



User Guide

FOR LOADRITE™ X-WEIGH 2350™
EXCAVATOR WEIGHING SYSTEMS





LOADRITE™ X-Weigh 2350™

User Guide

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A solution of



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The LOADRITE logo, featuring the word 'LOADRITE' in a bold, black, sans-serif font inside a blue rectangular box with a yellow border. The logo is positioned on the right side of a horizontal line of small, grey, slanted dashes that spans the width of the page.

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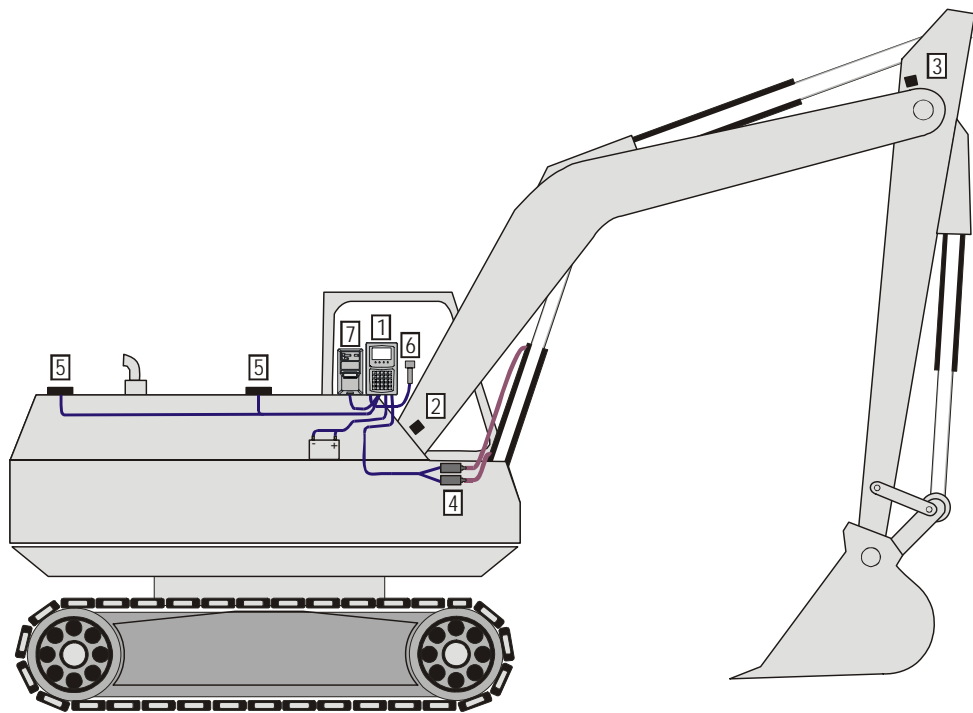
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1 LOADRITE EQUIPPED EXCAVATOR

1. Console
2. Boom Position Sensor
3. Stick (dipper arm) Position Sensor
4. Pressure Transducers
5. Tilt Sensors
6. Remote Add Button (optional)
7. Printer (optional)

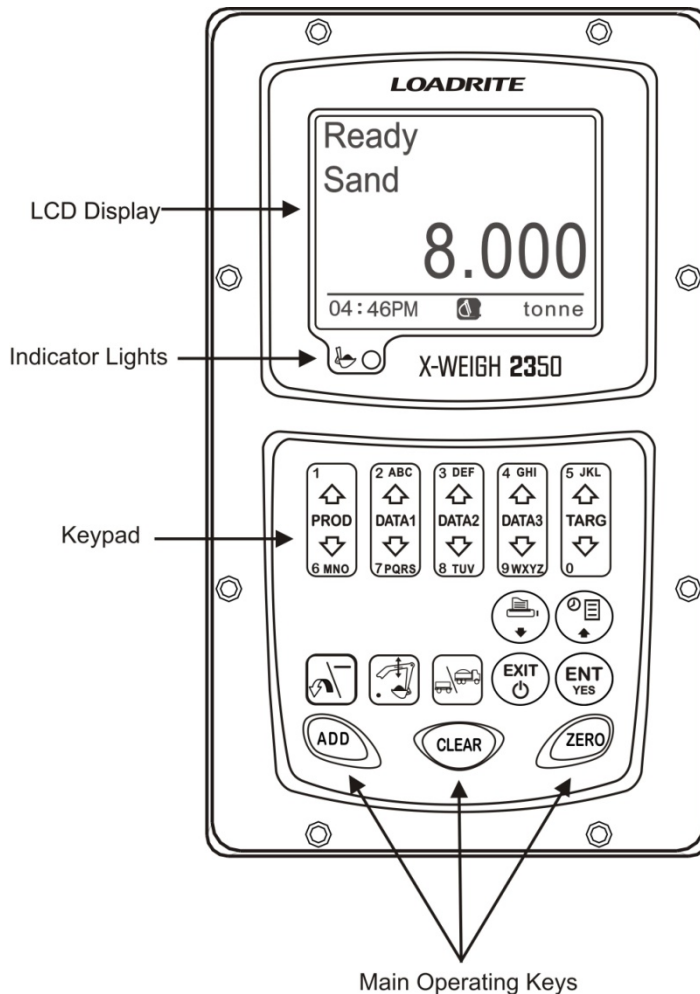


2 INTRODUCTION

The Loadrite X-Weigh 2350 measures the weight of loads moved by hydraulic excavators. The console is installed in the cab of the machine and is connected to various sensors on the lifting arms.

As the machine raises the load, the console measures the hydraulic pressure in the lift cylinders, converts pressure into a weight reading and displays the result. Position sensors mounted on the arms allow the system to compensate for arm position and lift speed.


The weight of the bucket and arms are zeroed out when the system is calibrated so that only the weight of the payload is displayed. While operating the excavator, the driver can add each weight lifted to a running total.



The console has internal memory which stores settings and production data even when switched off.







2.1 INDICATOR LIGHTS











One indicator light is provided below the LCD screen.





<p>Trigger</p> 	<p>Illuminates when a load is lifted through the weighing zone. When this light is on, the lifted weight may be added.</p>	<p>Pages 8 and 12</p>
--	--	-----------------------

2.2 KEYPAD

The numeric values table shows the special functions that the keys have in addition to their used for entering data.

<p>1</p> 	<p>Product select scroll up. Referred to as the PRODUCT key.</p>	<p>Page 22</p>
<p>2 ABC</p> 	<p>Data-1 select scroll up.</p>	<p>Page 24</p>
<p>3 DEF</p> 	<p>Data-2 select scroll up.</p>	<p>Page 24</p>
<p>4 GHI</p> 	<p>Data-3 select scroll up.</p>	<p>Page 24</p>
<p>5 JKL</p> 	<p>Target value scroll up. Referred to as the TARGET key.</p>	<p>Page 28</p>
<p>PROD</p> 	<p>Product select scroll down. Referred to as the PRODUCT key.</p>	<p>Page 22</p>

	Data-1 select scroll down.	Page 24
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	Data-3 select scroll down.	Page 24
	Target value scroll down. Referred to as the TARGET key.	Page 28
	Print functions Also scroll down. Referred to as the PRINT and DOWN key.	Page 41
	Display clock and access the menu. Also scroll up. Referred to as the MENU and UP key.	Page 35
	Subtracts the current load from the total. Recalls the previous load. Referred to as the SUBTRACT or RECALL key.	Page 14 and 17
	Weigh zone adjustment. Decimal point. Referred to as the WEIGH ZONE key.	Page 20
	Enter split mode. Referred to as the SPLIT key.	Page 31
	Exits an operation without changing the data. When pressed on the Ready screen, puts the console into standby mode. To return to the Ready screen, press any key. Referred to as the EXIT key.	-

	Enter key for accepting data or changes. Referred to as the ENTER key.	-
	Adds the current load to the total. Also toggles into Auto-add mode. Referred to as the ADD key.	Page 13
	Clears the Short Total for the current product. Referred to as the CLEAR key.	Page 19
	Zeroes out the current load. Referred to as the ZERO key.	Page 15

3 QUICK START GUIDE

This section summarises the common console procedures. For full details of weighing methods, see Weighing Overview; chapter 4 and Weighing Procedures; chapter 5.

3.1 SWITCHING ON

The console powers up automatically when you switch on the ignition of the excavator.

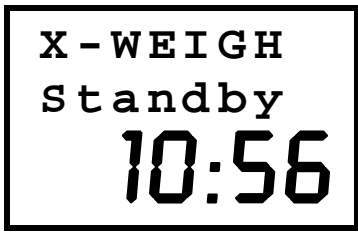
If the console has been switched off for more than one hour, it displays the Warm Up screen when powered up.

3.2 STANDBY

The console has a 'standby' mode which is similar to turning the console off.

To put the console into standby press the EXIT key, when in the **Ready** mode.

To restart the console, press any key.



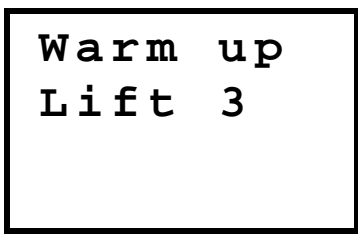
X - WEIGH
Standby
10:56

3.3 THE WARM UP SCREEN

For best weighing accuracy, the hydraulic fluid in the lift cylinders should be at normal operating temperature. This is achieved by raising and lowering the empty bucket a few times.

The **Warm up** screen is displayed if the machine has been turned off over an hour.

Raise the empty bucket through the weighing zone three times.



