

LOADRITE

Sprint

Weighing System



OPERATORS MANUAL

LOADRITE

SPRINT Weighing System

Model LR911

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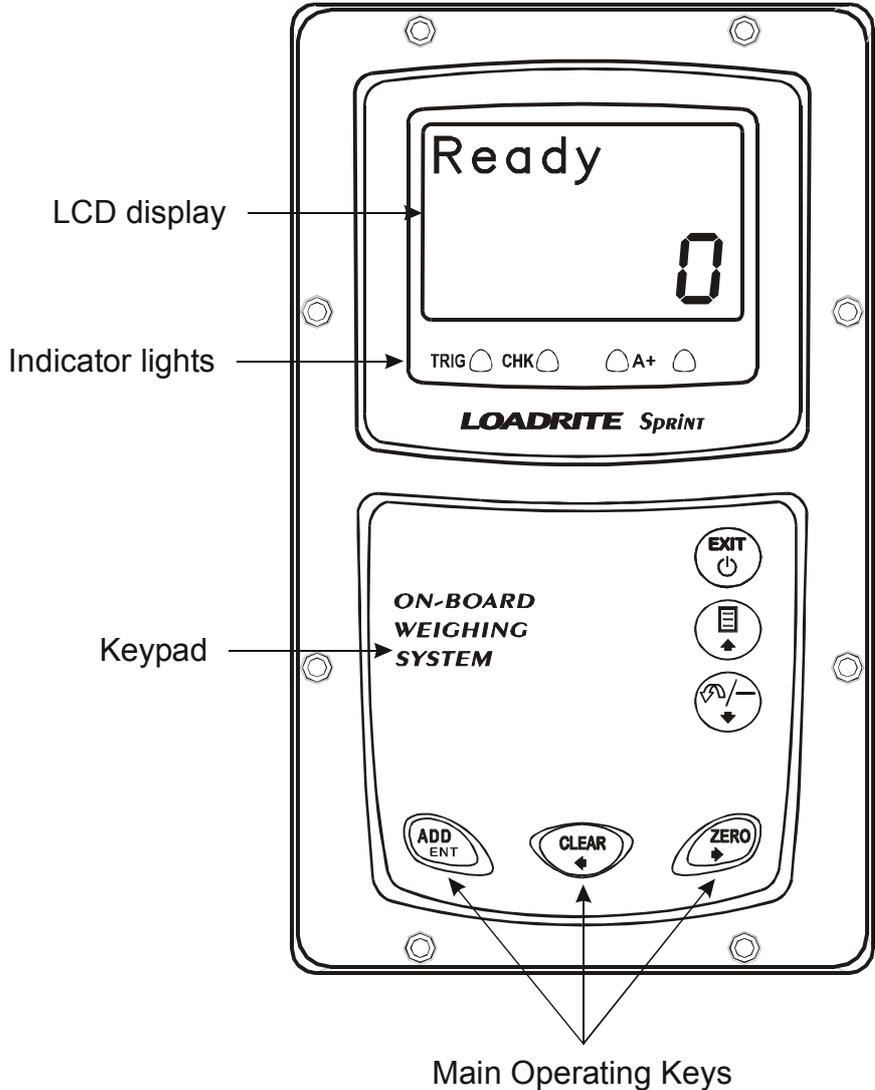
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1 Introduction

The Loadrite Weighing System measures the weight of loads lifted by small front-end loaders, forklift trucks and similar machines that use hydraulic rams to lift the load. The Loadrite is installed in the cab of the loading machine and is connected to sensors on the lifting arms.

As the machine raises the load, the Loadrite measures the hydraulic pressure in the lift cylinders, converts pressure into a weight reading and displays the result. An electronic trigger device mounted on the lift arms ensures that the pressure readings are always taken at the same position on every lift.

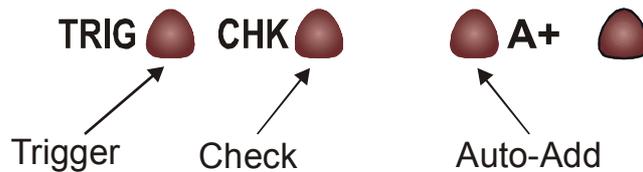
The weight of the bucket or forks and associated structures is zeroed out when the system is calibrated so that only the weight of the payload is displayed. While operating the loader, the driver can add each weight lifted to a running total.



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

Indicator Lights

The indicator lights are provided below the LCD screen.



