

Electro-Magnetic 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

PLEASE CONTACT YOUR LOCAL DISTRIBUTOR

If unknown then fax: 44 (0) 1453 733311

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Our policy is one of continuous improvement and the information in this document is subject to change without notice. Check that the software reference matches that displayed by the instrument.

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User Guide

Binmaster 8000

Bin Weighing System

Operation

Software Ref: PS305-002

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The system is installed mainly on FEL (Front End Loader) Refuse Vehicles to measure and log the individual net weights of refuse lifted in bins to various customers

The system uses strain sensing technology to measure the weight of the bin dynamically as it is lifted, and again on the way down. This double measurement means that manual taring is not normally necessary. 8 separate bin size calibrations compensate for different lengths of bin. These are selected before each lift. An angle sensor determines the points during the lift that weight measurement and recording are made.

The head unit (the "brain" of the system) automatically compensates for up and down slope angle and lift speed. The weighing procedure is "transparent" - it does not impede or complicate the normal operating routine, and takes place automatically each time a bin is lifted.

The nett weight is automatically calculated and recorded on every lift. If the "Customer Entry" function is enabled, the instrument will alarm if you lift without first entering the customer reference number.

Weighing Accuracy

For maximum accuracy the operator should always lift the bin smoothly through the weighing position e.g. a continuous lift. You can expect an overall weighing accuracy in the order of $\pm 2\%$. If you find that the instrument total is consistently higher or lower than a weighbridge total then you can use a "NUDGE" function in the calibration menu to re-calibrate the system. This is very easy to do - simply follow the on-screen instructions.

At the time of printing, the system is not Weights and Measures approved, and therefore charging by the exact weight is not recommended.

Instrument Features and Controls

- A large bright dot-matrix screen displays the accumulated weight and the individual bin weight after each lift, in large, easy to read figures.
- All instrument functions are accessible from on-screen menus using the menu buttons around the side of the screen.
- A separate alpha-numeric keypad is used to input or edit information e.g. product/customer descriptions as well as calibration data.
- Automatic entry (optional manual entry) of the bin weight.
- Option to delete an accidental or erroneous entry.