Warm up
Lift 3

<p>The console beeps at each lift and displays the count down from 3. After the third lift, the Ready screen is displayed and the screen may look like this.</p> <p>If it is time to check zero, the console will display the Check Zero message to remind you.</p> <p>More information about Ready screen and Check Zero screen will be covered later in this manual.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>Ready Sand 3400</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Check Zero</p> </div>
--	---

3.4 THE READY SCREEN

The Ready screen shows the product name and the Short Total for that product. The Short Total is simply the sum of loads since you last cleared the total.

When the Ready screen is displayed, the console is in Total mode and is ready to weigh. Note that **Sand** in the below example represents the current product of choice. Your console may be configured differently, and hence, a different product name may appear on the screen.

<p>Ready ←</p> <p>Sand ←</p> <p>3400 ←</p>	<p>The console is ready to weigh</p> <p>Current product to be loaded</p> <p>Current total loaded</p>
---	--

3.5 WEIGHING A LOAD

(Weights shown are examples only).

<p>Console is ready to weigh sand. (Current total 3400).</p>	<div style="border: 1px solid black; padding: 5px;"> <p>Ready Sand 3400</p> </div>
--	---

<p>Raise the load smoothly using normal engine revs. The bucket should be kept level during weighing.</p>	<p>W e i g h i n g</p> <p>3400</p>
<p>A short time later, the console beeps, turns the TRIG indicator light on and displays the load lifted (2200).</p>	<p>T o t a l</p> <p>3400</p> <p>2200</p>

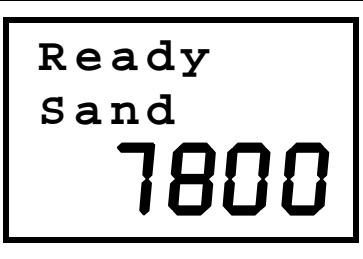
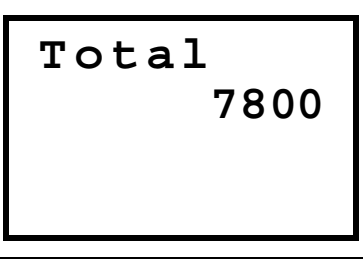
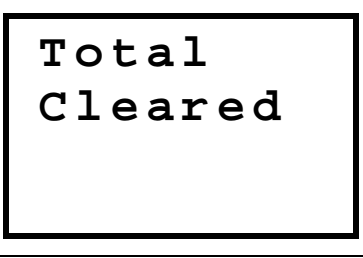

3.6 ADDING A LOAD

(Weights shown are examples only).

<p>Before lifting: (Current total 5600).</p>	<p>R e a d y</p> <p>S a n d</p> <p>5600</p>
<p>Weigh the load (see above). The console beeps and displays the load. (Weight of load 2200).</p>	<p>S a n d</p> <p>5600</p> <p>2200</p>
<p>Press the ADD key. The console updates the total and returns to the Ready state. (New total 7800).</p>	<p>R e a d y</p> <p>S a n d</p> <p>7800</p>

3.7 CLEARING THE SHORT TOTAL




(Weights shown are examples only).

<p>When you want to reset the Short Total to zero (e.g. after loading a truck) ready for another loading operation, Press and hold the CLEAR key.</p>	
<p>The console briefly displays the short total for the current product ...</p>	
<p>...then displays Total Cleared for a few seconds, and then ...</p>	
<p>...returns to the Ready screen.</p>	

3.8 ZEROING

It is recommended to zero the console from time to time. This is to avoid inaccurate readings due to build up of material in the bucket.

(Weights shown are examples only).

<p>Before lifting: Make sure that the bucket is empty and level.</p>	
<p>Raise the bucket as if weighing (see above). The console beeps and displays the load.</p>	
<p>Press the ZERO key. The console performs the zero adjustment and returns to the Ready state.</p>	

More detailed information about Zeroing can be found in section 5.7

4 WEIGHING OVERVIEW

4.1 WEIGHING MODES

While individual bucket weight can be measured, the console also has an ability to accumulate how much weight you have loaded on to a truck. The main weighing modes are shown in the following table. The modes that are available in a particular console depend on the installation.

Mode	Description
Total	As you add bucket loads, the weights are added to the totals. The Short Total is displayed.
Target	A target weight is entered into the console. As you add bucket loads, the remaining value to reach the target is displayed.

4.2 SHORT AND LONG TOTALS

The console keeps a total of the bucket weights that you add. For each product, two independent totals are stored.

Short Total	Typically used to display the total weight lifted onto a truck. As you add successive loads, the console displays the updated Short Total (sum of the loads so far) on the Ready screen.
Long Total	Typically used to accumulate the weights lifted over a longer period, for example a shift or a day. (See section 5.6 Viewing Long Total).

4.3 ACCURATE WEIGHING

For accurate weighing, make sure that:

- The bucket remains level.
- The arms are lifted / moved smoothly.
- Material does not spill from the bucket while weighing, or before the bucket is emptied on to the truck.

- The console is correctly zeroed. (Zeroing is described in section 5.7).

4.4 GENERAL METHOD OF WEIGHING

1. **LEVEL BUCKET.** After picking up material make sure the bucket is level.
2. **LIFT.** Raise the load smoothly using normal engine revs. The console beeps, turns the TRIG light on and displays the load. (See section 3.4).
3. **ADD.** The console waits for a few seconds for you to take one of the following actions:
 - Press the ADD key to add the weight to the long and short totals, or
 - Press the SUBTRACT key to subtract the load from the totals, or
 - Press the ZERO key to zero the measuring system.

If you don't press a key, the console beeps and prompts you to take action. The console then counts down and if you still don't press a key, it discards the weight and goes back to the **Ready** state.

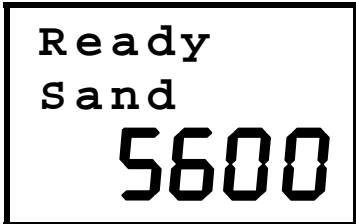
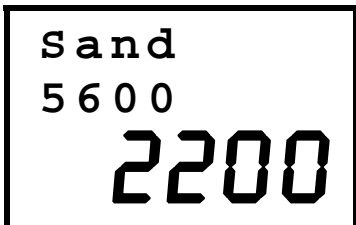

5 WEIGHING PROCEDURES

5.1 ADDING A LOAD

This function adds the lifted weight to the Short and Long Totals for the current product.

To add a load:

(Weights shown are examples only).

<p>Before the load is lifted: (Current total 5600).</p>	
<p>Raise the load smoothly through the weighing zone. The console beeps and displays the load. (Weight of load 2200).</p>	
<p>Press the ADD key. The console updates the total and returns to the Ready state. (New total 7800).</p>	

The console has an option to use a Remote add button. If fitted, the remote add button is normally mounted on the lift lever.

In Target mode, the display is different. For details, see Target Mode in chapter 8.

5.2 AUTO-ADD

Auto-add is an optional feature that is selected during installation. If Auto-add is enabled, the console can automatically operate the ADD function every time a load is lifted past the trigger point.

The Auto-add icon is displayed when the console is in Auto-add mode.

To turn on/off Auto-add function:

1. Press the MENU key. The time is displayed.
2. Use the UP and DOWN keys to scroll to **Auto Add**.
3. Press the ENTER key to select.
4. Use the UP and DOWN keys to adjust the setting.
5. Press the ENTER key to accept the setting.

If Auto-add is on:

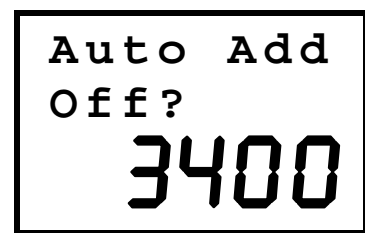
The procedure for zeroing is different. See section 5.7.

Toggling Auto-add function on/off:

The Auto-add function can be set-up to allow the operator to toggle its operation between on and off by holding down the ADD key. This is done during installation.

To toggle Auto-add function off:

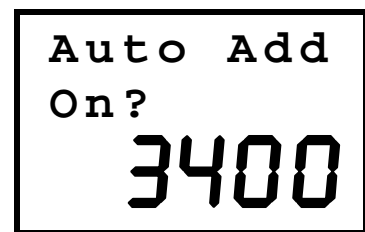
In **Ready** screen, press and hold the ADD key. The console will prompt you to confirm.
Press the ENTER key to confirm.



Auto Add
Off?
3400

To toggle Auto-add function on:

In **Ready** screen, press and hold the ADD key. The console will prompt you to confirm.
Press the ENTER key to confirm.




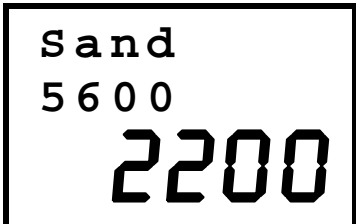

Auto Add
On?
3400

5.3 SUBTRACTING A LOAD

This function can be useful when only part of a final bucket load of loose material is required. You can add the full bucket load and then re-weigh and subtract the amount remaining in the bucket.

To subtract a load:

(Weights shown are examples only).

<p>Before the load is lifted: (Current total 5600).</p>	
<p>Raise the load smoothly through the weighing zone. The console beeps and displays the load. (Weight of load 2200).</p>	
<p>Press the SUBTRACT key. The console updates the total and returns to the Ready state. (New total 3400).</p>	


In Target mode, the display is different. For details, see Target Mode on page 24.

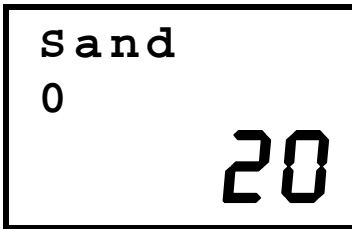
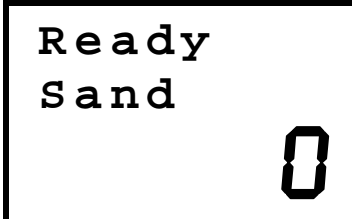
5.4 ZEROING

When you raise an empty bucket through the weighing zone, the display should read zero. However, due to build up of material in the bucket, a small zero error may occur.