Trigger	Illuminates when a load is lifted past the trigger point. When this light is on, the lifted weight may be added.	Pages 5 and 10
Check Function	Illuminates when the Loadrite is in the user-selected function. Configuration is set during installation.	-
Auto-Add	Illuminates when the Loadrite is in Auto-Add mode. In this mode, the Loadrite will automatically add the lifted weight.	Page 11

Keypad

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

	Exits an operation without changing the data. When pressed on the Ready screen, puts the Loadrite into standby mode. To return to the Ready screen, press any key.	
	Access to menu. Scroll up.	Page 18
	Subtracts the current load from the total. Recalls the last load. Scroll down.	Page 12 and 13

	Adds the current load to the total. Enter key for accepting data or changes.	Page 6 and 11
	Clears the short total for the current product. Scroll left.	Page 7 and 16
	Zeroes out the current load. Scroll right.	Page 7 and 13

2 Quick Start Guide

This section summarises the common Loadrite procedures. For full details of weighing methods, see Chapter 3 Weighing Overview on page 9 and Chapter 4 Weighing Procedures on page 11

Switching On

The Loadrite powers up automatically when you switch on the ignition of the loading machine.

If the Loadrite has been switched off for more than 30 minutes, it displays the Warm Up screen when powered up.

Standby

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

To put the Loadrite into standby press



, the EXIT key, when in the **Ready** mode.

To restart the Loadrite, press any key.

S t a n d b y

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 or forks a few times.

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

Raise the empty bucket or forks past the trigger point three times.

W a r m u p
L i f t 3

<p>The Loadrite 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 Loadrite 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</p> <p style="text-align: right; font-size: 2em;">0</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Check Zero</p> </div>
--	--

The Ready Screen

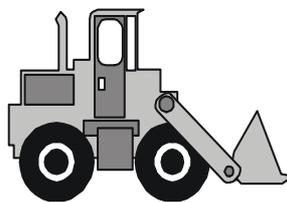
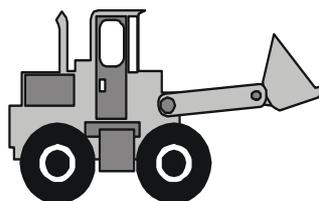
The Ready screen shows the ready status and the short total. The short total is simply the sum of loads since you last cleared the total.

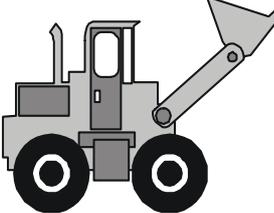
When the Ready screen is displayed, the Loadrite is ready to weigh.

<div style="border: 1px solid black; padding: 10px;"> <p>Ready</p> <p style="font-size: 2em; text-align: center;">3400</p> </div>	<p>← The Loadrite is ready to weigh</p> <p>← Current total loaded</p>
---	---

Weighing a Load

(Weights shown are examples only)

<p>Loadrite is ready to weigh sand. (Current total 3400)</p>		<div style="border: 1px solid black; padding: 5px;"> <p>Ready</p> <p style="font-size: 2em; text-align: center;">3400</p> <p style="font-size: 0.8em; text-align: center;">TRIG <input type="checkbox"/> CHK <input type="checkbox"/> <input type="checkbox"/> A+ <input type="checkbox"/></p> </div>
<p>Raise the load smoothly past the trigger point using normal engine revs. The bucket must be fully rolled back during weighing.</p>		<div style="border: 1px solid black; padding: 5px;"> <p>Weighing</p> <p style="font-size: 2em; text-align: center;">3400</p> <p style="font-size: 0.8em; text-align: center;">TRIG <input type="checkbox"/> CHK <input type="checkbox"/> <input type="checkbox"/> A+ <input type="checkbox"/></p> </div>

<p>A short time later, the Loadrite beeps, turns the TRIG indicator light on and displays the load lifted (2200).</p>		<table border="1"> <tr> <td> <p>Total 3400 2200</p> </td> </tr> <tr> <td> <p>TRIG  CHK   A+ </p> </td> </tr> </table>	<p>Total 3400 2200</p>	<p>TRIG  CHK   A+ </p>
<p>Total 3400 2200</p>				
<p>TRIG  CHK   A+ </p>				



The trigger point is where the trigger activator (e.g. the metal plate in the optical trigger or the magnet in the magnetic trigger) passes the body of the trigger.

Static Weigh function

The Loadrite has an option known as 'Static Weigh'. When this is used, the weight display is always 'live' and no trigger is used.

The 'Trigger' light is used to indicate that the weight being measured is 'stable' (not changing too much) and therefore can be Added, Subtracted or Zeroed.

Your Loadrite dealer will have configured the Static Weigh function if required.



Recall function does not work when in 'Static Weigh' mode – refer to page 15.