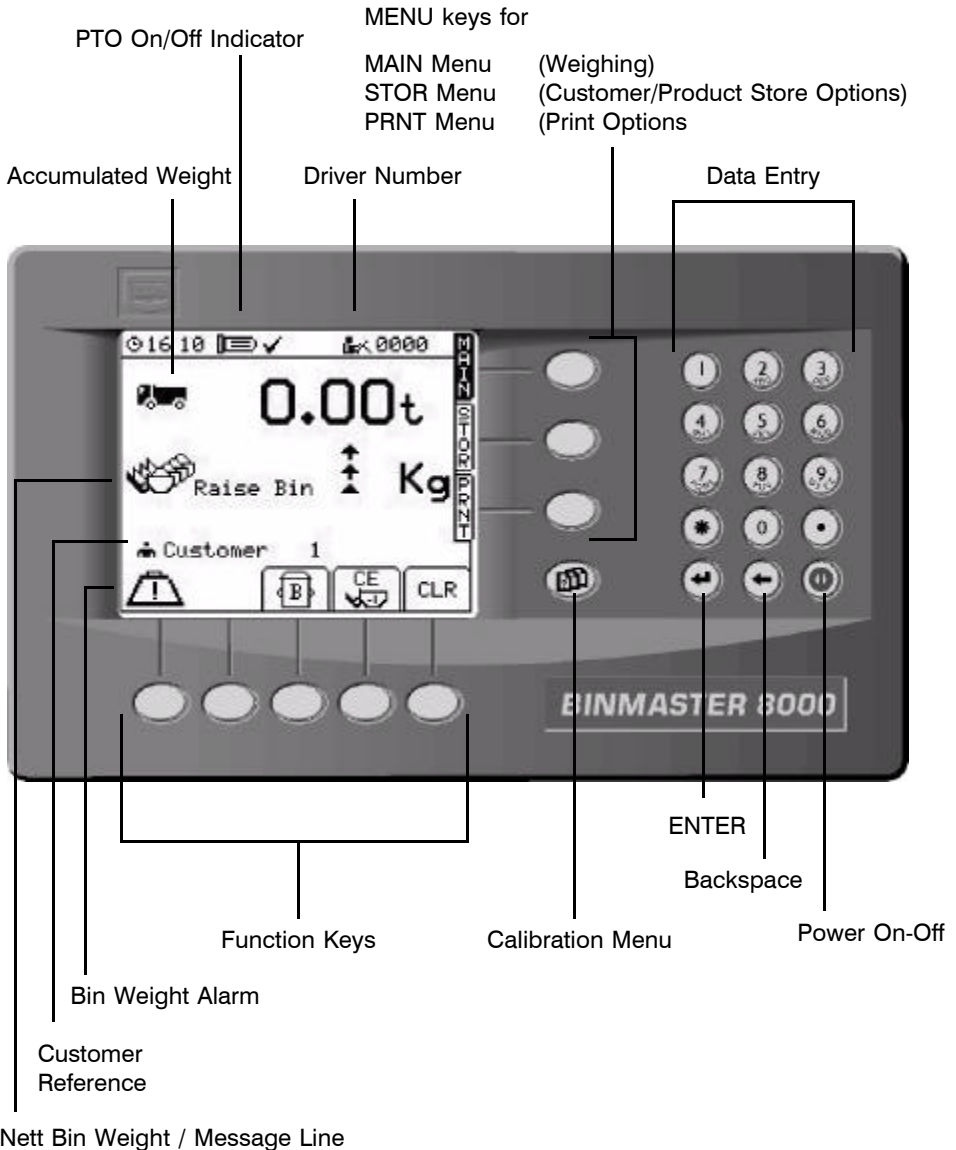
Overview

- Store facility for up to 200 separate products and 1000 customers.
- Customer database includes the bin type (8 choices). Separate calibration factors for each bin type reduces inaccuracies when weighing.
- Extended storage capacity (50,000 + customers) using an optional RDS Data module kit (PCMCIA Flash Memory Card).
- Programmable alarms for maximum accumulated weight and bin weight.
- A rolling record of daily loading totals for the previous 7 days.
- A grand total of all loads since last reset, which can be reset or printed at any time.
- A simple-to-use 'NUDGE' facility to correct any consistent discrepancies arising between the instrument total and weighbridge total.
- Printing with the RDS ICP100 or ICP200 In-Cab Printer or log bin weights onto an RDS Data Module.
- Upload / download Customer/Product data with the RDS Data module kit.

Weighing Units

The weighing units are in kilograms. From the calibration menu you have the option to set the display resolution in units of 1kg, 5kgs, 10kgs, 20kgs or 50kgs depending on your operating requirements.

The MAIN Screen and Switch Functions



Operation

Startup

There is a 7-second delay after switching on the vehicle ignition before power is supplied to the head unit. This prevents the instrument being affected by the voltage drop when starting the engine.

1. Press **(I)** to switch the instrument on.
2. Enter the *Driver Number* via the alpha-numeric keypad and press the ENTER key twice to confirm. The instrument will then default to the **MAIN** weighing screen.

NOTE: *The Driver Number screen may not appear depending on how the instrument has been set up in which case the instrument will go straight to the MAIN screen.*

Weighing Procedure

The weighing procedure does not impede normal operation, however you should lift the bin smoothly to ensure maximum accuracy. The process is dynamic, meaning that the system weighs with the arms moving.

1. The display will be flashing "ENTER CUSTOMER REFERENCE" . Key-in the appropriate Customer Number and press ENTER. This also sets the correct calibration factors for the bin type A to H associated with the customer. The instrument will then display the message,

"Raise Bin"

2. Pick up the bin. Do not stop the arms part way through the lift because the system is weighing dynamically. As you lift, the screen will display the messages,

"Weighing Gross"

then,

"Gross Confirmed"

When the bin has been emptied the instrument will display,

"Lower Bin"


As you lower the bin the screen displays the message,

"Weighing Tare"

The nett weight is briefly displayed and then added to the accumulating total.

Overweight alarm

The instrument has an alarm facility for the bin weight. This is switched off by default in the calibration menu. If it is set with a threshold value, this should not exceed the safe working load for the lifting arms.

Assuming the alarm is enabled, if the bin is overweight the  symbol will flash on the MAIN operating screen as soon as the bin is lifted off the ground (or you attempt to lift it!) and the instrument will beep continuously until the bin has been emptied or set back down.

NOTE: *If the bin alarm does not seem to operate or alarms continuously, remove the bin, then switch the instrument off and back on again. This will zero the bin alarm automatically.*

An alarm condition will not otherwise affect the normal weighing procedure.



