



Weighloader ADT user manual

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V2.0



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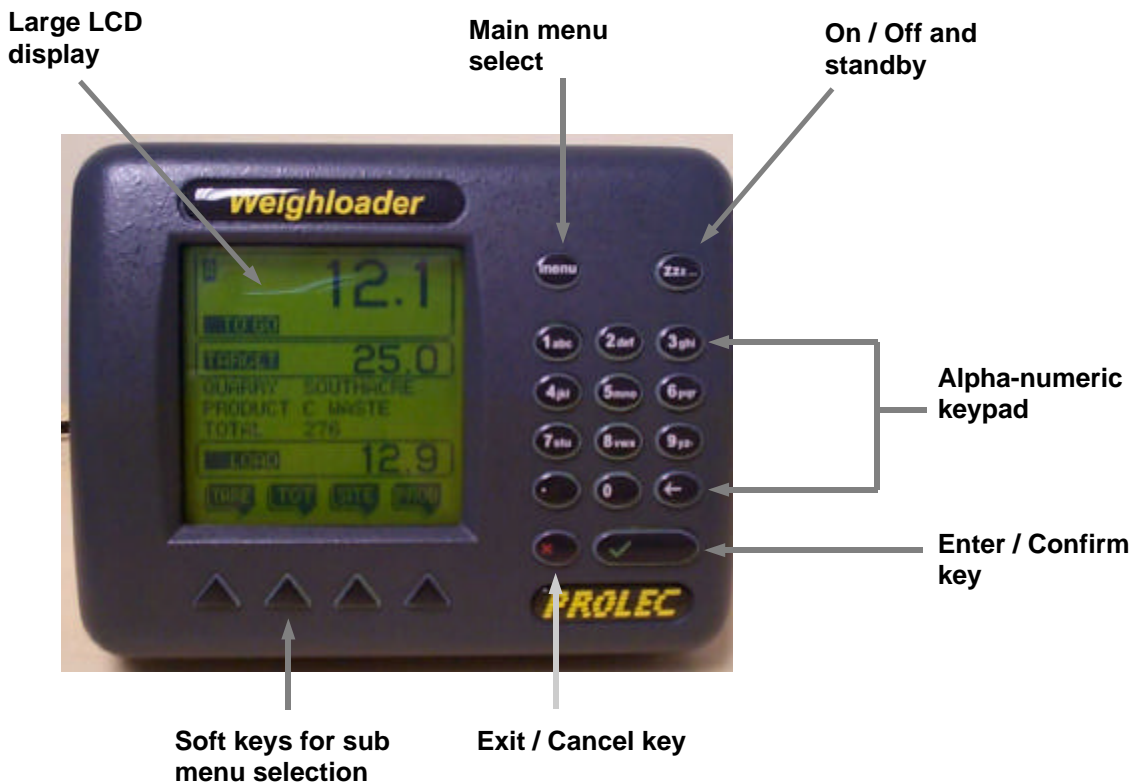
Weighloader ADT

1 Introduction

Weighloader ADT is a sophisticated weighing system suitable for Articulated Dump Trucks requiring accurate, real time load information.

Developed from the successful Weighloader – Wheeled Loader Weighing System – and utilising the latest in precision strain sensing technology, the Weighloader ADT offers essential on-board dynamic weighing features with well presented load data and a simple operation.

Operational facilities provided include, target weighing mode, auto add, auto taring, multi-material recording and multiple quarry site selection.



Features

- Clear Back-lit graphic display with contrast and brightness control
- Backlit keypad
- Auto add
- Auto Tare
- Manual Tare
- Standby Mode
- Multi product material recording - supports up to 99 products
- Multi site selection
- Data download
- Target mode
- Overload warning
- Real Time Clock – with 3 user adjustable alarm settings
- Easy to use Menu Guide
- Soft keys for sub menu selection
- Low Maintenance
- Designed to meet EMC Directive 89/336/EEC
- Environmental protection meets IP65 (Display) and IP67 (Computer)

Servicing

Prolec supports a nationwide network of fully trained service engineers. Warranty claims, service work, technical information and spare parts are available by contacting :

Prolec Ltd
25 Benson Road
Nuffield Industrial Estate
Poole Dorset
BH17 OGB

Tel : 01202 681190 (Mon - Fri 08.30 - 1730)

Note:

Prolec Ltd. reserves the right to amend specifications, information and designs without notice. Prolec Ltd. cannot anticipate every possible circumstance that might involve a potential hazard and the warnings given in this manual are not all inclusive. The correct functioning of this equipment is dependant upon correct installation, calibration and user operation.