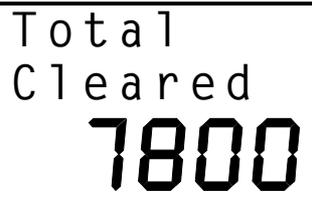
Adding a Load

(Weights shown are examples only)

<p>Before lifting. (Current total 5600)</p>	<table border="1"> <tr> <td> <p>Ready 5600</p> </td> </tr> </table>	<p>Ready 5600</p>
<p>Ready 5600</p>		
<p>Raise the load smoothly past the trigger point using normal engine revs. The Loadrite beeps and displays the load. (Weight of load 2200)</p>	<table border="1"> <tr> <td> <p>Total 5600 2200</p> </td> </tr> </table>	<p>Total 5600 2200</p>
<p>Total 5600 2200</p>		

<p>Press  .</p> <p>The Loadrite updates the total and returns to the Ready state.</p> <p>(New total 7800)</p>	
--	---

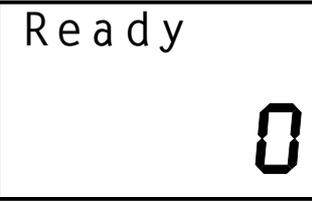
Clearing the Short Total

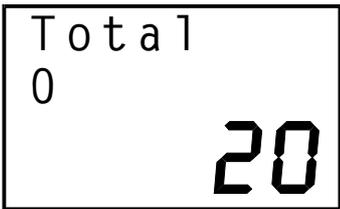
<p>When you want to reset the short total to zero (e.g. after loading a truck) ready for another loading operation,</p> <p>Press  .</p>	
<p>The Loadrite displays Total Cleared for a few seconds, clears the short total for the current product and then ...</p>	
<p>...returns to the Ready screen.</p>	

Zeroing

It is required to zero the Loadrite 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.</p> <p>Make sure that the bucket is empty and fully rolled back.</p>	
---	---

<p>Raise the bucket smoothly past the trigger point.</p> <p>The Loadrite beeps and displays the load.</p>	
<p>Press  .</p> <p>The Loadrite performs the zero adjustment and returns to the Ready state.</p>	

More detailed information about Zeroing can be found on page 13.

3 Weighing Overview

Weighing Mode

While individual bucket weight can be measured, the Loadrite also has an ability to accumulate how much weight you have loaded on to a truck. This weighing mode is called Total mode. This is, as you add bucket loads, the weights are added to the totals. The short total is displayed.

Short and Long Totals

The Loadrite keeps a total of the bucket weights that you add. Two independent totals are stored.

Short Total	<p>Typically used to display the total weight loaded onto a truck.</p> <p>As you add successive loads, the Loadrite displays the updated Short Total (sum of the loads so far) on the Ready screen.</p>
Long Total	<p>Typically used to accumulate the weights loaded over a longer period, for example a shift or a day.</p> <p>Long total may be viewed via menu. See page 20.</p>

Accurate Weighing

For accurate weighing, make sure that:

- The bucket or forks are fully rolled back for each lift.
- The loader is stationary.
- The lift arms start well below the trigger point. This ensures that all acceleration and load bounce has been eliminated well before the trigger sequence begins.
- The Loadrite is correctly zeroed. (Zeroing is described on page 13).

General Method of Weighing

1. **BUCKET BACK.** After picking up material into the bucket, roll the bucket back.
2. **LIFT.** Raise the load smoothly past the trigger point using normal engine revs. (The trigger point is where the metal plate passes the body of the trigger). For best results, operate the lift lever before accelerating the engine so that the machine does not rock as it lifts. The Loadrite beeps, turns the TRIG light on and displays the load. (See also page 5).
3. **ADD.** The Loadrite waits for a few seconds for you to take one of the following actions:

- Press  to add the weight to the long and short totals, or
- Press  to subtract the load from the totals, or
- Press  to zero the measuring system.

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

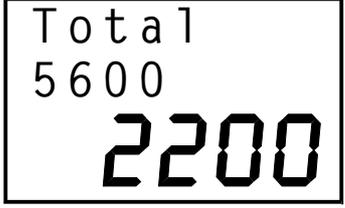
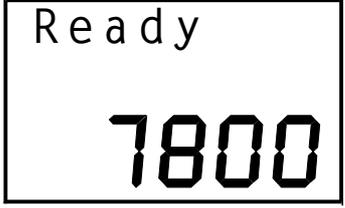
4 Weighing Procedures

Adding a Load

This function adds the lifted weight to the short and long.

To Add a load

(Weights shown are examples only)

<p>Before the load is lifted. (Current total 5600)</p>	
<p>Raise the load smoothly past the trigger point. The Loadrite beeps and displays the load. (Weight of load 2200)</p>	
<p>Press . The Loadrite updates the total and returns to the Ready state. (New total 7800)</p>	

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

Auto-Add

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

<p>The Auto Add indicator light illuminates when the Loadrite is in Auto-Add mode.</p>	
--	---

To turn on/off auto add function

1. Press .
2. Use ↑ ↓ to scroll to **Auto Add**.
3. Press  to select.
4. Use ↑ ↓ to adjust the setting.
5. Press  to accept the setting.