NOTE: *The alarm function is only approximate. It does not indicate to the same accuracy of normal weighing.*

Inhibiting the weighing procedure during transit

The weighing system is permanently powered and by default, the weighing routine remains 'live' during transit (unless the head unit is switched off). This may lead to inadvertent triggering of weight readings due to vehicle motion.

The weighing routine can however, be automatically inhibited when the PTO is disengaged. This will prevent a weight reading being triggered when the vehicle is in transit and avoids any need to switch the head unit off between pick-up sites.

The default setting for the weighing cutout is OFF, so ensure that the instrument has already been configured to enable this function (refer to the calibration manual).



When this function is enabled the  icon indicates when the PTO is engaged and likewise  when it is disengaged. When it is disengaged the 'Raise Bin' and 'Enter Customer' prompts will not appear.

NOTE: *If the arms are already raised above the triggering point, the PTO then switched on and the arms lowered, that weighing routine is ignored. The weighing procedure will commence as normal once the arms are lowered right down (i.e. below the lower pass angle).*




Operation

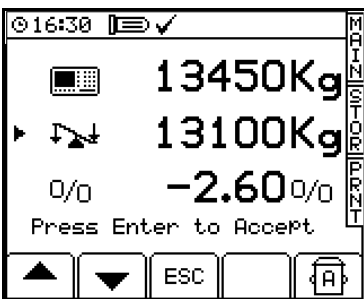
Re-calibration using the "NUDGE" function

A consistent discrepancy between the instrument weight total and the load recorded over the weighbridge is easily rectified.

1. Make a note of the weighbridge total and the instrument total.
2. Press  and then the  key to select the "NUDGE" screen (below).



3. Press  to select the bin type.
4. Enter the instrument total () and press ENTER.
5. Enter the weighbridge total () and press ENTER.



6. The percentage difference between the two figures is then displayed. Press ENTER to accept and the new calibration factors are then stored in memory.
7. Press the MAIN menu key to return to the weighing screen.

NOTE: EACH BIN TYPE REQUIRES NUDGING INDIVIDUALLY

Retrieving Customer and Product Data

1. Press the **STOR** menu button.



To view a Product or Customer Store:


2. Select either the "**Customer**" or "**Product**" line (using the arrow keys to move the screen cursor) and then the customer or product number to display the stored totals.

There are 200 product stores and 1000 customer stores available.

NOTE (Customer/Product stores can also be programmed with text descriptions).

3. Press the **MEM** key to view the individual store record i.e. number of loads, total accumulated weight, and the date the store record was last reset.

View / Print / Reset the Grand Total

1. From the **STOR** screen select the "**Grand Totals**" line and press the **MEM** key. The Grand Total shows the total number loads and total weight recorded since the date displayed.
2. Press the **PRNT** key to print the Grand total.
3. Press the **CLR** key to reset the Grand Total.
4. Press the  key to view the daily totals of the previous 7 days.

Operation

Reset all Customer / Product Store Totals


From the **STOR** screen select the "Clear Stores" line and press the ENTER key three times.

NOTE: This function does not delete any of the customer or product DESCRIPTIONS that have been programmed or uploaded.


Entering Memo Text

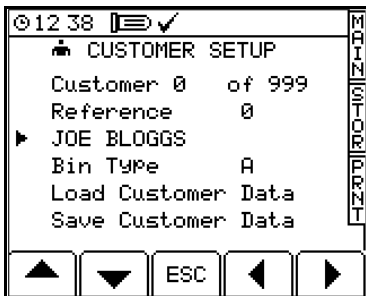
It may be useful in some situations to include extra information about a particular load, which will appear on the printout.

A line of memo text can be entered for a particular load.

1. From the **STOR** screen select the line with the  icon and position the flashing cursor using the arrow function keys.
2. Enter the text using the ALPHA-NUMERIC keypad.

Programming a Store Description

1. Press , move the menu pointer to the line "**2. Stores Data**" and press ENTER to select the **STORE SETUP** screen.
2. Select the "Product" or "Customer" line (Product Stores are switched off by default), and press ENTER to select the **PRODUCT SETUP** or **CUSTOMER SETUP** screen (below).



3. Select the store number (1-999) and move the pointer to the "Customer" line. Position the cursor on the first character using the right arrow key.
4. Enter the description via the alpha-numeric keypad.

