including the 'Calibration', 'Printer Setup' and 'Weighing Units' menus are not normally accessible to the operator.

### 5.1 Adjusting Screen Contrast or Brightness

From the SETUP screen, press;

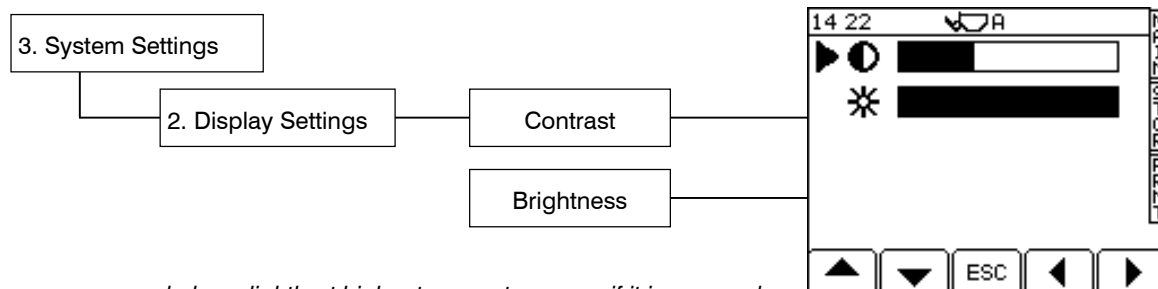
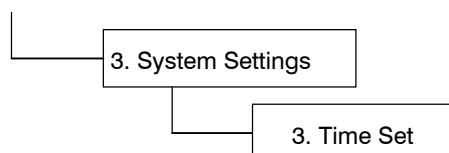


Figure 46

**NOTE:** The screen may darken slightly at higher temperatures e.g. if it is exposed directly to bright sunlight. This is a normal characteristic of this type of display.

### 5.2 Set Time and Date

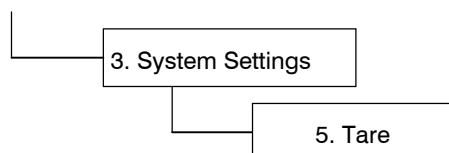
From the SETUP screen, press;



If you need to change a time setting, position the menu pointer against the function, type in the new value and press ENTER.

### 5.3 Switch Tare Facility Off

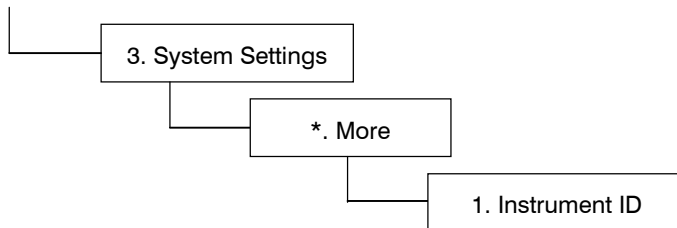
From the SETUP screen, press;



Switch "On", "Off" or "Tare -1" using the left and right arrow keys..

## 5.4 Set Instrument ID

From the SETUP screen, press;



This is the heading that appears at the top of the display e.g. "IN APPROVED MODE" any time a button is pressed. This line of text can be switched on or off (default = Off). The text can be edited via the alpha-numeric keypad.

You can also programme up to 8 lines (20 characters per line) of ID information (e.g. vehicle, driver ID, Company address etc), which will appear at the top of each print. You can only programme this information by editing the LMSETUP.CSV file in MS Excel.

## 5.5 Job/Ticket Number

From the SETUP screen, press;

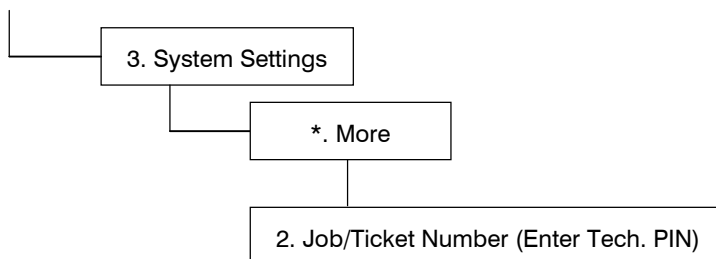


Figure 47

UK506-47.PCX

A sequential number is generated for each job completed. A sequential number is also created for each ticket printed. If duplicate tickets are printed for the same job, the ticket numbers will be different but the job number stays the same.

