ADAM

Adam Equipment

LBC SERIES

(P.N. 700660114, RevC, August 2011)

Easy Reference:

Model name of the scale:	
Serial number of the unit:	
Software revision number (Displayed when power is first turned on):	
Date of Purchase:	
Name of the supplier and place:	

CONTENTS

1.0 INTRODUCTION

- The LBC models are supplied with a power supply adapter, to charge the internal rechargeable battery operation.
- Four models: 3kg X 0.1g, 6kg X0.2g, 15kg X 0.5g, 30kg X 1g
- Large LCD with backlight
- 3 weighing units: g, kg, lb
- Indicators for Stable, zero, net weight, and low battery functions
- Stainless steel pan with ABS case and pan support
- Sealed Membrane keypad
- Overload Protection
- Spirit level and leveling feet
- Auto calibration, zero tracking and tare

2.0 SPECIFICATIONS

model	LBC-3	LBC- 6	LBC-15	LBC-30
capacity	3Kg	6Kg	15Kg	30Kg
Readability	0.1g	0.2g	0.5g	1g
Repeatability	0.1g	0.2g	0.5g	1g
Linearity ±	0.2g	0.4g	1g	2g
Units	kg / g / lb			
Stabilization time	2s	2s	2s	2s
Operating temperature	0ºC to 40ºC 32ºF to 104ºF			
Power supply	12VDC @ 800mA adapter 6V4.5Ah rechargeable battery			
Calibration	External calibration			
Calibration Weights	User Selectable			
Display	6 digits 24mm LCD			

3.0 SAFETY PRECAUTIONS

Caution:

Please use only the original DC adapter supplied with the scale. Other cords or adapters may damage the scale.

Notice:

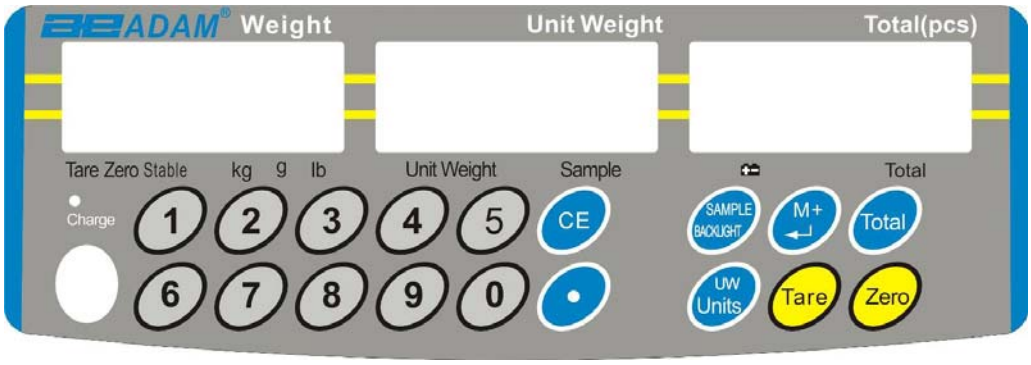
- Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents.
- Battery should be removed if the scale is not used for a long period of time.
- Do not stack material on the scale when it is not in use.
- Avoid high humidity that might cause condensation, and keep away from direct contact with water.
- Static may influence the weighing result. To reduce the static wipe the pan and the scale with anti-static wipes.
- When the battery is lower than 5.7v, the low battery will show to indicate the low battery; when it is lower than 5.4v, the scale will turn off automatically.

4.0 INSTALLATION OF THE LBC SERIES

- The LBC Series comes with a stainless steel platform packed separately.
- Place the platform in the locating holes on the top cover.
- Do not press with excessive force as this could damage the load cell inside.
- Level the scale by adjusting the four feet. The scale should be adjusted such that the bubble in the spirit level is in the centre of the level and the scale is supported by all four feet.
- Attach the power supply cable to the connector on the right side of the scale base. Plug in the power supply module. The power switch is located at the right side of the scale base.
- The scale will show the battery voltage **"vol-X.X"** in the **"Unit Weight"** display .
- Next a self-test is followed. At the end of the self-test, it will display **"0"** in all three displays, if the zero condition has been achieved.

5.0 DISPLAY

The scales have three digital display windows. These are **“Weight”, “Unit Weight” and “Total”**.



5.1 WEIGHT DISPLAY

It has 5-digit display to indicate the weight on the scale. Arrows above symbols will indicate the following:

- Tare indicator, **“Tare”**
- Zero indicator, **"Zero"**
- Stability indicator, **"Stable"**
- Indicators for the changed units, **"kg","g","lb"**.

5.2 UNIT WEIGHT DISPLAY

- This display will show the unit weight of a sample. This value is either input by the user or computed by the scale.
- The arrow indicator will be seen above "Sample" when there is insufficient number of samples to accurately determine the count.

5.3 TOTAL DISPLAY

This display will show the number of items on the scale or the value of the accumulated count.
Indicator:

- Low battery, **LO-BAT**

6.0 KEY DESCRIPTIONS

Keys	Functions
[0-9, .]	Numeric entry keys, used to manually enter unit weight
[CE]	Used to clear the unit weight or an erroneous entry.
[M+/↵]	Add the current count to the accumulator. Up to 99 values or full capacity of the weight display can be added. Also prints the displayed values when Auto print is switched off.
[Sample/blight]	Used to input the number of items in a sample. Toggle the backlight
[UW/Units]	Used to enter the weight of a sample manually.
[Tare]	Tares the scale. Stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the results. This is the net weight. Entering a value using the keypad will store that as the tare value.
[Zero]	Sets the zero point for all subsequent weighing. It shows zero.