If Auto-Add is on:

The procedure for zeroing is different. See page 14.

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.

Another example is when a log has been added and then removed from a truck.

To subtract a Load

(Weights shown are examples only)

<p>Before the load is lifted. (Current total 5600)</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Ready</p> <p style="font-size: 2em; font-weight: bold;">5600</p> </div>
<p>Raise the load smoothly past the trigger point. The Loadrite beeps and displays the load. (Weight of load 2200)</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Total</p> <p>5600</p> <p style="font-size: 2em; font-weight: bold;">2200</p> </div>
<p>Press .</p> <p>The Loadrite updates the total and returns to the Ready state. (New total 3400)</p>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Ready</p> <p style="font-size: 2em; font-weight: bold;">3400</p> </div>

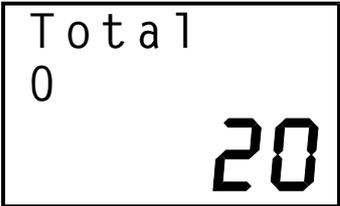
Zeroing

When you raise an empty bucket past the trigger point, 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 Loadrite

<p>Before lifting.</p> <p>Make sure that the bucket is empty and fully rolled back.</p> <p>The loader must be on level ground.</p>	
<p>Raise the bucket smoothly past the trigger point using normal engine revs.</p> <p>The Loadrite beeps and displays the load.</p> <p>(Example weight 20)</p>	
<p>Press the  key.</p> <p>The Loadrite performs the zero adjustment and returns to the Ready state.</p>	

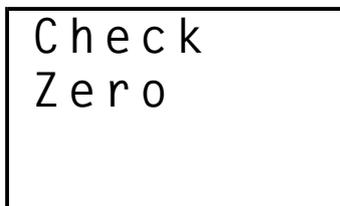
Large Zero Error

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

If the weight is greater than 10% (typical is 10% but it can be set up to 75% during installation) of full scale, when you press  , the Loadrite 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 Loadrite 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 Loadrite will remind the operator to do a ZERO check:

- Every 15 minutes for the first hour
- 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 Loadrite is configured, you will need to carry out the following procedure:

<p>Before lifting:</p> <p>Press the  key.</p>	
--	---

<p>Raise the empty bucket smoothly past the trigger point. The Loadrite beeps and performs the zero adjustment.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Zero Updated</p> </div>
---	--

If Auto Add is not on, or Auto Add Time is not set to 0, follow the standard procedure to zero (page 13).

Auto-Add is described on page 11.

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).



Recall function does not work when in 'Static Weigh' mode. To correct a mistake incurred when in 'Static Weigh' mode, re-weigh the load and then subtract that amount. Refer to page 12 for subtracting a load.

To Recall the previously lifted weight

(Weights shown are examples only)

<p>Current total 5600</p> <p>Press </p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Ready</p> <p style="font-size: 2em;">5600</p> </div>
<p>The Loadrite beeps and displays the last load.</p> <p>(Weight of last load 2200)</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Total</p> <p>5600</p> <p style="font-size: 2em;">2200</p> </div>

If the last action was an “add”, you can subtract.
 If the last action was a “subtract”, you can add.
 (Example: subtracting a load that was previously added, new total 3400)

Ready
 3400



If you press a key that is not allowed in the circumstances, such as



when the recalled load was previously added, the Loadrite ignores the key press.

Viewing Long Total

To view the Long Total

(Weights shown are examples only)

In **Ready** screen,

Press  to display the menu and use
 ↑ ↓ to scroll to the Long Total option.

Press .

The Loadrite displays the Long Total.

Long Tot
 23400

Clearing Totals

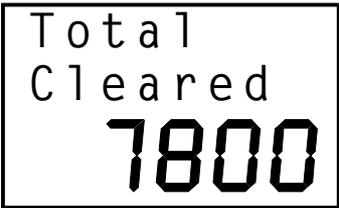
To clear the Short Total

(Weights shown are examples only)

In the **Ready** mode,

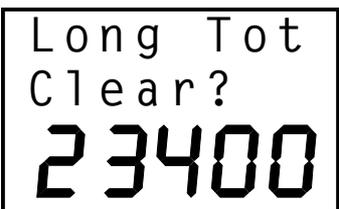
press .

