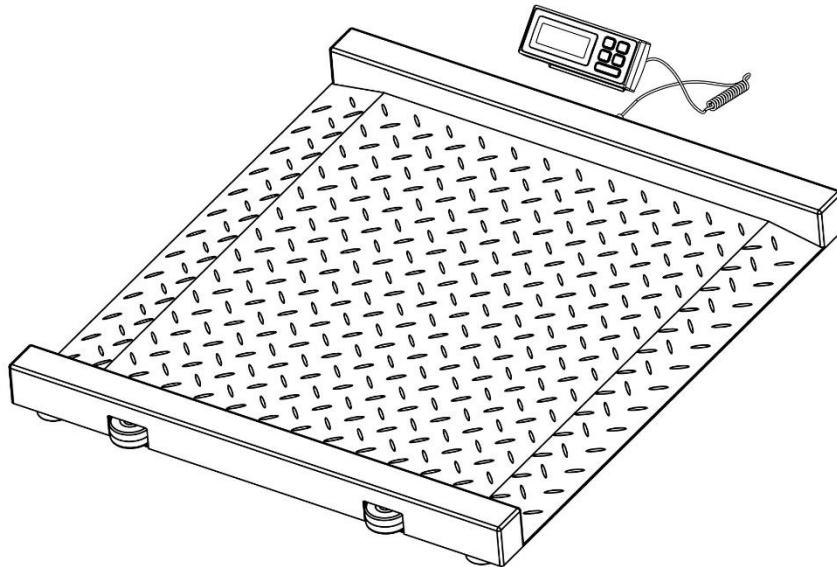




LW MEASUREMENTS, LLC

Professional Weighing Equipment

LDS/SDS Series Weight Scale
Large drum scale/small drum scale



Operation Manual

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Declaration of Conformity

Declaration of conformity for apparatus with CE mark

We hereby declare that the product to which this declaration refers conforms to the following standards.

Electronic Scale: LDS Series / SDS Series

Mark applied	EU Directive	Standards
	2004/108/EC	EN 61326-1: 2006

Signature:



Boon Lim, R & D Manager

Date: 1.21.2016

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Introduction

What you should know about this Operation Manual:

Tree® Professional Weighing Equipment products are simple to operate.

Nevertheless, you should read through these operating instructions in their entirety, so that you can make optimum use of the full potential of the weighing scale in your daily work activities.

These operating instructions contain guidance in the form of pictograms and keyboard diagrams, which should help in finding the required information:

For the labeling of potential hazards, please refer to the Safety proportion of this operation manual.

Safety

Representations & Symbols

Note: Important instructions, which involve safety, are highlighted with the appropriate mark:



Safety recommendations

When using the weighing equipment in surroundings with increased safety requirements, the corresponding regulations must be observed.

The weighing scale may only be used with the power adapter supplied.

Before connecting the power adapter to the scale, the user must ensure that the operating voltage stated on the power adapter is compliant with the mains voltage.

If not, please contact Customer Service at the address above.

If the power adapter or its cable is damaged, the weighing scale must immediately be disconnected from the electricity supply (pull out the power adapter).

If there should be any reason to believe that it is no longer safe to operate the scale, it should be immediately unplugged from the electricity supply (pull out power adapter) and secured against inadvertent operation.

In carrying out maintenance work, it is essential to follow the recommendations set out in maintenance and servicing.

The weighing scale must not be operated in an area subject to explosion risks.

Care must be taken when weighing liquids to ensure that no liquid is spilled into the inside of the scale or into connections on the rear of the equipment or the power adapter. If liquid is spilled on the scale, it must immediately be unplugged from the main electricity supply (pull out power adapter).

The weighing scale may be operated after it has first been inspected by a service technician.

These operating instructions must be read by each user and should be easily accessible at the workplace at all times.

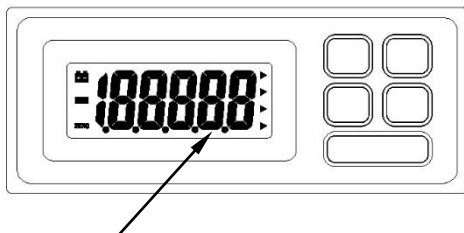
Specifications

LDS specifications:

Model	Capacity	Division
LDS	2000 lbs.	0.5 lb.
Platter	36.6 ins. x39.4 ins.	
Net/gross weight	121 lb./140 lb.	
Package	Standard Capacity: 5.2x44.9x4.7 (in)	
Operating temperature	0-40°C (32-104°F)	
Power Source	6xx AA battery or AC/DC	
	Adapter 9V/100mA	

Model	Capacity	Division
SDS	1000lb.	0.2 lb.
Platter	31 ins. x32.4 ins.	
Net/gross weight	100 lb.	
Package		
Operating temperature	0-40°C (32-104°F)	
Power Source	Adapter 9V/100mA	