2 LCD Display

The display provides all the relevant information and control required during normal loading operations.

Note :

The soft keys are the 4 triangular keys at the bottom of the display. Their function is indicated by the display icon immediately above the key. The functions will vary with the different weighing modes, menu options etc.

Switching the System On

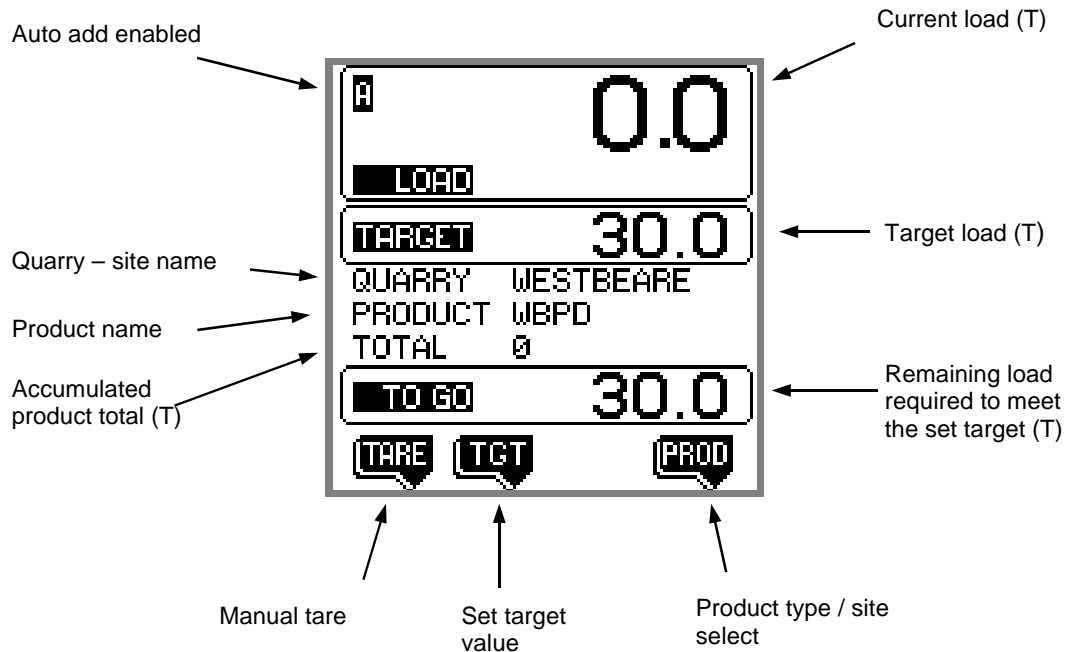
Switch the system on by pressing and holding the  key.

The system will briefly display a self test page before displaying the time and date.

Press any key to access the weighing display.



Weighing Display

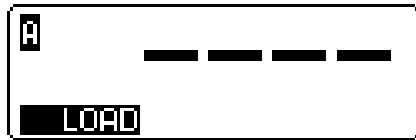


3 Weighing Operation

Note : The system will only weigh correctly if the ADT is in Float mode. The system will not be accurate if the ADT is in Power Down, Hold or Power Up modes.

Before weighing the system needs to be tared. This is done automatically by applying the load and dump brake. When the taring operation is in progress, the display is as shown below before displaying a load of 0.0

3.1 Tare



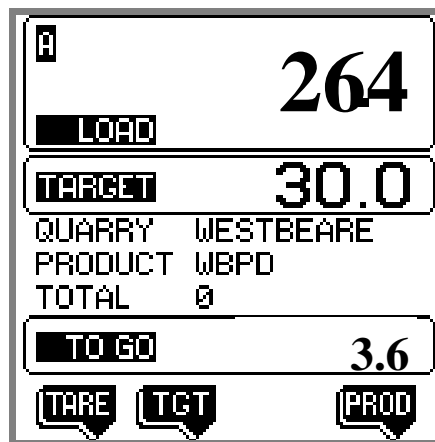
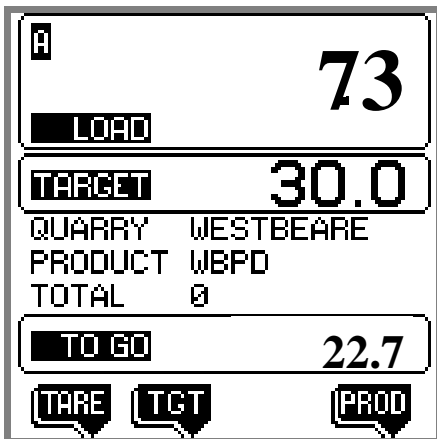
The taring procedure takes approximately 3 seconds