Ready
 7800

<p>The Loadrite displays Total Cleared for a few seconds, clears the Short Total and then ...</p>	
<p>...returns to the Ready screen. The next ADD operation starts a new Short Total.</p>	

To clear the Long Total

(Weights shown are examples only)

<p>In the Ready mode,</p> <p>Press  to display the menu and use   to scroll to the Long Total option.</p> <p>Press  .</p> <p>The Loadrite displays the Long Total.</p>	
<p>Press  .</p> <p>The Loadrite asks you to confirm the clear</p>	
<p>Press  to confirm.</p> <p>The Loadrite 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>	

5 Menu Options

The Menu allows you to change some of the settings of the Loadrite. 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
Auto Add	★	Auto add setting
Trigger Screen	★	Rotary trigger position screen
Module	★	LD940 Module properties
Usage	★	Display the internal print buffer usage
Reset	★	Reset the internal print buffer
Selftest		Self test
Uplink		Sets up the Loadrite 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 time is displayed.
2. Use   to scroll to the required option.

3. Press  to select the option.

When you have finished with an option, the Loadrite returns to the main

menu. To return to the Ready screen, press .

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 .
2. Use ↑ ↓ to scroll to **Setup**.
3. Press  to select.
4. The Loadrite prompts you to enter an access code. For special functions, key in your security code and press .

Clock Setting (Clock)

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

To set the time and date – refer to page 32.

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. For example, bucket or forks. Each should be assigned a number. Once enabled, the operator needs to select the correct scale for the attached implement.

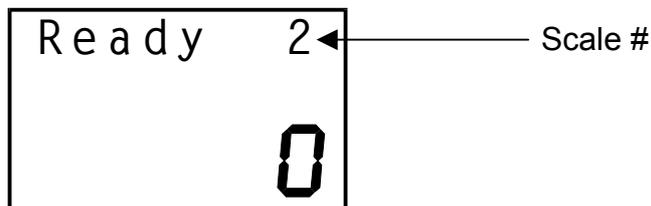
To change the Scale

1. Press . The time is displayed.
2. Use ↑ ↓ to scroll to **Scale#**.
3. Press  to select.
4. Use ↑ ↓ to scroll to the desired scale number, then press .



It is important to check zero before continuing (page 13).

If multiple scale is enabled, the scale number is shown on the Ready screen.

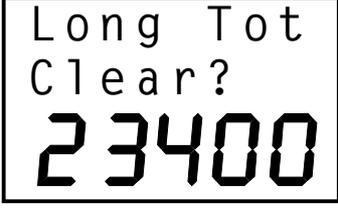


Long Total (Long Tot)

To view the Long Total

<ul style="list-style-type: none"> • Press  . • Use ↑ ↓ to scroll to the Long Total option. • Press  to select. • Press  to return to the Ready screen. 	
---	--

To clear the Long Total

<p>Press  .</p> <p>Use ↑ ↓ to scroll to the Long Total option</p> <p>Press  to select</p> <p>The Loadrite displays the Long Total.</p>	
<p>Press  .</p> <p>The Loadrite asks you to confirm the clear</p>	

<p>Press  to confirm.</p> <p>The Loadrite 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>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Ready</p>  </div>
---	---

Auto Add On/Off Setting (Auto Add)

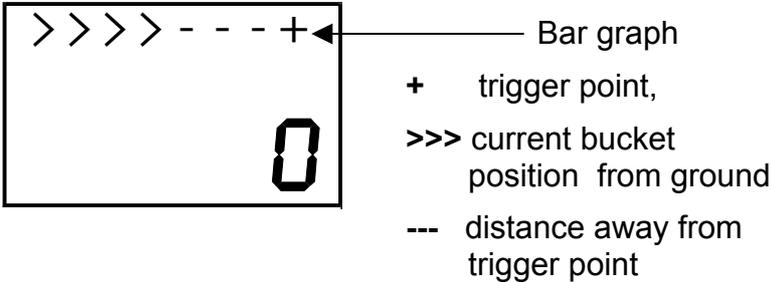
Auto Add is an optional feature that is selected during installation. If Auto-Add is enabled, the Loadrite can automatically operate the ADD function every time a load is lifted past the trigger point.

To turn on/off Auto Add function

1. Press  .
2. Use ↑ ↓ to scroll to **Auto Add**.
3. Press  to select.
4. Use ↑ ↓ to adjust the setting.
5. Press  to accept the setting.

Rotary Trigger Position Screen (TrigScrn)

This function displays a bar graph that reflects the current position of the rotary trigger. It is available only if the rotary trigger is installed.



To turn on/off Rotary Trigger Position Screen

1. Press  .

2. Use   to scroll to **TrigScrn**.

3. Press  to select.

6. Use   to adjust the setting.

7. Press  to accept the setting.



This function is only available if the Loadrite is configured to use rotary trigger.