Zero error affects the accuracy of lifted weights.

To zero the console:

<p>Before lifting make sure that the bucket is empty. The loader should be on level ground.</p>	
---	---

<p>Raise the bucket smoothly through the weighing zone using normal engine revs.</p> <p>The console beeps and displays the load.</p> <p>(Example weight 20).</p>	
<p>Press the ZERO key.</p> <p>The console performs the zero adjustment and returns to the Ready state.</p>	

Large ZERO Error

If the weight is greater than 5% of full scale, when you press the ZERO key, the console prompts **Bucket Empty?** If it is, press the ENTER key which will zero the empty bucket. Pressing the EXIT key will not zero the console.

If the weight is greater than 10% of full scale, when you press the ZERO key, the console displays **Too heavy, zero aborted** and does not alter any settings.

This prevents any accidental zeroing of valid weights.

If the bucket is empty and this message still occurs, there may be a fault in the system. The console should be checked and, if necessary, re-calibrated.

Check Zero Prompt



This function automatically reminds the operator to check ZERO occasionally. Changes in the ZERO occur more often while the machine is warming up.

When first turned on, after having been off for more than one hour, the console will remind the operator to do a ZERO check:

- Every 15 minutes for the first hour, or

- Every 30 minutes thereafter

At this point a ZERO check lift should be carried out as described in the previous section.


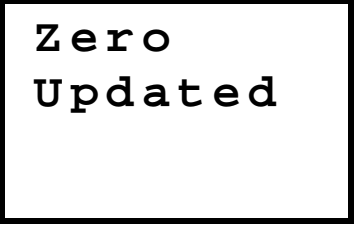
The reminder can be cleared without doing a ZERO check, by simply continuing with normal operation. However, a ZERO error can affect the accuracy of lifted weights so it is important to do a ZERO check regularly.

The automatic CHECK ZERO reminder will not occur if the operator is checking the ZERO often enough.

The automatic CHECK ZERO prompt is an optional function that is selected during installation.

Zeroing when Auto-add is on:

The procedure to Zero may be different when Auto-add is on and Auto-add Time is set to 0 second. If this is how your console is configured, you will need to carry out the following procedure:

<p>Before lifting: Press the ZERO key. The console will display a message indicating that you should now perform the zero lift.</p>	
<p>Raise the empty bucket smoothly through the weighing zone. The console beeps and performs the zero adjustment.</p>	

If Auto-add is not on, or Auto-add Time is not set to 0, follow the standard procedure to Zero (section 5.7).

Auto-add is described in section 5.2.

5.5 RECALLING LAST LOAD

The Recall function is equivalent to lifting the same load again and can be used to correct mistakes.


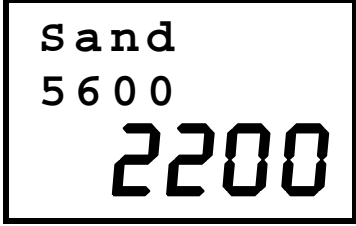
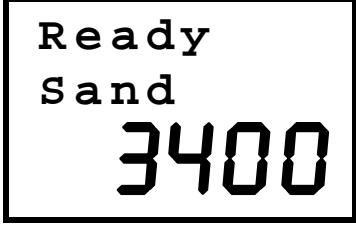
You can recall and display the last load if it has been:

- Added.
- Subtracted, or

- Timed out (ignored)

To recall the previously lifted weight:

(Weights shown are examples only).

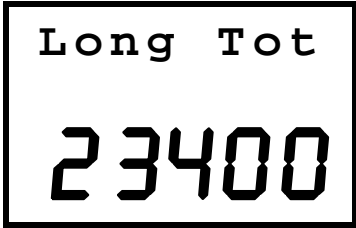
<p>Current total 5600.</p> <p>Press the RECALL key.</p>	
<p>The console beeps and displays the last load.</p> <p>(Weight of last load 2200).</p>	
<p>If the last action was an “Add”, you can subtract.</p> <p>If the last action was a “Subtract”, you can add.</p> <p>(Example: subtracting a load that was previously added, new total 3400).</p>	

If you press a key that is not allowed in the circumstances, such as the ADD key when the recalled load was previously added, the console ignores the key press.

5.6 VIEWING LONG TOTAL

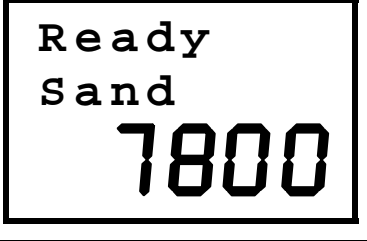


To view the Long Total for the current product

(Weights shown are examples only).

<p>In Ready screen, press the MENU key to display the menu and use the UP and DOWN keys to scroll to the Long Total option.</p> <p>Press the ENTER key.</p> <p>The console displays the Long Total.</p>	
---	---

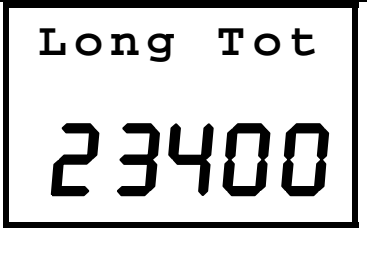
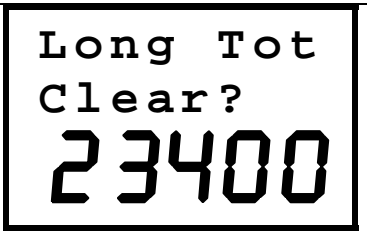
5.7 CLEARING TOTALS


To clear the Short Total for the current product
(Weights shown are examples only).

<p>In the Ready mode, press the CLEAR key.</p>	
<p>The console displays Total Cleared for a few seconds, clears the Short Total for the current product and then ...</p>	
<p>... returns to the Ready screen. The next ADD operation starts a new Short Total for this product.</p>	

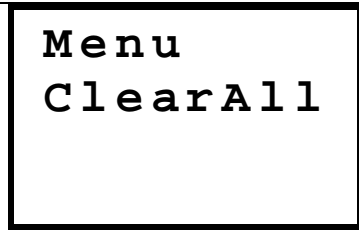
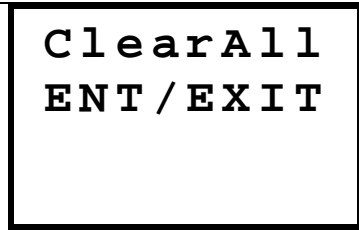
To clear the Long Total for the current product:

(Weights shown are examples only).

<p>In the Ready mode, press the MENU key to display the menu and use the UP and DOWN keys to scroll to the Long Total option. Press the ENTER key. The console displays the Long Total.</p>	
<p>Press the CLEAR key. The console asks you to confirm the clear.</p>	

<p>Press the ENTER key to confirm.</p> <p>The console displays Long Tot Cleared for a few seconds and then returns to the Ready screen.</p> <p>Note that the Short Total is also cleared for consistency.</p>	
---	---

To clear all Long Totals in one go:

<p>Press the MENU key to display the menu and use the UP and DOWN keys to scroll to the Clear All screen.</p> <p>Press the ENTER key.</p>	
<p>The console displays a prompt for you to confirm the clear operation.</p> <p>Press the ENTER key again to clear all totals or the EXIT key to return to the menu without clearing.</p>	

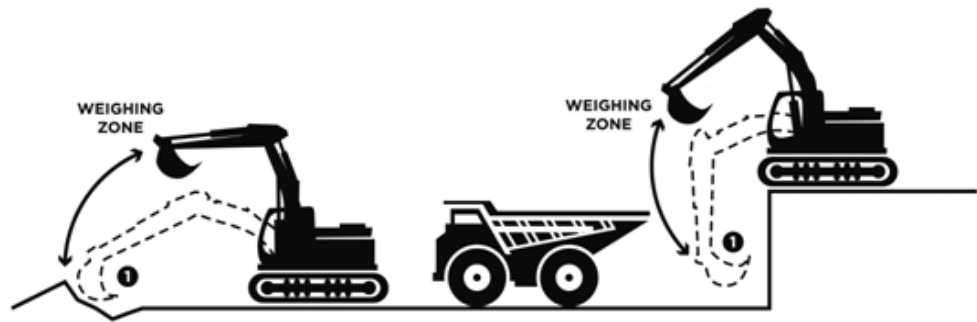
If the console has a printer connected, the Long Totals are printed together with a grand total before being cleared.

5.8 SETTING WEIGHING ZONE


The excavator's range of motion during loading is dependent on the location at which loading takes place. For example the excavator can be operating on top of a stockpile or at roadside.

To save time and unnecessary movement the console allows the weighing zone to be optimised for the location.

This function is used to set the breakout level or; lower point of the weighing zone. The optimal weighing zone is calculated by X-Weigh so that the weight calculation begins just after the excavator finishes digging and finishes before the boom reaches its highest position.



To set breakout level:

<p>Move the boom to the point at which the console should begin weighing and press the WEIGH ZONE key.</p> <p>NB. The height selected should be just after the digging is complete.</p>	
<p>The console displays a prompt for you to confirm the minimum weighing position.</p> <p>Press the ENTER key again to accept or the EXIT key to return to the Ready screen without changing the position.</p>	<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p>Set Breakout Level?</p> <p>105.2</p> </div>

6 PRODUCT MANAGEMENT

Loadrite supports up to 20 products. Each product is associated with a product number, product name, Short Total, Long Total and add bucket counter. The product info screen enables you to manage your products.

The product info screen not only allows you to select a different product, but also displays information about the product before you select it.