Assigning a Bin Type to a Customer Store

Select the desired customer store. Using the arrow keys, move the cursor to the line 'Bin Type' and select from 'A' to 'H'.

For each bin type assigned to a customer store, you should have already performed the weight calibration procedure using that bin, as indicated in the Calibration manual.

The instrument will store separate calibration and tare factors for up to 8 types of bin.

Operation

Programming a Store Description (cont.)

Manual programming is OK if you just want to edit a small number of descriptions. Alternatively you can upload or download all memory stores from Microsoft Excel via the optional RDS Data Module.

Please refer to the manual (Pt. No. S/DC/500-10-260) supplied with the Upload / Download kit Part No. K/MEM/UP/DOWN/LD

Printing Customer and Product Data

Connecting a Printer

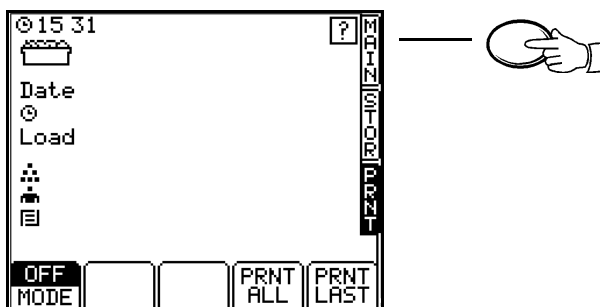
Connect the printer to the top 9-way connector on the back of the instrument.

The default communication protocol is factory set for an RDS ICP200 Printer. You can still use another printer by configuring the instrument and printer settings to match. (please refer to the calibration manual).

Selecting the Printer Output Mode

By default the instrument will not normally produce a printed record automatically after weighing.

1. Select the **PRNT** screen. The lower left icon indicates the type of printer output currently set.



2. Press the adjacent adjacent function key to change the printer output



— The printer does not automatically print out a load ticket when the arms are lowered.



- Prints a 7 line record after each bin weigh, including,
- Job number
 - Date and time
 - Load
 - Product and Customer
 - Memo text



- Prints the same information as above but the ticket also includes space for name, address and signature if required.

To View / Print Last Load information

1. Press the **PRNT** menu button. The date, time, weight, customer store, product store (if selected) and memo text for the previous bin are displayed.
2. Select '**PRNT LAST**' to print details of the last bin.

Select '**PRNT ALL**' to print a summary of the load totals recorded for each customer and product store. The data should then print out.

NOTE 1: *Any stores with ZERO totals will NOT be included on the printout.*

NOTE 2: *If the fill bar does not fill up and the 'Printer Busy' message remains on screen, this may be due to a faulty printer connection or the printer is not powered on. Check the printer lead is properly connected before further action.*

Accumulated Load Alarm


If an alarm threshold has been set in the calibration menu for the accumulated load total, when this load is reached, the instrument will bleep continuously and the accumulated load display will flash.

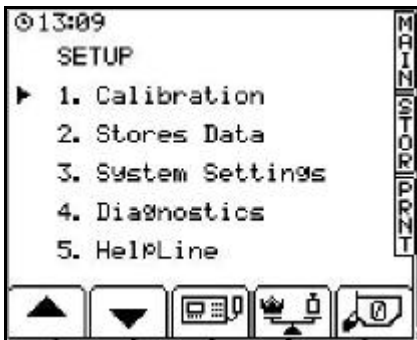
Press any key to cancel the alarm.

Operation

Output to a Data Module

1. Ensure that the instrument is already configured for output to a data module from the 'PRINTER SETUP' screen (refer to the calibration manual).
2. With the instrument turned off, plug in the data module to the top port on the back of the instrument.
3. Slot in the PCMCIA memory card and switch on the instrument. The instrument will then automatically make a file directory on the memory card based on the time and date.
4. After each lift the instrument will log the bin details and weight as a .CSV file in the aforementioned directory, These files can be imported into a *Microsoft Excel* spreadsheet or compatible waste management software.

Pressing the  on the SETUP screen indicates the status of the Data Module i.e. the presence of a card in the slot and proper connection, and the memory capacity remaining on the card.