LD941 Data Module Properties (Module)

This function enables you to examine the properties and the status of the data logger connected to the Loadrite. It is available only if the MMS data logger feature has been enabled during installation.

When activated, this function will do the following:

- Display software and hardware information of the data logger
- Perform self-test
- Display data usage

To access the Data Module Properties function:

1. Press  .

2. Use   to scroll to **Module**.

3. Press  to select.

Internal Buffer Usage (Usage)

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

Internal Buffer Reset (Reset)

The Reset function allows all data in the temporary internal logging buffer to be deleted. It is recommended to run this reset function regularly.

Self Test (Selftest)

Self test function tests various internal memory and devices.

To access the Self Test function:

1. Press .
2. Use ↑ ↓ to scroll to **Selftest**.
3. Press  to select.

Uplink (Uplink)

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

To access the Uplink function:

1. Press .
2. Use ↑ ↓ to scroll to **Uplink**.
3. Press  to select.

6 Print Functions

Printed Data

When a Loadrite printer is connected, weight data can be printed as you weigh loads. The print options need to be 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
--------------------------	----------

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

Clear Short Total

Short total	Optional
-------------	----------

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

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

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

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

Clear Long Total

Long total	Always printed
------------	----------------

ID number (of loader)	Always printed
-----------------------	----------------

Date / Time	Always printed
-------------	----------------

Zero performed

Weight zeroed	Always printed
---------------	----------------

7 Obtaining the Best Accuracy

Lifting Speed

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

Keep engine revs constant.

Trigger Point

The hydraulic pressure required to start lifting is much greater than that required to keep the load moving smoothly upwards. It is important that the load is moving at a steady speed when it reaches the trigger point.

We recommend that you start the lift well below the trigger point. In terms of time, at least 2 seconds of lift before the trigger point.

Bounce

Most loaders have pneumatic tyres which can cause the machine to bounce when lifting. Any bounce causes variation in the hydraulic pressure and affects the accuracy of the weight measurement.

To minimise the effect of bounce, always operate the lift lever before accelerating the engine and start the lift well below the trigger point.

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 always in the same position – fully rolled back.

8 Error Messages

Check Power

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

Check Transducer

The Loadrite 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.

Check Trigger

The Loadrite has detected a fault in the trigger or the cable that connects the trigger.

☞ Observe safety procedures when checking the trigger.

Check Zero

The Loadrite automatically reminds the operator to check zero occasionally.

See Check Zero Prompt on page 14.

When this message appears you need to perform zero lift.

Lift Under Range

The Loadrite has detected that the Lift pressure was too low.

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

Module Data Lost

The Loadrite has an ability to store data internally in the event that the Data Logger Module LD941 is absent or full. The Loadrite 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.

Module Error

The Loadrite has detected an error when writing to the LD941 data logger module.

Check that the module is securely connected to the Loadrite.

Module Full

The Loadrite has detected that the LD941 data logger module is full.

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

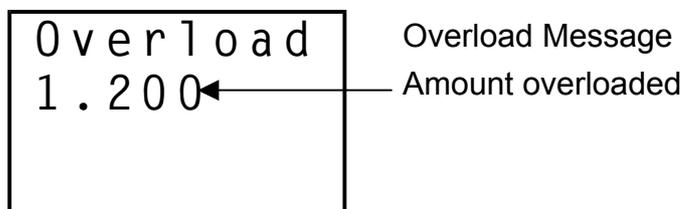
No Lock

No Lock means that the interlock was not closed when lifting the load. The interlock must be closed (or the bucket must be fully rolled back) while lifting the load.

No weight is displayed and hence there is no weight to add.

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.



Printer Disabled

Print function has been disabled at installation.

Printer Error

The Loadrite has detected a fault in the printer.

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

Recall Disabled

Recall function does not work in 'Static Weigh' mode.

See page 15 for details.

Too Heavy, Zero Aborted

The Loadrite zero function can only zero up to 4% of full scale.

See page 13 for details.

Warm Up Lift

This message appears if the Loadrite has been switched off for more than 1 hour.

You need to lift the bucket/forks a few times to warm up.

See the *Warm Up Screen* on page 4 for details.

9 Specifications

Suitable Applications

The Loadrite measures weight by sensing the hydraulic pressure required to lift a load. A trigger mechanism senses the position of the lifting arms.

Typical vehicles using the Loadrite system are:

- Front end loaders (bucket and/or fork)
- Forklift trucks.

Minimal Weighing Delay

Weighing delay is minimal, because the weighing function is carried out during a normal lift. Loader should be stationary.