If for whatever reason the head unit needs replacing, both job number and ticket number can be edited to continue from the last numbers generated on the previous head unit.

In addition, you can assign a text prefix of up to 8 alpha-numeric characters. The example text "ABC-" (fig. 47) appears in front of all job numbers and load ticket numbers, followed by the sequential number generated after each job completion or printout.

## 5.6 Change PIN Numbers

From the SETUP screen, press;

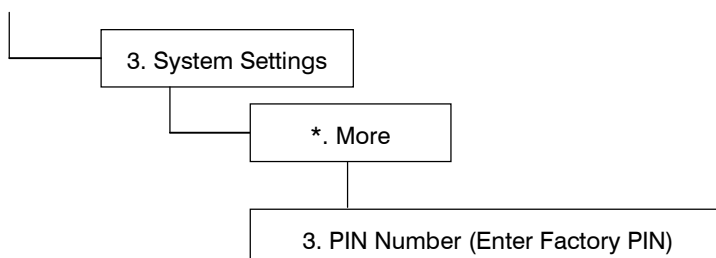


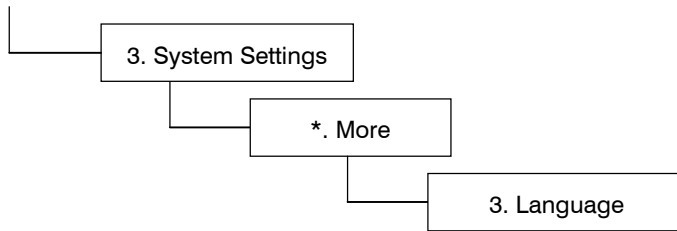
Figure 48

UK506-48.PCX

You can set new PIN numbers as required. The "Official PIN" is a special PIN number required for programming the instrument with COPRO Approval information. Refer to the calibration manual for the default PIN numbers.

## 5.7 Set Language

From the SETUP screen, press;

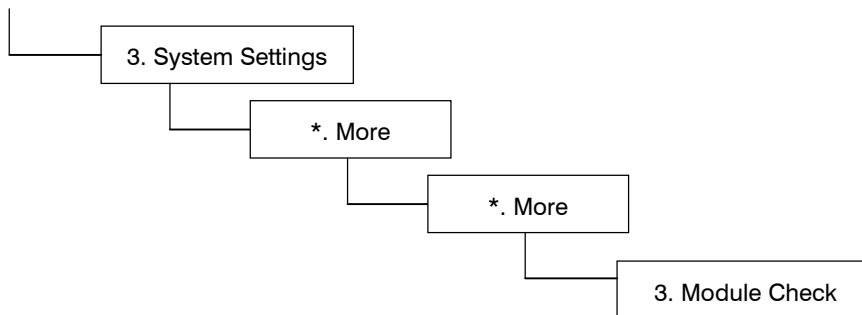


Select the preferred language from the list displayed.

Note that English has three settings:- "UK", "AU" for Australia and "US", to cater for differences in some wording and Time+Date format.

## 5.8 Module Check

From the SETUP screen, press;



This functions acts as the "key" to enable instrument to switch between the internal software and the software on the secondary software module. It must be switched on for the LM9000 instrument, to enable you to switch to non-approved mode (LM8000) as required.

## 6. Other Information Screens

### 6.1 'Diagnostics

Please refer to the installation manual.