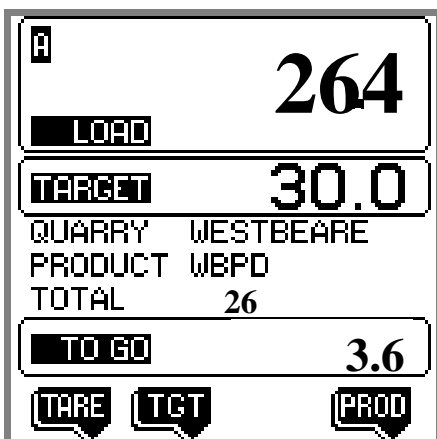
3.2 Loading

After taring, the truck is ready for loading.

As the truck is filled the load will increase, until capacity is reached and the loading stops.



As the load approaches within 5 T of the maximum capacity of the machine the red beacon on the ADT cab roof will start to flash. When the maximum load has been reached the lamp stays on permanently.



When the truck is fully loaded, drive to the required location. The action of driving will automatically release the load and dump brake.

The removal of the load and dump brake signal causes two actions :

- 1 The displayed load is frozen.
- 2 The load is automatically added to the product total.
Note : the total is rounded to the nearest tonne.

4 Soft Keys



The soft keys provide easy access to 3 functions without having to go through the system Menu.

TARE – this is a manual tare function and its use is not recommended if automatic tare is in use.

TGT – sets a load target. Will only be required if exact loads need to be transported by the ADT, otherwise ignore.

PROD – selects the quarry / site and the product against which loads will be added.

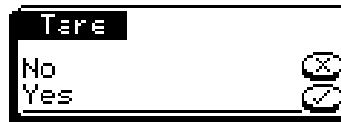
Note :

The   soft keys allow up / down scrolling of the highlight.



Manual Tare

not recommended if automatic tare is available and in use.



Set target value



Note : Unless specific loads need to be transported, the target is not important.

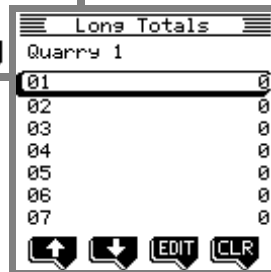


Select Product / Site

Stage 1 : Select Site
EDIT allows new site details to be entered.



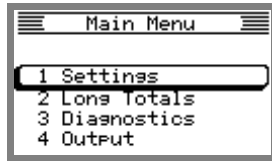
Stage 2 : Select Product
EDIT allows new site details to be entered.



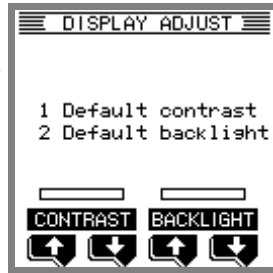
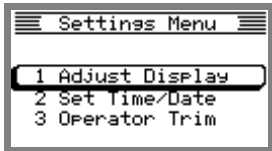
5 Menu Options

To select the Menu options press  Four main options are available.

5.1 Settings

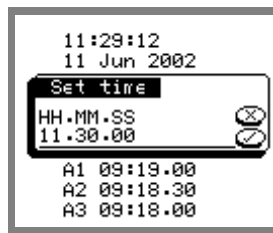


5.1.1 Display



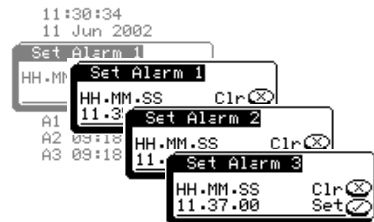
Set display contrast and brightness

5.1.2 Time and Date



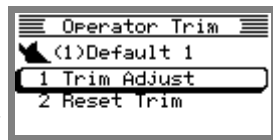
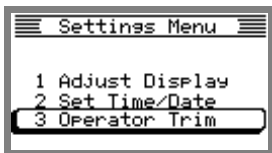
Set time and date

Enter the time and then date as requested.