To select a different product:

(Weights and product names are examples only).

<p>Ready screen:</p> <p>Press the PRODUCT key.</p>	
<p>The Loadrite will first display the product number along with the product name. Then, the Short Total and the number of buckets added will follow.</p> <p>Product index = 1 Product name = Sand Bucket added = 4 Short total = 3400</p>	
<p>Press the PRODUCT keys to scroll through the products.</p>	

As soon as you stop scrolling, the product last displayed will be selected. You will then return to the Ready screen.

Ready
Gravel



7 DATA

If this feature is enabled, the Loadrite console allows you to enter three data fields (up to 13 characters) that provide additional information to the weight data. Each field has a label to identify it and can be configured as a specific data type (e.g. alphanumeric, numeric or auto-increment). The specific labels and data type for your console are set up at installation time.

Typical labels might be, for example:



- Customer for Data 1
- Docket for Data 2
- Truck for Data 3

If you have the appropriate equipment installed, this information can be stored in the Loadrite Data Module and/or printed with the weight data.



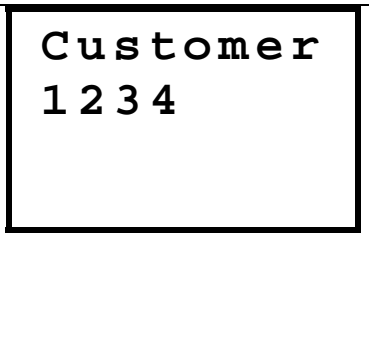
7.1 DATA SELECT

Before loading a truck, for example, you can select customer name, truck plate number, etc, for your docket print out.

To select name from a data list:

<p>In Ready mode, press DATA key. The console displays current value for the first data field.</p> <p>Data field 1 = Customer Name Current value = Johnson Customer index number = 4</p>	
<p>Use the DATA keys to scroll through your predefined customer list to select.</p> <p>As soon as you stop scrolling, the customer name last displayed will be selected. You will then return to the Ready screen.</p>	

To enter new name:

<p>In Ready mode, press the DATA keys. The console displays current value for the first data field.</p> <p>Data field 1 = Customer Name Current value = Johnson Customer index number = 4</p>	
<p>Press the CLEAR key to clear the current customer name.</p> <p>You will see a cursor blinking. You are now ready to enter new customer name.</p>	
<p>Suppose the customer is 1234. Use the numeric keys to enter the value and then press the ENTER key.</p> <p>Note that pressing the ENTER key means accepting the displayed value for the data field.</p> <p>You will then return to the Ready screen.</p>	

You may have up to three data fields available, depending on how the console has been set up at installation time.

Alphanumeric Data

The console has an option to enter Alphanumeric (Alpha) data. This option is enabled at installation time. The console uses its telephone style keypad to allow letters to be entered.

When a number key is pressed, a digit is displayed. If the same number key is pressed again, the first letter on that key is displayed. If the key is pressed again the second letter is displayed and so on.

For example, if the numeric key 2 is pressed repeatedly, the characters displayed in sequence are '2', 'A', 'B', 'C', 'a', 'b', 'c', '2', 'A' and so on.

In this allows you to enter names for customers, trucks etc.

Sometimes a name will have two sequential letters on the same key. For example the letters 'D' and 'E' in the word 'DEAKON'. After the 'D' has been entered wait a second or two. The cursor

will automatically shift and be ready for your next character. You can then enter 'E'.

Auto Target value look up



This function enables you to store a list of target values (for different trucks). You can recall the target value from memory by scrolling through a list of truck names.

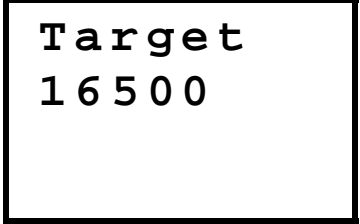
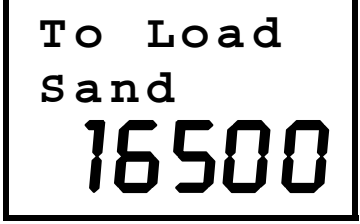
Use scrolling to recall truck target value:

Suppose we have a truck and target list as follows. We configure Data 2 to store truck plate numbers and Data 3 to store the corresponding target values. Data 2 itself is an alphanumeric field and is set up as target reference. Data 3 is set up as target list.

Data 2: Truck	Data 3: Target
AGT175	15000
AUQ887	16500
BQ1001	15500
BQ1002	15500
YA8855	12000

Suppose we want to recall the target value for Truck AUQ887.

<p>In Ready mode, Press the DATA key for the data field containing truck data, the last truck will be displayed.</p>	
<p>Press the DATA keys to scroll until you see AUQ887 on the screen, then press the ENTER key to select the truck.</p>	

Console will then automatically use AUQ887 as reference and look up the corresponding target value.	 A digital display showing the word "Target" in a large, bold, black font, with the number "16500" below it in a slightly smaller, bold, black font.
You will then return to the To Load screen.	 A digital display showing the words "To Load" and "Sand" in a large, bold, black font, with the number "16500" below them in a very large, bold, black font.

Auto-increment

Auto-increment function is an optional function that is selected during installation. If Auto-increment is enabled, data value will be made to increment automatically when Short Total is cleared. The data value can only be viewed but cannot be edited.

8 TARGET MODE

Target mode is an optional feature that is selected during installation. This feature provides an easy way to load up to a Target weight for a product in a series of lifts. In Target mode, the console displays the “To Load” value, which is the remaining amount to reach the Target.

Before loading, the operator enters a target weight. Each time you add a weight, the “To Load” value is reduced by that weight.

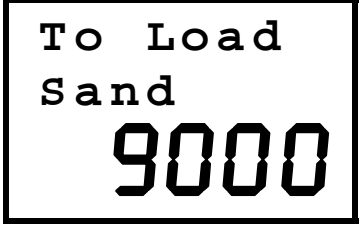
Target mode is used typically when loading a truck to its optimum payload.

To enter Target mode (and enter a new Target):

You can also change the current Target when entering Target mode. This is explained below.

(Weights shown are examples only).

<p>First clear the previous total. (<i>Clearing Totals</i> is described on page 19.)</p> <p>The console is in Total mode at this point.</p>	
<p>Press the TARGET key.</p> <p>The console displays the last target value used.</p>	
<p>If necessary, key in a new target value or use the TARGET keys to scroll through the target list.</p> <p>Press the ENTER key to accept the target.</p> <p>To enter a target value beginning with five (i.e 5000), press the CLEAR key which will make the Target value flash. The desired value can then be entered in the usual way.</p>	

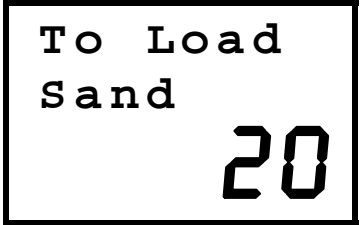

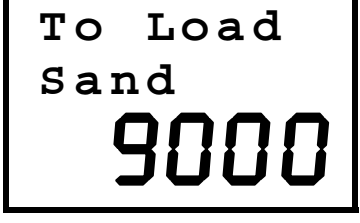
The console displays Target Updated for a few seconds and then returns to the Ready screen in Target mode.	
---	---

As your “To Load” value approaches to zero, you are getting close to finishing loading a truck. It does not have to be exactly zero, as long as it is close. For example, if you have To Load value 20, it means that you are 20 under the Target. If you have To Load value -20 (negative), it means that you are 20 over the Target.

To reset to Target:

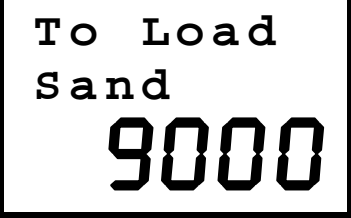




When you are finished loading a truck, you need to clear the total or reset the Target.

(Weights shown are examples only).

Press the CLEAR key.	
The console displays Target Reset for a few seconds and then ...	
... resets the display to the current target.	

To return to Total mode:

(Weights shown are examples only).

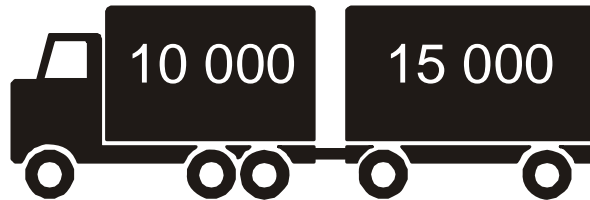
<p>To Load message indicates that we are in target mode.</p>	
<p>Press the TARGET key to enter the Target edit screen then press the EXIT key to exit target mode.</p>	
<p>The console displays No Change few seconds and then ...</p>	
<p>The console displays Total Mode for a few seconds and then ...</p>	
<p>... return to Total mode. The message Ready is shown along with the current total.</p>	

9 SPLIT MODE

Split Mode is an optional feature that is selected during installation. This feature provides an easy way to load a truck with a trailer. You can split the total into multiple sub-totals.