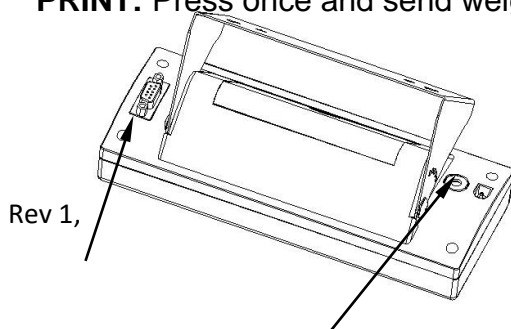
Parts Description



Display

ON/OFF	HOLD
UNIT	ZERO
PRINT	

- **ON/OFF:** Turn the scale power on/off.
- **HOLD:** Press this key to store weight value.
- **UNIT :** Select weighing units : kg or lb.
- **ZERO : (for TARE)** Set the display to zero or subtract the weight of container.
- **PRINT:** Press once and send weight information once.








Rev 1,

RS232 socket

AC Adapter Socket

Features

- Display options : 5 digital LCD
- Power : AC adapter 9V/100mA
- Auto back light (optional)
- Auto shut off (optional)
- Operating Temperature : 5 ~ 35°C
- Operating Humidity : 25% ~ 95%RH
- Zero Range (0 to 4% of full capacity)
- Tare Range (4% to full capacity)
- Error Message indication :
 -  Overload
 -  Exceed zero track range when power is on
 -  Unstable when power is on
 -  Calibration code is not enough or operation error.
 -  Low battery indication
- Two calibration weight units: kg, lb.
- Open calibration capacity
- Power on zero-setting range: + 10%
- Zero range: + 4% of full capacity
- Three modes: Normal mode / Setting mode /Internal Auto Calibration mode
- RS232 function

Getting Started

The scale is packaged in an environmentally-friendly carton, which provides optimum protection for the balance during transportation.

We suggest that you keep the original packaging in order to avoid damage if you are shipping or transporting the scale to a different location. It is also the best way to keep it in the best conditions if it will not be used for an extended period of time.

In order to avoid damage, please follow the instructions provided below, when unpacking the scale:

- Unpack the scale carefully.
- When outside temperatures are very low, the scale should be stored for a couple hours and kept in its box in a dry room at normal temperature, so that no condensation settles on the unit when opening the box.
- Check the scale immediately after unpacking for any external visual damage. If there is any damage on scale, contact customer service immediately.
- If the scale is not to be used immediately after purchase, it should be stored in a dry place where fluctuations in temperature are low. (Reference pg.).
Read through these operating instruction, before you work with the unit and pay attention to the Safety recommendations

Delivery

Inspect delivery for completeness immediately upon unpacking all components.

Checklist for complete delivery

	Component delivered present yes / no
Weighing unit body	
Weighing pan	
Power adapter	
Operating manual	

Program Options

Work mode setting of the indicator:

- Press and hold [UNIT] key and [HOLD] key, then press [ON/OFF] key to turn on the scale, the display will show Ani.Sw, press [UNIT] key to enter function setting menu press [ZERO] key to select ON or OFF (ON means animal mode, OFF means normal weighing mode),press [HOLD] key to confirm the selection.
- Press [HOLD] key again to enter the next menu, the display will show Ani.Kd, press [UNIT] key to enter function setting menu, press [ZERO] key to select animal scale anti-shock range among 50, 100, 200, 400, press [HOLD] key to confirm the selection.
- Press [HOLD] key again to enter the next menu, the display will show Ani.fd, press [UNIT] key to enter function setting menu, press [ZERO] key to select animal scale filter range among 0.5, 3, 5, 10, press [HOLD] key to confirm the selection.
- Press [HOLD] key again to enter the next menu, the display will show Ani.Ft, press [UNIT] key to enter function setting menu, press [ZERO] key to select animal scale filter time among 1,2,3,4, press [HOLD] key to confirm the selection

FUNCTION SETTINGS

- Press and hold [HOLD] key then press [ON/OFF] key to turn on the scale, the display will show A-ON or A-OFF, press [ZERO] key to select on or off (ON means auto power off function activate, off means auto power off function inactivate). Press [UNIT] key, the display will show L-ON or L-OFF, press [ZERO] key to select on or off (ON means auto backlight function activate, OFF means auto backlight function inactivate).
- Press [UNIT] key, the display will show P-XXX. Press [ZERO] key to select OFF, key, con and Stb. (OFF means RS232 function inactivate, KEY means that output the data by pressing [PRINT] key. Con means that output the data continually. Stb means that output the data when reading is stable)
- Press [UNIT] key, the display will show J-ON or J-OFF, press [ZERO] key to select ON or OFF. (ON means showing zero when turn on the power, OFF means showing weight placed when turn on the power.)

Calibration

Calibration has been done in factory already. Do not recalibrate it unless it is extremely inaccurate. If you have any problems about calibration, please contact with the dealer who will provide you professional guidance.