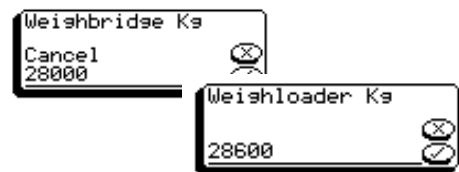
Alarm settings allow up to 3 alarm times to be set. Press X if not required

5.1.3 Operator Trim

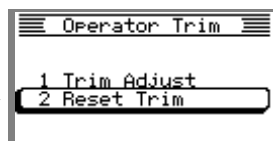


Adjusts the calibration trim value.

Use this option if the weighing system accuracy is outside specification.

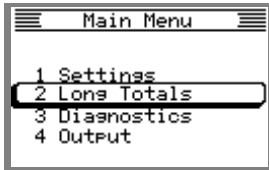


Enter the known (weighbridge) reading and then the Weighloader reading. The new calibration trim value will be automatically calculated.



Resets the calibration trim value to 1.00. Useful if the trim value becomes corrupted due to incorrect use of the trim adjust function

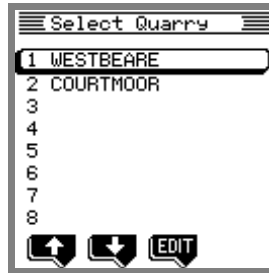
5.2 Long Totals



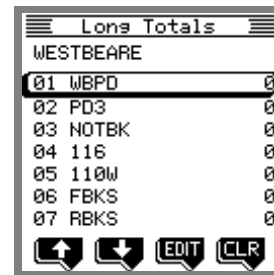
The system can keep a running totals record for up to 99 different product materials. The loads are recorded in units of tonnes and have a maximum value of 999,999 tonnes.

This option provides the facility to view these totals.

Selecting Long Totals gives a list of sites. These can be changed and edited using the EDIT function.

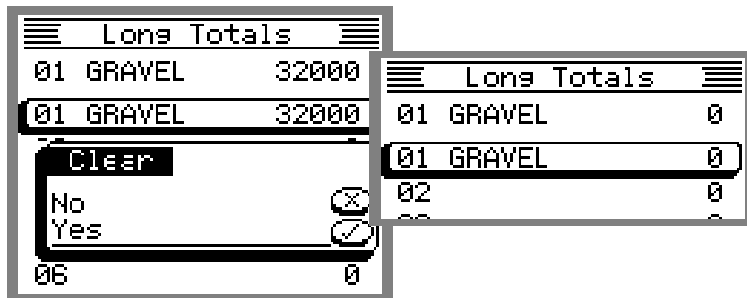


Selecting the SITE then enables the list of products contained within that site reference. These can be changed and edited using the EDIT function



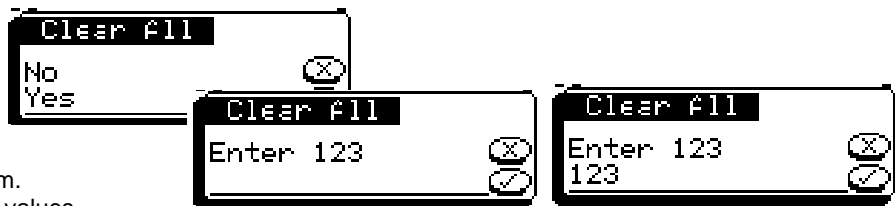
5.3 Clearing Long Totals

To clear the Long Total value to 0 press the CLR soft key



Confirm the selection.

Select the Clear All option.

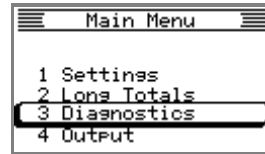


Enter the no. 123 and confirm. This will Clear all Long Total values.

Otherwise press  to exit the Clear All option and return to the Long Totals display.

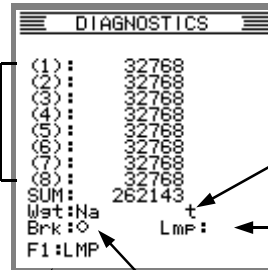
5.4 Diagnostics

The Diagnostics option provides input and output information and can be used as a basic fault finding tool or for reporting data to service if a fault is suspected.