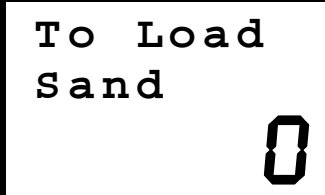
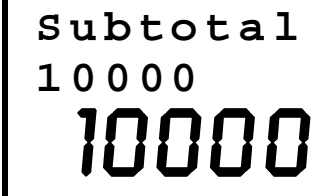
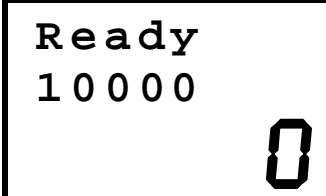
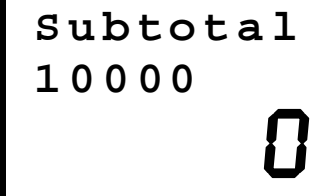
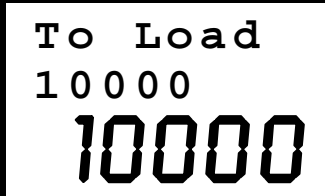
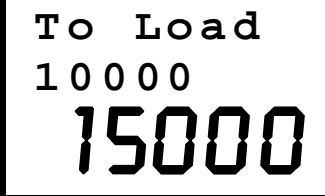

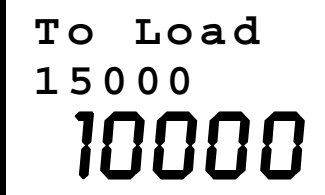
The following example illustrates how to use the split function.

Example: Suppose we are to load a truck with a trailer. The truck can carry 10 000 and the trailer 15 000, the total therefore being 25 000.



(Weights shown are examples only).

EXAMPLE	TOTAL MODE	TARGET MODE
At start: Current weight = 0 Weight needed = 10 000	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Ready Sand 0 </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Ready Sand 0 </div>
To load 10 000 into the truck...		<div style="border: 1px solid black; padding: 5px; text-align: center;"> Target = 10 000 To Load Sand 10000 </div>
Add # 1: 5 000:	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Ready Sand 5000 </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> To Load Sand 5000 </div>

EXAMPLE (continued)	TOTAL MODE	TARGET MODE
Add # 2: 5 000 The truck is full with a weight of 10 000.		
Go into Split Mode: Press the SPLIT key. At present we have: Truck Total = 10 000 Trailer Total = 0 Grand Total = 10 000	 	 
To load 15 000 into the trailer...		Target = 15 000 
Add # 3: 5 000 (First add towards the trailer). This gives us: Truck Total = 10 000 Trailer Total = 5 000 Grand Total = 15 000		

<p>Add # 4: 5 000 (Next add towards the trailer).</p> <p>This gives us: Truck Total = 10 000 Trailer Total = 10 000 Grand Total = 20 000</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Ready 20000 10000</p> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>To Load 20000 5000</p> </div>
<p>Add # 5: 5 000 (Final add towards the trailer).</p> <p>This gives us: Truck Total = 10 000 Trailer Total = 15 000 Grand Total = 25 000</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Ready 25000 15000</p> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>To Load 25000 0</p> </div>
<p>Press the CLEAR key to finish loading.</p> <p>We now have: Truck Total = 10 000 Trailer Total = 15 000 Grand Total = 25 000</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Subtotal 15000</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Total 25000</p> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Subtotal 15000</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Total 25000</p> </div>



Sample Printout:

Add(1) 5000
Add(2) 5000
Subtotal 10000

Add(3) 5000
Add(4) 5000
Add(5) 5000
Subtotal 15000

SAND 25000

10 MENU OPTIONS

The Menu allows you to change some of the settings of the console.

The options are as follows:

Setup...		Installation functions (security code required).
Language	★	Language setting.
Clock	★	Clock setting.
Scale #	★	Change scale.
Long Total		View long total of current product.
Clear All		Clear all long totals.
Auto Add	★	Auto add setting.
Contrast		Change Display contrast setting.
Module	★	Loadrite Data Module sub-menu.
Data Edit	★	Edit Data settings. Useful for overriding Auto-increment number.
Data List	★	Edit Data list.
Selftest		Self test.
Uplink		Sets up the console to communicate with PC-based "Loadrite Link" application to receive new configuration.

★ Depending upon the configuration during installation, some options may not be available.

To access an item on the menu:

1. Press the MENU key. The time is displayed.
2. Use the UP AND DOWN keys to scroll to the required option.
3. Press the ENTER key to select the option.

When you have finished with an option, the console returns to the main menu. To return to the **Ready** screen, press the EXIT key.

10.1 SETUP

The Setup option enables you to access special functions such as span calibration. You need a security code to access these functions.

To access the Setup options:

1. Press the MENU key. The time is displayed.
2. Use the UP AND DOWN keys to scroll to **Setup**.
3. Press the ENTER key to select.
4. The console prompts you to enter an access code. For special functions, key in your security code and press the ENTER key.

10.2 LANGUAGE SETTING (LANGUAGE)

The console can optionally support multiple languages. If multiple language is enabled during installation, you can select the language in which the display texts will be shown.

To change the language:

- Press the MENU key. The time is displayed.
- Use the UP AND DOWN keys to scroll to **Language**.
- Press the ENTER key to select.
- Use the UP AND DOWN keys to scroll to the desired language, then press the ENTER key.

10.3 CLOCK SETTING (CLOCK)

Clock Setting editing is an optional function that is selected during installation. Once enabled, you have access to change the console internal clock (date/time) setting.

To set the time and date – refer to section 10.3.

10.4 CHANGING SCALE NUMBER (SCALE#)

This function enables different load bearing implements to be used by the vehicle. It is available only if the multiple scale feature has been enabled during installation, e.g. different bucket sizes. Both should be assigned a number. Once enabled, the operator needs to select the correct scale for the attached implement. The Loadrite console supports four scales or attachments.

To change the scale:

- Press the MENU key. The time is displayed.

- Use the UP and DOWN keys to scroll to **Scale#**.
- Press the ENTER to select.
- Use the UP and DOWN keys to scroll to the desired scale number, then press the ENTER key.

It is important to check zero before continuing (section 5.7).

10.5 CLEAR ALL LONG TOTALS (CLEARALL)

This function clears all the long totals to zero.

To clear all the long totals – Section 5.9.

10.6 AUTO-ADD ON/OFF SETTING (AUTO-ADD)

Auto-add is an optional feature that is selected during installation. If Auto-add is enabled, the console can automatically operate the ADD function every time a load is lifted past the trigger point.

To turn on/off auto add function:

- Press the MENU key. The time is displayed.
- Use the UP and DOWN keys to scroll to **Auto Add**.
- Press the ENTER key to select.
- Use the UP and DOWN keys to adjust the setting.
- Press the ENTER to accept the setting.

10.7 DISPLAY CONTRAST ADJUSTMENT (CONTRAST)

This feature allows the operator to adjust the display contrast for optimum visibility. The console has five different contrast settings.

To adjust the display contrast:

- Press the MENU key. The time is displayed.
- Use the UP and DOWN keys to scroll to **Contrast**.
- Press the ENTER key to select.
- Use the UP and DOWN keys to adjust the setting.
- Press the ENTER to accept the setting.

10.8 DATA MODULE SUBMENU (MODULE)

This menu is only available if the Loadrite Data Module feature has been enabled during installation. The Data Module submenu

provides access to information about and operations using the Data Module.

Loadrite Data Module Properties (Properties)

This function is available only if the Loadrite Data Module feature has been enabled during installation. Data Module Properties function enables you to examine the properties and the status of the Data Logger Module connected to the console.

When activated, this function will do the following:

1. Display software and hardware information of the Data Logger.
2. Perform self-test.
3. Display data usage.

To access the Data Module Properties function:

- Press the MENU key.
- Use the UP and DOWN keys to scroll to **Module**.
- Press the ENTER key to select.

10.9 DATA EDIT (DATAEDIT)

Data Edit is an optional feature that is selected during installation. This is the same Data Edit function as described in chapter 7, except that when accessed through the Menu it allows you to over-ride any data setting, including Auto-increment-type data.

To access the Data Edit function:

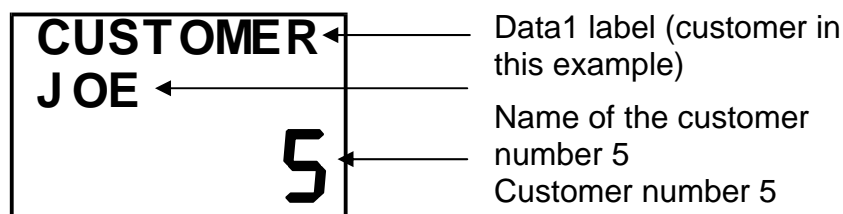
- Press the MENU key. The time is displayed.
- Use the UP and DOWN keys to scroll to **DataEdit**.
- Press the ENTER key to select.

10.10 DATA LIST (DATALIST)

If the Data function is enabled and at least one of the Data fields is configured to work with alphanumeric data, this function will appear in the menu.

The Data List function allows you to manually edit a Data List (typically a list of customer names).

For example, suppose Data1 is configured for customer name:



Data1 label (customer in this example)

Name of the customer number 5

Customer number 5

To access the Data List function:

- Press the MENU key. The time is displayed.
- Use the UP and DOWN keys to scroll to **DataList**.
- Press the ENTER key to select.
- Use the UP and DOWN keys to scroll to the list you want to edit.
- Press the ENTER key to select.

To edit an existing customer name:

- Use UP and DOWN to scroll to the name, then press the ENTER key.
- You are now in Edit mode. Make the necessary changes.
- Press the ENTER key to accept the new name.

To add a new customer name:

- Press the ADD key.
- The console will find the next available empty slot in the list and put you in Edit mode.
- Press the ENTER key to accept the new name

For your convenience, the console automatically goes to the next slot for your next new customer. If you do not have any more names to add, press the EXIT key to leave the Edit mode.

To clear an existing customer name:

- Use the UP and DOWN keys to scroll to the name.
- Press the CLEAR key.
- You will see the name disappear.
- Press the ENTER key to confirm the CLEAR operation.
- Press any other key to abort.

The slot will still appear in the list but will display 0. This slot can be edited. The name will not show up when scrolling through the Datalist using the data keys.

10.11 SELF TEST (SELFTEST)

Self test function tests various internal memory and devices.