- Press and hold [ZERO] key then press [ON/OFF] key, the display will show CAPU=, press [UNIT] key to select full capacity unit kg or lb.
- Press [HOLD] key to confirm the selection. press [HOLD] key again to enter the next menu, the display will show CAP,

- Press [UNIT] key to enter setting full capacity, press [UNIT] key to move the flash digit to right, press [ZERO] key to increase the flash digit, press [HOLD] key to confirm the selection.
- Press [HOLD] key again to enter the next menu, the display will show CALU=, press [UNIT] key to select calibration unit kg or lb, press [HOLD] key to confirm the selection.
- Press [HOLD] key again to enter the next menu, the display will show CAL, press [UNIT] key to enter setting calibration weight ,press [UNIT] key to move the flash digit to right,
- Press [ZERO] key to increase the flash digit, press [HOLD] key to confirm the selection (the calibration weight should be more than 2/3 of full capacity). Press [HOLD] key again to enter the next menu, the display will show DIV,
- Press [UNIT] key to select division, press [HOLD] key to confirm the selection. Press [HOLD] key again to enter the next menu, the display will show ADC, press [UNIT] key to select 20, press [HOLD] key to confirm the selection..
- Press [PRINT] key, the display will show CAL, then AD value, press [UNIT] key when the stable indicator to be displayed, the display will show flash calibration weight, place the shown weight on the platform, press [UNIT] key when the stable indicator to be displayed, the display will show -----, AD value. Turn off the scale. Now calibration is finished and you can remove the weights.
- Turn on the scale, place tested weight to check whether it is correct, if not, please repeat above steps.

Interface

1 : battery socket :

AC/DC 9V————— external positive, inner negative

2 : RS232 interface : DB9

RS232 TRANSMIT FUNCTION

1. RS232 interface : DB9

SCALE		PC
TXD 3	—————	2 RXD
GND 5	—————	5 GND

2. RS232 Transmission Agreement

- Mode Simplex Asynchronous Serial

- Baud rate : 9600
 - Data Bit : 8
 - Parity Bit : NONE
 - Stop Bit : 1
 - Data Format : ASCII
3. Transmission Information Format : 20 Byte , blank=20H

M= overload mode
W= normal weighing mode

: = weight information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
W/M	:	±																CR	LF

Weight information Unit formation

Example: 50kg

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
W	:	±							5	0	.	0	k	g				CR	LF

HOLD FUNCTION

- Place the item on the scale platform.
- Wait for the stable weights to be displayed.
- Press the [HOLD] key. The "." hold indicator will turn-on.
- Remove the item from the scale platform. The item's weight reading will remain on the display. Now you can also select unit (i.e. to Pounds or Kilograms) by pressing [UNIT] key.
- Remove the item from the scale platform. The item's weight reading will remain on the display. Now you can also select unit (i.e. to Pounds or Kilograms) by pressing [UNIT] key.

Maintenance & Service

DANGER

For maintenance-work, the balance must be disconnected from the power supply (remove power adapter plug from socket). Also ensure that the balance cannot be connected to the power supply during the work by a third party.

Make sure that no liquid spills into the scale while performing maintenance work. If liquid is spilled on the scale, it must be inspected by a service technician.

Regularly perform maintenance to the weighing pan and the weighing pan holder by removing any dirt or dust from under the weighing pan and on the weighing scale housing. Use a soft brush or a soft, lint-free cloth, moistened with a mild soap solution.

CAUTION

Never use solvents, acids, alkalis, paint thinners, scouring powders or other aggressive or corrosive chemicals for cleaning; these substances can cause damage to the surfaces of the scale housing.

Transportation & Storage

Your weighing machine is a precision instrument, treat it carefully. Avoid shaking, severe impacts and vibration during the transportation. Make sure that there are no marked temperature fluctuations during the transportation and that the weighing machine does not become damp (condensation).

If you would like to take the weighing machine out of service for an extended period, disconnect it from the electricity supply, clean it thoroughly (refer to Maintenance & Service) and store it in a place which meets the following conditions:

- No violent shaking, no vibrations
- Minimum temperature fluctuations
- No direct solar radiation
- Minimum moisture

Warranty

The products are under warranty against factory defects for a period of two (2) years from the date of shipment.

For Customers within the lower 48 states of the continental United States. LW Measurements will pay for freight both ways for the first 30 days after purchase. After 30 days expire the customer is responsible for shipping the product back to us. After the product is received we will inspect it and as necessary we will repair or replace and will ship the product back to the customer at our expense.

Any new scales returned for warranty must be properly packaged in the original box. If they are not properly packed an in the original box, the customer pays for shipping cost. If we determine there is a factory defect, we will pay for the shipping back. If we determine that it is not a factory defect, the customer will pay shipping.

For Customers outside the lower 48 States, including Mexico, Canada, Puerto Rico, Hawaii, Alaska and all other countries, customers must pay for shipping.

Our warranty does not cover misuse or neglect including but not limited to battery or water damage, overloading, and chewed or cut wires. If the product is found to have been misused or damaged by the customer, LW measurements is not responsible for the cost of return.

For warranty claims please go online to lwmeasurements.com and fill out the warranty submission form or call your customer service representative.