Error prompts:

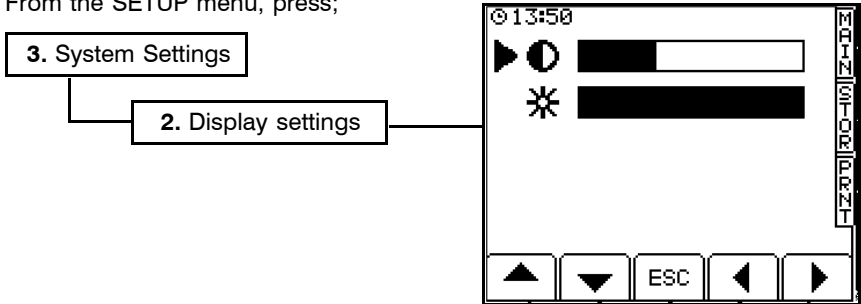
"NO CARD IN SLOT" - check that a card is inserted correctly.

NOTE: Please refer to the 'Memory Store Upload/Download' manual (Pt No. S/DC/500-10-260) which is supplied with the uploading kit Pt No. K/MEM/UP/DOWN/LD for further operating information regarding the use of the Data Module.

Other User Settings

Display Settings

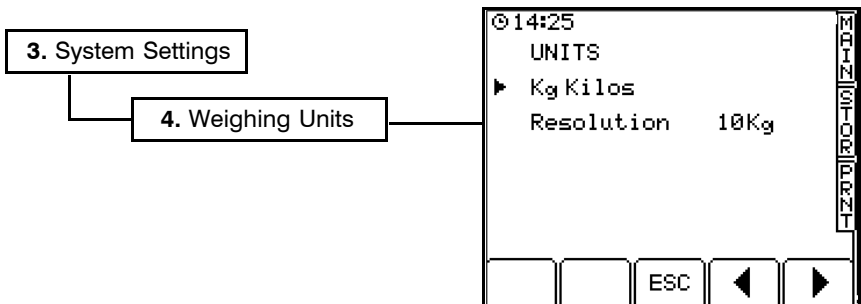
From the SETUP menu, press;



NOTE: The screen may go darker at elevated temperatures, e.g. when exposed directly to bright sunlight in a hot cab. This is a normal characteristic of any LCD display.

Weighing Units

From the SETUP menu, press;

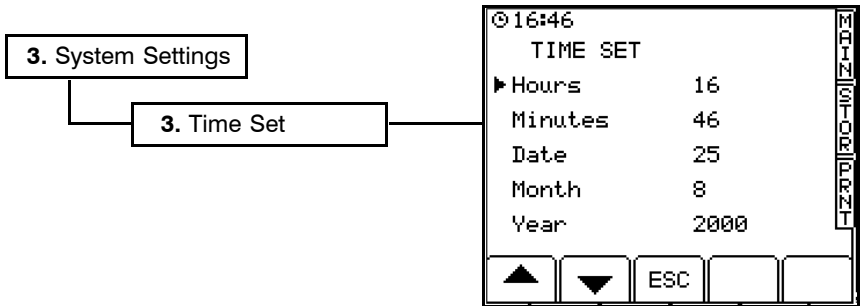


Select the resolution for the weight displayed, i.e. to the nearest 1kg, 5kg, 10kg (default), 20kg, or 50kg.

Operation

Time Settings

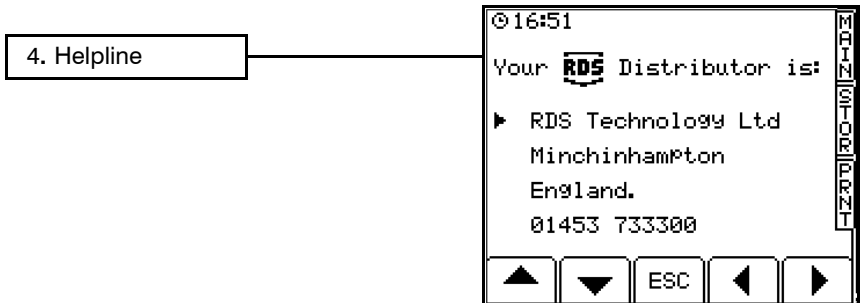
From the SETUP menu, press;



If you need to change the time setting in order to print the correct time on the printer slips, then position the menu pointer next to the time function, type in the correct value and press the ENTER key.

Helpline

From the SETUP menu, press;



This screen will normally be programmed on installation, with the contact details of your local distributor. In the event of any problems with the operation of the weighing system, please contact your local distributor for further assistance.