- (LINE 1) Loadmaster type as shown on the front screen.
- (LINE 2) 8 ID lines (e.g. for Name, address & Tel No of the company). (See Section 7.1)
- (LINE 3,4,5) 3 icon on-screen bitmaps in Decimal format used for the first 3 Reference fields (i.e. product/customer etc).
- (LINE 6) A "Start Logo". This is the bitmap in Decimal format shown on the Loadmaster Start up screen (This can be modified to requirements. See note below).
- (LINE 7) A "Print Logo". This is the bitmap in Decimal format shown at the top of each print (This can be modified to requirements. See note below).
- (LINE 8) An "AE" bitmap spare logo in Decimal format and can be allocated to any of the Refdat indexes. (This can be modified to requirements. See note below).
- (LINE 9) A "BENOR" bitmap logo in Decimal format for the Benor regulation (Belgium) and can be allocated to any of the Refdat indexes.
- (LINE 10) A "CE 1137" bitmap logo in Decimal format for allocation with the relevant approved products.
- (LINE 11) A "DE" bitmap spare logo in Decimal format and can be allocated to any of the Refdat indexes. (This can be modified to requirements. See note below).

N.B. Due to the size of this file, it is recommended that MS Excel is not used to edit the file. Use other text packages, i.e. MS Notepad.

A typical file is shown below:

[illegible]

**Note:**

*The maximum recommended size of the PrintLogo, StartLogo, AE, BENOR, CE1137 & DE images is 152 x 72 pixels.*

*The maximum recommended on screen icon size is 8 x 10 pixels.*

*Any logos or icons should be made with a .pcx file extension. Once created on a "Paint" or "Drawing" package, these pcx files should be converted to .DEC files.*

Such a converter package is available from RDS technology LTD called "pcx2bit". The program is run from a DOS command prompt. Once a DEC file is created, the data should simply be copied as a line of info opposite the named logo in the LMSETUP.csv file (see above).

## 7.1 Editing the Header information on the Printout

Open the LMSETUP.CSV file in [MS Notepad](#) and edit Line 2 (ID) of the file as required.

e.g. **ID.Company Name.ID 2.Road.Town.Region.Post Code.Tel.Fax**

There are 8 ID lines. Each line of text is separated by a comma.

## 8. Operating Parameters

The Loadmaster system is designed to operate within the following parameters:

### Environmental:

Climatic environment:	Indicator, printer: Closed, non-condensing, -20/+40°C
Transducers, sensors:	Open, condensing, -20/+40°C
Sealing:	Head unit:: IP34 (mount in an enclosed cab) Sensors: IP67 (mount with hose connection uppermost) Junction Box: IP65
Pressure range:	0 – 250 bar
Maximum angle deviation	From level ground, $\pm 10^\circ$ Front-Back, $\pm 5^\circ$ Left-Right
Approval Classification:	OIML R51, Y(a)/ Y(b), MID Y(b), OIML R76
No. of divisions (n)	250
Scale Interval (e) (kg)	$\geq 10$
Capacity (kg):	$\leq 25,000$

### Electrical:

Supply voltage:	11 – 30V dc
Current:	500mA max.
EMC Emission:	EN50081-1
EMC Immunity:	EN50082-2
EM classification:	E3

---

## ***Document History***

Issue 1.0:	28/1/08	Original Issue based on UK506-3.DOC
Issue 1.1	3/9/08	Minor corrections (ref. WB)
Issue 2:	10/11/08	Added environmental spec and MID-compliant Data Label information
Issue 2.1	28/11/08	p.33: Amended operating parameters. Fig 3b: deleted reference to "MID 2008"
Issue 2.2	12/12/08	Ref S/W Ver. PS306-051 rev. 00: ref. pages 1,5,8,9,24,25,32
Issue 2.2.1	17/2/09	Ref. p.7, para. 1, p.23 – add icons, change fig 30c
<a href="#">Issue 3</a>	<a href="#">16/11/09</a>	<a href="#">Pg.22 – "Parent &amp; Child" columns/Pg.24/Pg.25 – "Note columns"/Pg.33 – Logo size</a>