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	1 - 20mA (0-100%).
Trigger input (Magnetic)	Pull up resistor requiring switch to ground
Serial communications.	RS232C protocol to printer and data logger

Display

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

Keypad

6 keys	Back light. Special functions
--------	-------------------------------

Clock

Built in clock	Hours, minutes, day, month, year. Year 2000 compliant
----------------	---

Physical

Loadrite indicator	Protected to IP54 Weight - 1.6kg
Pressure transducer	Protected to IP67
Magnetic trigger	Protected to IP67

Available Options

Loadrite printer	24 column
Data logger	Provides electronic data collection
Remote ADD button	For operator convenience
Interlock system	To disable weighing under defined machine conditions

Additional operating features can be enabled at installation time.

10 Output / Input Connections

Transducer

1. +12V
2. Reserved
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. N.C.
6. Magnetic trigger
7. N.C.
8. Positive supply to Trigger 2
9. N.C.
10. Interlock
11. N.C.
12. N.C.
13. Ground output
14. Positive output
15. Ground output

Printer

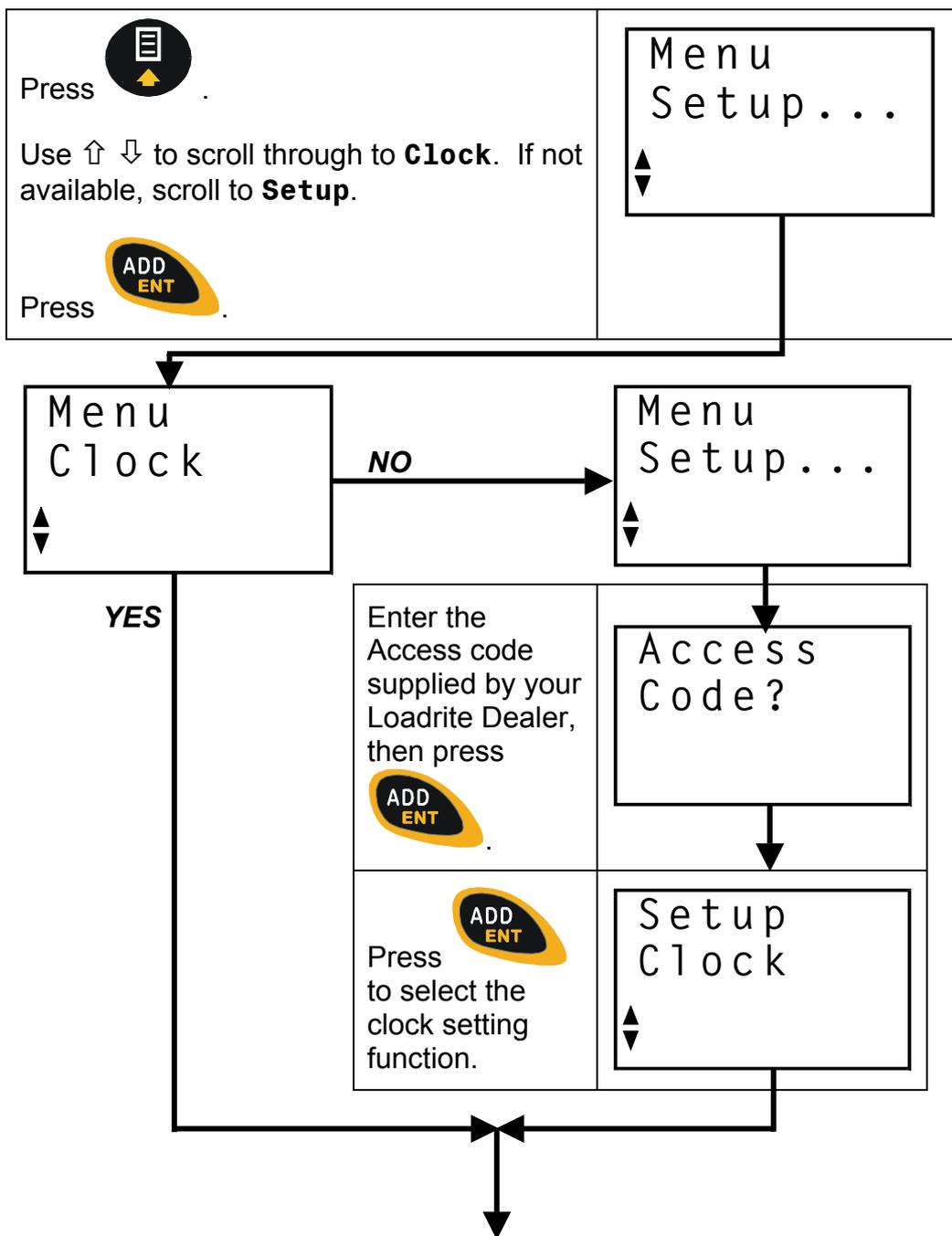
1. Negative supply to printer
2. Positive supply to printer
3. +12V output
4. N.C.
5. Reserved
6. Printer RS232 output
7. Printer busy input
8. EDP RS232 input
9. EDP RS232 output
10. Ground output
11. Reserved
12. N.C.