These are the ADC values of the sensors and will be in the range of -32768 to +32768. If the sensor is at either extreme then a fault is present.

As a load is added to the machine, the outputs increase in a positive direction.



Indicates ADT load

Status of the cab mounted lamp

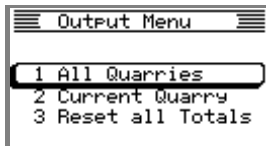
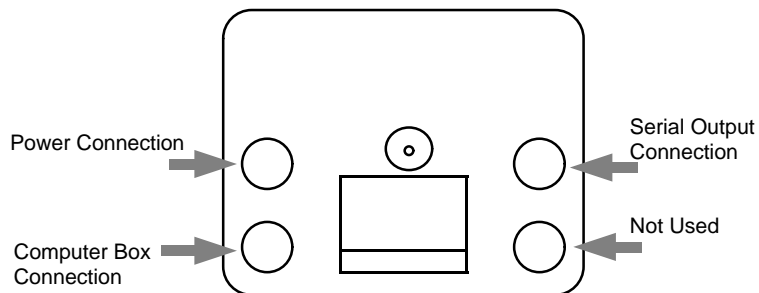
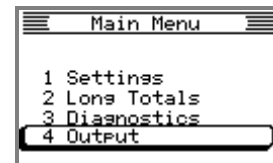
Pressing the first softkey will switch the cab mounted lamp on/off

Status of the load and dump brake.
 ○ = off
 ● = on

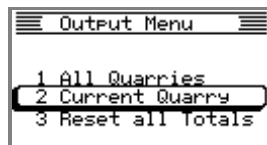
5.5 Output

This option provides the facility to download recorded product data. A serial data cable is required and is available from Prolec. The cable connects the connector on the rear of the display. The data can be downloaded to a printer or PC. The communication parameters are :

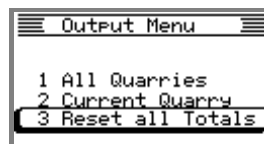
Baud Rate = 9600
 Parity = none
 Data = 8
 Stop bits = 1



All Quarries - Outputs all quarry and product data



Current Quarries - Outputs all product data of quarry currently selected



Resets all quarry product totals to zero.

6 Fault Finding Guide

The Weighloader ADT is an advanced computer controlled weighing system and no attempt to repair any component of the system should be made by anyone other than a PROLEC service engineer or agent.

Prolec supports a nation-wide network of fully trained service engineers. Warranty claims, service work, technical information and spare parts are available by contacting :

Prolec Ltd
25 Benson Road
Nuffield Industrial Estate
Poole
Dorset BH17 0GB

Tel: 01202 681190 (Mon - Fri 08.30 - 17.30)
Fax: 01202 677909

There are some system faults which can be resolved on site and the following provides a guide for the investigation of these faults.

6.1 General Operational Errors

If the system does not perform as expected during its operation refer to the operators manual. If a particular aspect of the system is providing troublesome to use and cannot be solved by reference to the operators manual then call Prolec for assistance. This may save time and money if the need of a PROLEC service engineer is not actually required.

6.2 Electrical Errors

If the system will not switch on, do the following :

- a) Check the power cable and system cable from the computer/display for damage.
- b) Check for any blown fuses (inline with the power cable or within the fuse box). Replace any damaged fuses and retry the system. If the system will still not switch on then the system requires the attention of a PROLEC service engineer.

6.3 Automatic Tare Fail

If the system will not automatically tare use the diagnostics to confirm the detection of the load and dump brake – section 5.4 refers. If activation of the load and dump break is not recognised then the system will not automatically tare, this may be due to a wiring problem or a failing in the detection circuit of the Weighloader.

6.4 Beacon Lamp Fail

The cab mounted beacon gives warning of approach to maximum truck capacity. If this stops working use the diagnostics to check the lamp function – section 5.4 refers. Check the bulb and the wiring noting that an inline fuse is fitted to supply power to the beacon lamp.

6.5 Incorrect Loads

If the displayed weight is obviously incorrect then :

- a) Check that the ADT is empty before weighing or taring.
- b) Follow the Operator Trim procedure – see section 5.1.3.
- c) Use the diagnostics option to view the sensor outputs. With zero load, the sensors should be similar, if a sensor is approaching the maximum range (-32768 or +32768) then that particular sensor will be at fault. If a sensor failure is apparent then contact Prolec for service.