To access the Self Test function:

- Press the MENU key. The time is displayed.
- Use the UP and DOWN keys to scroll to **Selftest**.
- Press the ENTER key to select.

10.12 UPLINK (UPLINK)

Uplink mode is a special mode that communicates with a PC using Loadrite Toolbox (optional PC application). In this mode, you can use Loadrite Toolbox to program product names and data list (customer list).

To access the Uplink function:

- Press the MENU key. The time is displayed.
- Use the UP and DOWN keys to scroll to Uplink.
- Press the ENTER key to select.

11 PRINT FUNCTIONS

The Loadrite system can print 'on-line', or store data internally for delayed printing. There is normally enough storage for up to one day, depending on usage.

If a printer is connected, all data will be printed as it is generated. This is described in the section below.

All data generated is temporarily stored in the console so that it can be printed in full later, or summary reports printed. This is described in the section 'Print Menu' in section 11.2.

11.1 PRINTED DATA

When a Loadrite printer is connected, weight data can be printed as you weigh loads. The print options are set up at installation time.

The data can be automatically printed when particular functions are performed as listed below.

On Power Up

Loadrite sign on	Optional
------------------	----------

Add/Subtract performed

Weight & Sequence number	Optional
--------------------------	----------

Data fields	Optional
-------------	----------

Date / Time	Optional
-------------	----------

Clear Short Total

Short, Long Total & Product name	Optional
----------------------------------	----------

Data fields	Optional
-------------	----------

ID number (of loader)	Optional
-----------------------	----------

User title (company name)	Optional
---------------------------	----------

Standby messages	Optional
------------------	----------

Date / Time	Optional
-------------	----------

Clear Long Total

Long Total & Product name	Always printed
---------------------------	----------------

Data fields	Optional
-------------	----------

ID number (of loader) Always printed

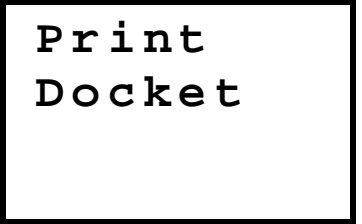
Date / Time Always printed

Zero performed

Weight zeroed Always printed

11.2 PRINT MENU

Pressing the PRINT key in the **Ready** mode displays the Print menu.

<p>Press the PRINT key and use the UP and DOWN keys to scroll to the desired option.</p> <p>Press the ENTER key to access selected option.</p>	
--	--

The options in this menu are as follows:

	Docket
	Totals
	Loadout
★	Summary
	Special
	Copy
★	Data List
	Product Names
★	Usage
★	Reset

★ Depending upon the configuration during installation, some options may not be available.

Print Docket

Print Last Docket function prints the data stored (e.g., ADD, SUBTRACT, etc) between the two last CLEAR events. If the data is not stored, it will not be printed. For example, if the console is not configured to log ADD events, weights added will not be printed. This function requires internal storage to be enabled. All configuration of this function is set during installation.

This function will not work if CLEAR is not used as intended. For example, you are loading sand. Halfway through, second truck comes in. You switch product to rocks and start loading to the second truck (without clearing total of sand). When you run this function, you will get the adds of sand plus the adds and total of rocks.

Print Totals

This function prints the total amount of each product loaded today (since midnight).

Sample Printout:

SAND	10320
PUMICE	10180

Print Loadout

This function prints out ALL print data stored in the console memory since midnight.

This function gives a printout that is basically the same as if a printer had been connected all the time. Depending on configuration, every Add, Clear, Zero etc could be included in the printout.



Sample Printout:

LOADRITE EXCAVATOR WEIGHING SYSTEM

SW 60345 V 2.00

01 JAN 98 01:45PM

LOADRITE

S/N

ID 0, LOADER 0

History Report

Data Started

01 JAN 98 12:00PM

Period Today

Zero 0

Add(1) 5100

Add(2) 5220

SAND 10320

CUSTOMER SMITH

ID 966

03 NOV 02 07:45AM

PROD03 PUMICE

Zero 0

Add(1) 5080

Add(2) 5100

Pumice 10180

CUSTOMER ADAMS

ID 966

03 NOV 02 07:45AM

.....

This function requires internal storage to be enabled. All configurations of this function are set during installation.

Print Summary

This function prints out a summary report that is grouped and summarised by Data1. If Data1 is a customer field, this function generates a customer total report using the data stored in the memory since midnight.

Sample Printout:

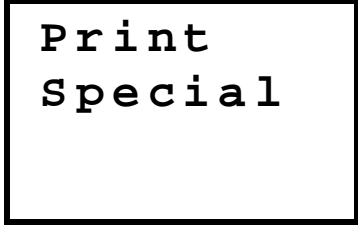
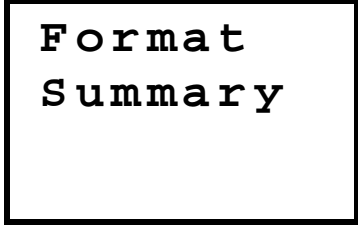
CUSTOMER SMITH
SAND 10320

CUSTOMER ADAMS
PUMICE 10180

.....

Print Special

This is the most powerful function in the print menu. It allows simple reports to be printed from the stored data.

<p>Press the PRINT key and use the UP and DOWN keys to scroll to Print Special and press the ENTER key.</p> <p>Press the EXIT key at any time to return to the Ready screen.</p>	
<p>Select the type of report:</p> <p>Summary – Prints a summary of the selected data.</p> <p>History – Prints All the selected data.</p> <p>KPI – Prints the start time, end time, total weight and average weight per hour for each day of the selected period.</p> <p>Average weight per hour is based on cleared weights and the number of hours between the first and last weight of each day.</p>	

<p>Select the period of data to use:</p> <p>Today – Prints the report based on data recorded since midnight.</p> <p>All – Prints the report based on all the data stored. (This may be meaningless unless you know the start time).</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Period</p> <p>Today</p> </div>
<p>Use the Arrow keys to select the option required and press the ENT key. If Today, Yesterday or This Week was selected, the Group options will display. If All was selected for History or KPI reports, the Port options will display.</p>	
<p>Select how data is to be grouped (used for summary reports only):</p> <p>Totals – The printout is grouped and summarised by product total.</p> <p>Customer (Data1) - The printout is grouped and summarised by Data field 1.</p> <p>Docket (Data2) - The printout is grouped and summarised by Data field 2.</p> <p>Truck (Data3) - The printout is grouped and summarised by Data field 3.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Group</p> <p>Totals</p> </div>
<p>This option only appears if the printout is not grouped on Totals (e.g. Data1, Data2, and Data3):</p> <p>All – All values are used on the printout.</p> <p>One – Only one of the ‘Grouped’ values is reported on. For example, if the printout is grouped on Customer, a report can be generated on one Customer in the memory.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Match</p> <p>All</p> </div>

Once the report is configured, the console will begin printing (ensure that the printer is connected BEFORE beginning to configure the report).

The generation and printing of the report may take some minutes, depending on how much data is stored.

Print Copy

This function sets the number of docket copies to be printed at each clear event.

Print Data List Names

This function prints out a list of the entire Datalist items (normally Customers) configured in the console. This function is normally only used to check the names when the list has been updated.

Print Product Names

This function prints out a list of all the Product names configured in the console. This function is normally only used to check the names when the list has been updated.

Print Stand-by message

The console normally displayed the service contact details of your local Loadrite Distributor when the stand-by key is pressed. These details can also be printed if required by using the 'Print Stand-by' function.

Print Usage

This function displays the current usage of the internal print buffer. Percentage free storage will be displayed.

Print Reset

The Reset function allows all data in the temporary internal print buffer to be deleted. It is recommended to run this reset function regularly after other reports have been generated.

12 OBTAINING BEST RESULTS

12.1 LIFTING SPEED

The hydraulic pressure required to lift a load varies with the speed of lift. The console electronically corrects for most variations, but better accuracy is obtained if you limit the range of lifting speed used.

12.2 WEIGHING ZONE

The console calculates the weight of each load as the bucket moves through the weighing zone. It is therefore important to make the start of the weighing zone as stable as possible.

Set the breakout level point after the bucket is clear of the digging area to avoid shudder associated with breaking free of the material being loaded.

12.3 CENTRE OF GRAVITY

The hydraulic pressure in the lifting cylinders depends on where the centre of gravity of the load is.

It is important that the bucket is kept level throughout each lift.

12.4 SLEWING

Slewing the excavator introduces additional factors to be compensated for. To ensure that the most accurate result is achieved, don't slew until the console has calculated the weight of the load and you will ensure that the most accurate result has been achieved.

13 ERROR MESSAGES

13.1 LIFT SPEED TOO HIGH

The console has detected that the bucket was not moving smoothly enough through the weigh zone for a sufficient time to allow an accurate weight calculation to be made.

This can be resolved by reducing the lifting speed to allow the bucket to be in the weighing zone for a longer time period.

13.2 POOR LIFT

If the lifting arm is bouncing significantly while weighing, an error occurs. This can happen if, for example, the bucket is lifted in a jerky manner.

The console can detect a bouncing load and if this occurs, the indicator displays the message **Unstable Load**.

13.3 LIFT NOT SMOOTH

The console has detected that the bucket was not moving at a constant speed through the weigh zone and may have been accelerating/decelerating.

13.4 SLEW RPM TOO HIGH

The console has detected that the measured slew speed has exceeded acceptable limits, as the weight was being measured. This can be resolved by slowing the slew of the machine whilst weighing is taking place.

13.5 STICK IN POSITION

Should this message appear as the bucket is lifted, the stick is outside of the optimal weighing zone as setup during installation. Contact your local Loadrite representative if this message appears too often.