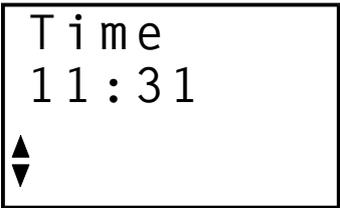
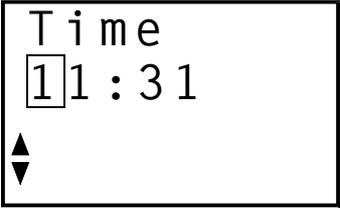
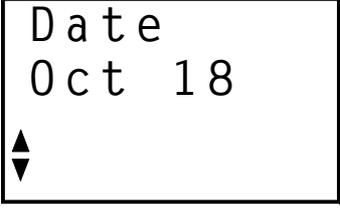
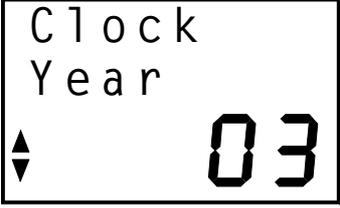
Appendix i Time and Date

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

To set the time and date:

You may need an access code from your Loadrite Dealer 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 Loadrite displays the first of the time / date screens.</p> <p>You can use \uparrow \downarrow to scroll through the time/ date screens. When on the required screen, press  to change the setting.</p>	
<p>Time of day screen:</p> <p>Press  to allow editing, a flashing cursor will appear.</p> <p>Use \uparrow \downarrow to change time and AM/PM setting if available.</p> <p>Use \leftarrow \rightarrow to move across different fields.</p> <p>Press  to confirm the new time.</p>	
<p>Day and month screen:</p> <p>Press  to allow editing.</p> <p>Use \uparrow \downarrow to change the setting and \leftarrow \rightarrow to move across different fields.</p> <p>Press  to confirm the new date.</p>	
<p>Year screen:</p> <p>Press  to allow editing.</p> <p>Use the \uparrow \downarrow to change the setting.</p> <p>Press  to confirm the new year.</p>	

Time of day screen:

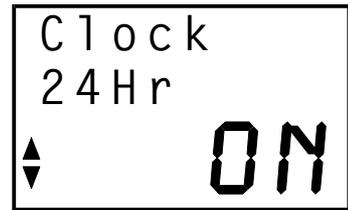


Press  to allow editing. The setting will flash.

Use   to change the setting.



Press  to confirm the new setting.



Appendix ii Span Calibration Adjustment

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

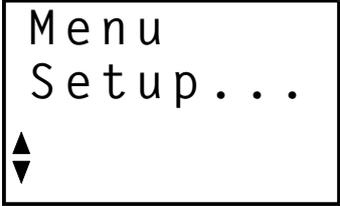
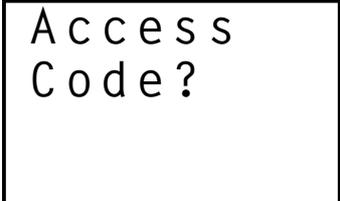
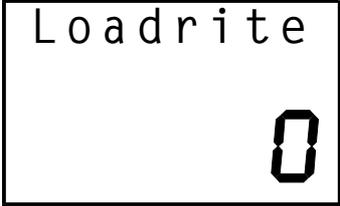
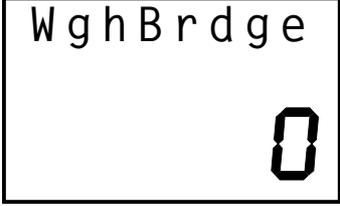
The adjustment is carried out by entering the total of weights recorded at a weighbridge (scale house) over a period of time and the corresponding Loadrite total.

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

WARNING

The Loadrite 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 Loadrite will over correct and its accuracy will be seriously impaired.

The method is explained below using an example.

<p>Press  .</p> <p>Use ↑ ↓ to scroll through to Setup.</p> <p>Press  .</p>	
<p>Enter the Access code supplied by your Loadrite Dealer.</p> <p>Then press  .</p>	
<p>The Loadrite prompts you to enter the Loadrite total weight.</p> <p>Key in the Loadrite total and press  .</p>	
<p>Key in the weighbridge total and press  .</p>	

The Loadrite briefly displays **Span Updated** and then returns to the menu.

Press  to return to the Ready screen.

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.

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