Note : If unfamiliar with the operation then read the manual first

OPERATING INSTRUCTIONS

Weighloader Printer

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OPERATING INSTRUCTIONS

Weighloader Printer

24 Introduction

The Weighloader Printer offers a simple method of providing a hardcopy of what has been loaded. The printer output can be left at the default output or you can add as many of the fields which are discussed below.

25 Printing A Ticket

There are 2 ways to print a ticket.

- 1 Pressing the "Print" softkey.
- 2 Select the "Ticket" option in the Print menu.

MENU->Print->Ticket

26 Default Output

The default output displays the date,time,product,total and each individual load.

```
Date:25.10.05 09:32
Product: BALLAST
Total:    4.65
(1)     2.41
(2)     2.24
```

27 Adding Loader Description

For sites that use more than one loader an identifier for the loader can be added using the "Edit Loader" option in the Print menu

MENU->Print->Edit Loader

An example of the output is shown below.

```
Date:25.10.05 09:54
Loader:SCOOP
Product: BALLAST
Total:    4.65
(1)     2.41
(2)     2.24
```

28 Adding Company Header

Your company name may be added at the top of the ticket using the "Edit Company" option in the Print menu.

MENU->Print->Edit Company

An example of the output is shown below.

```
BOBS TOOLYARD
Date:25.10.05 10:03
Loader:SCOOP
Product: BALLAST
Total:    4.65
(1)     2.41
(2)     2.24
```



OPERATING INSTRUCTIONS

Weighloader Printer

29 Adding An Operator

If there is more than one person operating the machine then it is possible to provide the name of the operator on the ticket using the "Edit Operator" option.

MENU->Print->Edit Operator

Up to 14 operators can be added to the system using the "Up", "Down" and "Edit" softkeys.

The operator is selected by moving the highlight bar via the "Up" and "Down" softkeys.

An example of the output is shown below.

```
BOBS TOOLYARD
Date:25.10.05 10:23
Loader:SCOOP
Operator:FRED
Product: BALLAST
Total:    4.65
(1)      2.41
(2)      2.24
```

HINT: If you don't always want to print the operator then leave the first entry field "01" blank.

Selecting the first entry field when it is blank will prevent the operator field being output.

30 Adding The Customer

A customer description can be added using the "Edit Customer" option from the print menu.

MENU->Print->Edit Customer

Up to 99 customers can be added to the system using the "Up", "Down" and "Edit" softkeys.

The customer is selected by moving the highlight bar via the "Up" and "Down" softkeys.

Whenever a ticket is printed the customer list will be displayed for the operator to make a selection.

An example of the output is shown below.

```
BOBS TOOLYARD
Date:25.10.05 11:01
Loader:SCOOP
Operator:FRED
Customer: A SMITH
Product: BALLAST
Total:    2.41
(1)      2.41
```

HINT: If you don't always want to print the customer then leave the first entry field "01" blank.

Selecting the first entry field when it is blank will prevent the customer field being output.

OPERATING INSTRUCTIONS

Weighloader Printer

31 Adding Comments

Comments can be added using the “Edit Comments” option from the print menu.

MENU->Print->Edit Comments

Up to 99 comments can be added to the system using the “Up”, “Down” and “Edit” softkeys. The comment is selected by moving the highlight bar via the “Up” and “Down” softkeys.

Whenever a ticket is printed the comments list will be displayed for the operator to make a selection.

An example of the output is shown below.

```
BOBS TOOLYARD
Date:25.10.05 11:10
Loader:SCOOP
Operator:FRED
Comments:THANK YOU
Customer: A SMITH
Product: BALLAST
Total:    4.51
(1)      2.41
(2)      2.10
```

HINT: If you don't always want to print the customer then leave the first entry field “01” blank.

Selecting the first entry field when it is blank will prevent the customer field being output.

32 Printing Long Totals

The long totals can be printed using the “Long Totals” option from the print menu.

MENU->Print->Long Totals

When this option is selected you are given the choice of printing “All None Zero” totals.

If you enter “Yes” to this option then just the none zero totals will be printed.

If you enter “No” to this option then all the long totals will be printed.

An example of the none zero output is shown below.

```
Date 25.10.05 11:19
BALLAST          147
SHP. SAND        9
```



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