13.6 CHECK POWER

The console has detected that the power supply has reached an unstable level. Check that the power source is stable and between +12 V and +32 V.

13.7 CHECK TRANSDUCER

The console has detected an error in the pressure transducer signal input. This indicates a fault in either the pressure transducer or the cable that connects the transducer.

13.8 CHECK TRIGGER

The console has detected a fault in one of the position sensors or the cables that connect them.

13.9 CHECK ZERO

The console automatically reminds the operator to check zero occasionally.

See Check Zero Prompt on page 16.

When this message appears you need to perform zero lift.

13.10 LIFT OVER RANGE

The console has detected that the lift pressure signal was beyond the range of the transducer.

This indicates very high hydraulic system pressure, a fault in either the pressure transducer or the cable that connects the transducer.

13.11 LIFT UNDER RANGE

The console has detected that the lift pressure signal was too low.

This indicates a fault in either the pressure transducer or the cable that connects the transducer.

13.12 MODULE DATA LOST

The console has the ability to store data internally in the event that the Loadrite Data Module is absent or full. The console will generate this message when the internal data storage is full and some data has been lost as a result.

You need to install a new Data Module immediately to avoid further loss of data.

13.13 MODULE ERROR

The console has detected an error when writing to the Loadrite Data Module.

Check that the Data Module is securely connected to the console.

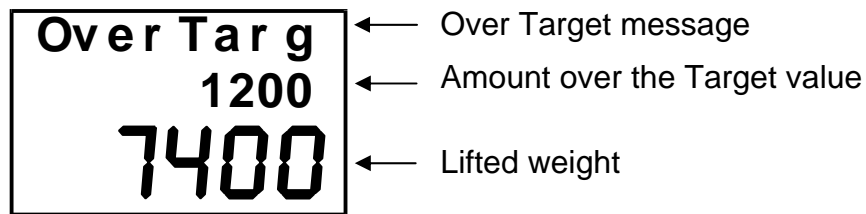
13.14 MODULE FULL

The console has detected that the Loadrite Data Module is full.

The full Data Module should be removed and taken to the MMS for data transfer.

13.15 OVER TARGET

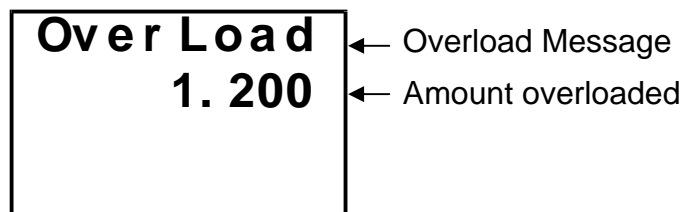
Over Target means that adding the lifted weight will exceed the target value. The lifted weight can still be added by pressing the **ADD** key.



Auto-add function will not automatically add Over-Target weight.

13.16 OVERLOAD

Overload means that the lifted weight exceeds the full scale (capacity) setting. If the Overload Error is set during installation, overloaded weight cannot be added.



13.17 PRINTER DISABLED

Print function has been disabled at installation.

13.18 PRINTER ERROR

The console has detected a fault in the printer.

Check that the printer is on-line and not out of paper.

13.19 TILT ERROR

The console has detected a fault in one of the tilt sensors or the cables that connect them.

13.20 RETURN OVER RANGE

The console has detected that the return pressure signal was beyond the range of the transducer.

This indicates very high hydraulic system pressure, a fault in either the pressure transducer or the cable that connects the transducer

13.21 RETURN UNDER RANGE

The console has detected that the return pressure signal was too low.

This indicates a fault in either the pressure transducer or the cable that connects the transducer.

13.22 TOO HEAVY, ZERO ABORTED

The console zero function can only zero up to 10% of full scale. See chapter five for details.

13.23 WARM UP LIFT

This message appears if the console has been switched off for more than one hour. You need to lift the bucket a few times to warm up.

See the Warm Up Screen on chapter three for details.

14 SPECIFICATIONS

Suitable Applications

The console measures weight by sensing the hydraulic pressure required to lift a load with a hydraulic excavator.

Weighing Accuracy

Typical accuracy is $\pm 3\%$ for most excavators. This may vary with different machine types, installation options and usage conditions.

Minimal Weighing Delay

Weighing delay is minimal, because the weighing function is carried out during a normal loading cycle.

Power requirements

Supply Voltage	12 to 32 Volts DC.
Supply current	Loadrite indicator: 160mA typical, 350mA max. Loadrite printer: 50mA standby, 4A peak.

Automatic transient suppression. Exceeds relevant SAE specifications for DC automotive power supply transients.

Signal Inputs and Outputs

Pressure Transducer input	4 - 20mA (0-100%).
Sensor Trigger inputs	PWM.
Serial communications.	RS232C protocol to printer and data logger.

Display

LCD display	Back light.
-------------	-------------

Keypad

20 keys	Back light. Numeric and special functions.
---------	--

Clock

Built-in clock	Hours, minutes, day, month, year.
----------------	-----------------------------------

Physical

Loadrite indicator	Protected to IP54. Weight: 1.6kg.
Pressure transducer	Protected to IP67.
Position sensor	Protected to IP67.

Available Options

Loadrite printer	24 column.
Data logger	Provides electronic data collection.
Remote ADD button	For operator convenience.

A large number of additional operating features can be enabled at installation time.

15 OUTPUT / INPUT CONNECTIONS

Transducer

1. +12V
2. Return pressure input
3. Transducer current input
4. +10 volt excitation
5. Lift pressure input
6. Shield
7. Ground

Power/Control

1. Negative supply (ground)
2. Positive supply
3. Remote button 2 (clear)
4. Remote button 1 (add)
5. Tilt Sensor 1
6. Tilt Sensor 3
7. Tilt Sensor 2
8. +V Aux
9. Digital Out
10. Boom Position
11. Stick Position
12. CAN Hi
13. CAN Lo
14. +V Raw
15. Ground output

Printer/Logger

1. Negative supply to printer
2. Positive supply to printer
3. +12V output
4. RX2



5. TX2
6. Printer RS232 output
7. Printer busy input
8. EDP RS232 input
9. EDP RS232 output
10. Ground output
11. Boot

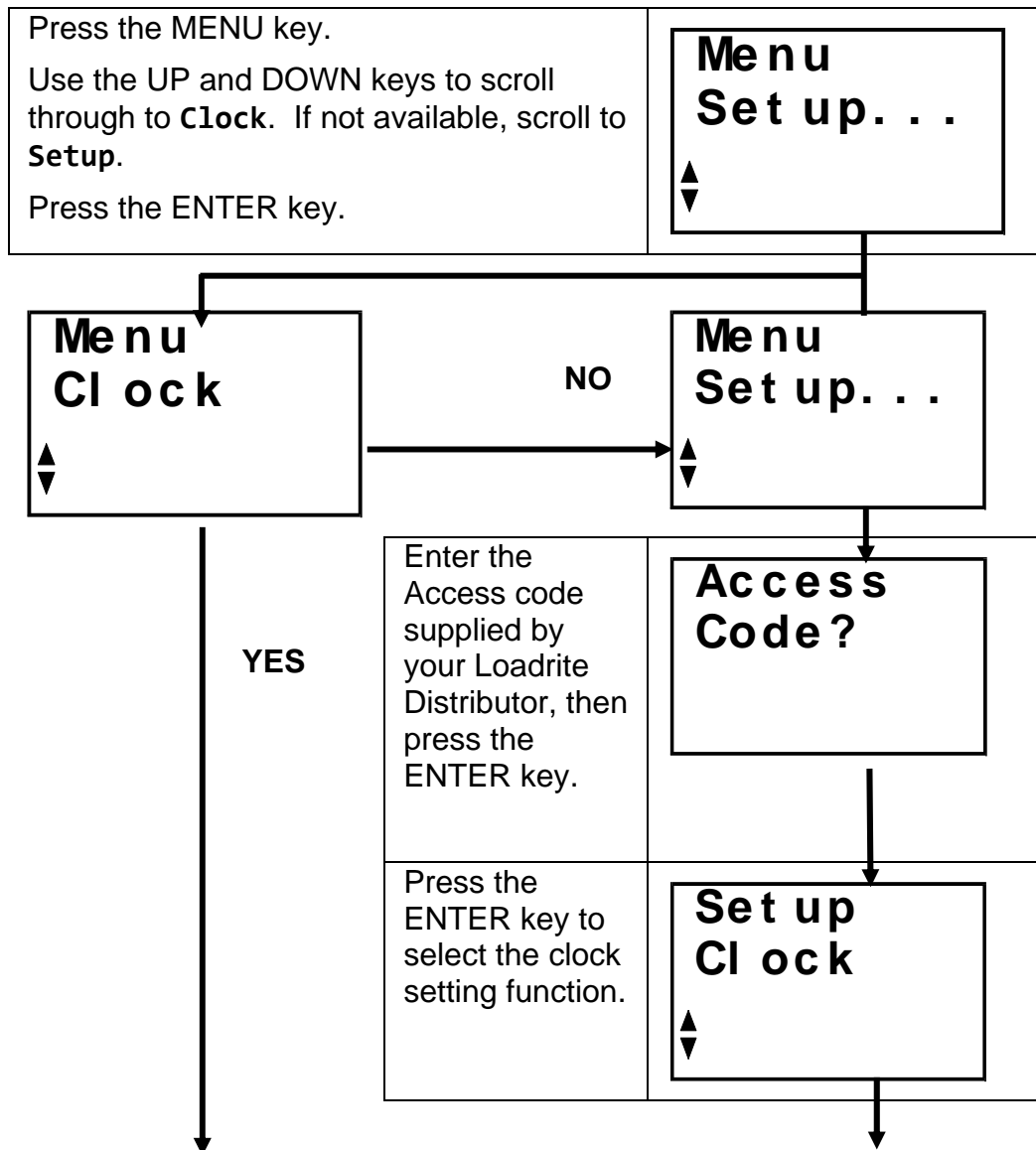
APPENDIX A - TIME AND DATE

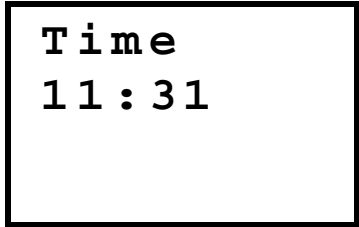
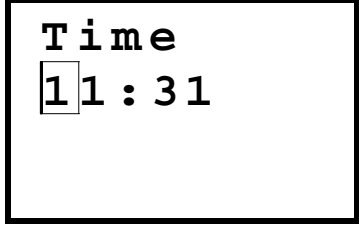
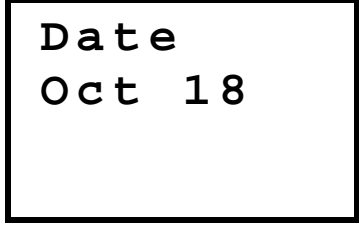
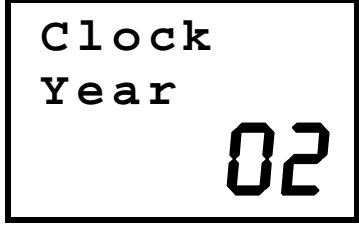
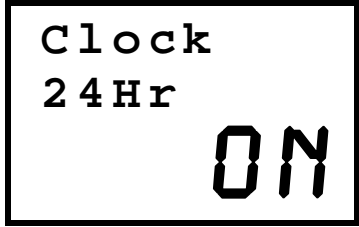
The console has an internal clock which can be used for inserting the time and date into printed data.

You can display the time and date by pressing the MENU key.

To set the time and date:

You may need an access code from your Loadrite Distributor to be able to set the clock. This is configured at installation time. A code is needed if the “Clock” function does not appear on the menu.



<p>The Indicator displays the first of the time / date screens.</p> <p>You can use the UP and DOWN keys to scroll through the time/ date screens. When on the required screen, press the ENTER key to change the setting.</p>	
<p>Time of day screen</p> <p>Press the ENTER key to allow editing, a flashing cursor will appear.</p> <p>Use the number keys to change time.</p> <p>Use the UP and DOWN keys to change AM/PM setting if available.</p> <p>Press the ENTER key to confirm the new time.</p>	
<p>Day and month screen</p> <p>Press the ENTER key to allow editing.</p> <p>Use the number keys to enter the month and day. (Enter 00 for October, 01 for November, and 02 for December).</p> <p>Press the ENTER key to confirm the new date.</p>	
<p>Year screen</p> <p>Press the ENTER key to allow editing.</p> <p>Use the number keys to enter the year.</p> <p>Press the ENTER key to confirm the new year.</p>	
<p>Time of day screen</p> <p>Press the ENTER key to allow editing. The setting will flash.</p> <p>Use the UP and DOWN keys to change the setting.</p> <p>Press the ENTER key to confirm the new setting.</p>	

APPENDIX B – SPAN CALIBRATION ADJUSTMENT


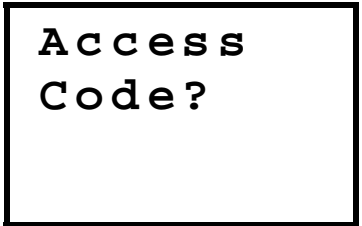
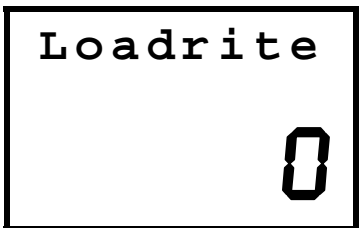
This function allows small changes to be made to the console calibration if the bucket of the machine is modified or if no accurate test weight is available when the console is calibrated at installation time.


The adjustment is carried out by entering the total of weights recorded at a weigh bridge (scale house) over a period of time and the corresponding console total.

To perform the adjustment you need to obtain a security access code from your Loadrite installer.

WARNING: The console alters its calibration every time this function is used. It is important that you only use this function once with a given set of data. If the same weights are entered again, the console will over correct and its accuracy will be seriously impaired.

The method is explained using an example below.

<p>Press the MENU key.</p> <p>Use the UP and DOWN keys to scroll through to Setup. Press the ENTER key.</p>	
<p>Enter the Access code supplied by your Loadrite Distributor.</p> <p>Then press the ENTER key.</p>	
<p>The console prompts you to enter the Loadrite total weight.</p> <p>Key in the Loadrite total and press the ENTER key.</p>	

<p>Key in the weigh bridge total and press the ENTER key.</p>	
<p>The console briefly displays Span Updated and then returns to the menu.</p> <p>Press the EXIT to return to the Ready screen.</p>	

Checking the Adjustment

You can check the Calibration Adjustment by obtaining and comparing new Loadrite and Weighbridge Values. If necessary, the Calibration Adjustment can be performed again using the new data.

Notes to remember:

All trucks and trailers should have tare weights confirmed for all loads to be checked. This ensures that a true weight can be established. Avoid split weighing the truck and trailer.

APPENDIX C - LOADRITE TERMINOLOGY

The following table lists a range of terms and definitions that are used to describe Loadrite products, features and processes.

Auto-add	Automatically adds the lifted weight to the total every time a load is lifted.
Auto-tare	A feature that allows you to pre-programme tare weights. The operator can then select a truck from memory and the Loadrite will automatically display the tare weight for that truck.
Auto-target	A feature that allows you to pre-programme target weights. The operator is able to select a truck from memory and the Loadrite will display the target weight for that truck.
Batch mode	The Batch mode helps the operator to keep track of how much of each product is required when you are working to a set recipe.
Blend mode	The Blend mode keeps track of what is required by bucket load quantity for each product in order to formulate a recipe.
Breakout level	The position of the bucket just after the excavator finishes digging, before weight calculation begins.
Bucket	Is used to describe the weighing implement that holds the load while it is being transferred.
Console	The visible Loadrite hardware that operators interface with in the loader cab.
Data field	Fields that allow you to label your weighing data to help you track and monitor your output e.g. by truck, customer etc.
Data module	A memory device which can be attached to the Loadrite console to store payload data.
Display	A large LCD screen with adjustable backlighting for night and low light

	operations. Used to display weight information and operator messages.
Inclinometer	A slope detection sensor that measures the tilt angle of the loader. This is used in Legal for Trade applications, to ensure accurate weighing within an approved tilt angle range.
Interlock	Bucket back and bucket forward position detection sensors. Used in Legal for Trade applications, where the bucket must be fully rolled back for weighing and rolled forward for emptying.
Keypad	The set of keys which allow you to operate the Loadrite console.
Legal for Trade	Certification by a local weights and measures authority to legally sell product from your loader.
Load	One discrete weigh lot or 'scoop'.
Loader	The machine responsible for lifting the load e.g. wheel loader, forklift.
Loadrite system /the system	Refers to the entire Loadrite system including the console, transducers, sensors etc.
Long total	The long total is typically used to accumulate the weights loaded over a long period, for example a shift or a day.
Model	The different Loadrite consoles Pro, Pit Boss, Express, Force and Sprint.
Operation mode	Any mode that relates to the running total of accumulated weights e.g. Total or Target mode.
Pressure transducer	A pressure sensor, that is connected to the loader's hydraulic system to measure the hydraulic pressure required to lift the load.
Primary product	The first item in a recipe is referred to as the primary product.
Printer	The printer is mounted in the loader cab. It provides a paper record of the weighing information collected by the Loadrite system. It is an optional accessory.
Product/material	Material that comprises a load.

Radio modem	Used to transfer payload data, live, from the Loadrite console, to the office.
Recipe	Some Loadrite operation modes allow you to enter different quantities of materials to make up a recipe which forms a product.
Remote add button	An additional add button which is mounted in close proximity to the loader controls. This feature enables the operator to use this frequently used button without having to take their hands away from the controls used to operate the loader.
Short Total	Your Loadrite keeps a total of the bucket weights that you add. As you add successive loads, the Loadrite displays an updated total which is a sum of what has been loaded so far, this is the short total.
Split weighing	The split weighing feature makes it easier for the operator to load trucks with trailers. It gives the operator the ability to run individual totals for loading truck and trailer units.
Standby	All Loadrite systems have a 'standby' mode which is similar to turning the Loadrite off. This feature is used when the operator is moving the loader around and does not need to weigh.
Tare mode	Tare mode gives you different options to work with tare weights. The Loadrite system can calculate the net weight of a pallet, for example, or notify when the maximum vehicle weight is reached.
Target mode	The target mode feature enables you to enter a predetermined target weight and your Loadrite will then deduct each subsequent lift from the total until that target weight is reached.
Tip-off	Final bucket load adjustment, which allows you to tip a measured amount of the product off the last bucket to ensure an exact target weight, is reached.
Transducer	(see pressure transducer)
Trigger	A position sensor responding to the position of the lift arms, which informs the system

	when to take a weight reading. Loadrite systems have three types of trigger; optical, rotary and magnetic.
Trigger point	A point in the position of the arms where a weight reading is taken.
Weighbridge	A platform scale for weighing vehicles. Also referred to as scale house and truck scale.
Weigh mode	Any mode that gives the operator different options to weigh the material in the bucket e.g. tip-off or tare mode.
Zero	Zeroing is required to zero the bucket from time to time. This is to avoid inaccurate readings due to build up of material in the bucket, which can occur when operators are dealing with wet or sticky materials.

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