7.0 WEIGHING

7.1 BEFORE WEIGHING

Check the setting of the auto shut off function, see section 6.0 If the auto shut off function is on, the scale will shut off after a period of time if the scale is not used and it has a stable reading.

7.2 WEIGHING

Press **[UW/Unit]** to select units from “g” / “Kg” / “lb”.

7.3 ZEROING THE DISPLAY

You can press the **[Zero]** key at any time to set the zero point from which all other weighing and counting is measured. This will usually be necessary only when the platform is empty. When the zero point is obtained the **“Weight”** display will show the indicator for zero.

7.4 TARING

- Zero the scale by pressing the **[Zero]** key if necessary. The indicator above **"Zero"** will be on.

- Place a container on the platform, a value for its weight will be displayed.

- Press the **[Tare]** key to tare the scale. The weight that was displayed is stored as the tare value and that value is subtracted from the display, leaving zero on the display. The indicator above **"Tare"** will be on.

- As a product is added only the weight of the product will be shown. The scale could be tared a second time if another type of product was to be added to the first one. Again only the weight that is added after taring will be displayed.

7.5 PARTS COUNTING

In order to do parts counting it is necessary to know the average weight of the items to be counted. This can be done by weighing a known number of the items and letting the scale determine the average unit weight or by manually inputting a known unit weight using the keypad.

Weighing a sample to determine the Unit Weight

- To determine the average weight of the items to be counted it will be necessary to place a known quantity of the items on the scale and then to key in the number of items being weighed.

- The scale will then divide the total weight by the number of items and display the average unit weight.

- Zero the scale by pressing the **[Zero]** key if necessary. If a container is to be used, place the container on the scale and tare as discussed earlier.

- Place a known quantity of items on the scale. After the weight display is stable, enter the quantity of items using the numeric keys followed by pressing the **[Sample/Blight]** key.

- The number of units will be displayed on the **"Total"** display and the computed average weight will be shown on the **"Unit Weight"** display.

- As more items are added to the scale, the weight and the quantity will increase. If the function "ASPL" is enabled (see section 6.1) the unit weight will be automatically recalculated when an additional mass less than the current count is added.

- If the scale is not stable, the calculation will not be completed. If the weight is below zero, the **"Total"** display will show negative count.

Entering a known Unit Weight

- If the unit weight is already known then it is possible to enter that value using the keypad.

- Enter the value of the unit weight using the numeric keys followed by pressing the **[U W/Units]** key. The **"Unit Weight"** display will show the value as it was entered.

- The sample is then added to the scale and the weight will be displayed as well as the quantity, based on the unit weight.

7.6 ACCUMULATION WHEN IN PARTS COUNTING

- When in parts counting mode, the values (weight and count) shown on the display can be added to the values in the accumulator by pressing the **[M+/↵]** key. The **"Weight"** display will show the number of times. The **"Total"** display will show the total accumulated count.

- More products can then be added and the **[M+/↵]** key to be pressed again. This can continue for up to 99 entries or until the capacity of the **"Weight"** display is exceeded.

- To observe the total stored times and count value, press the **[Total]** key.

- Press the**[M+/↵]** key will return to the normal weighing .

7.7 BACKLIGHT FOR LCD

- The backlight of the LCD can be set to be light or dark.
- When in normal weighing mode press the **[Sample /Blight]** key to change the state of the backlight.

8.0 FUNCTION SETTING

8.1 ENTERING THE FUNCTION SETTING MODE

- To enter the parameter menu, hold **[Zero]** and press the **[Tare]** key when in normal weighing mode.
- The display will show the revision number in the **"Weight"** display ,The **"Unit Weight"** display will show **"- - - - "** requesting the password number to be entered.

- The default password is **"0000"** but other numbers can be set using the parameter menus. Press the **[0]** key four times. The display will jump to the first parameter. **"FILt ?"** with the Unit weight window showing the current filter setting.

- The Parameter menu has 9 functions. To set the value for any parameter press **[Tare]** to decrease or **[Zero]** to increase the parameter and press **[M+/↵]** to save and move to the next setting

Weight Display	Description
FILt	Set a value for the amount of filtering to be done ranging from 1 to 7. A larger number means more filtering and a slower response. The default setting is 3.
StAb	Set a value to be used to determine balance stability, set a value of 0.5d,1d, 2d, or 4d. A larger number corresponds to a larger stable zone. Default is 1.
ZtrC	Set a value to be used to determine zero tracking range of 0.5d,1d,2d,4d or Off, A larger number means larger range of zero tracking and a worse repeatability. the default is 1d
CodE	Use the keypad to set a new password. The default is **"0000"**
bLIg	Setting the backlight Options: On OFF AUTO (default)
A SPL	In counting mode, this function allows the scale to recalculate the unit weight automatically after the first unit weight calibration. Recalculation of the unit weight is beneficial because errors may occur as the counting accumulates. The option is on and off.
CALI UNIt	To set the default unit. The option is g,kg,lb.
ZErO	To get the zero AD count.
CALI	See detail in section 10.0

To return to weighing after setting any parameter press the [Total] key to return to normal weighing.

9.0 CALIBRATION

Remove all weight from the pan before beginning.

- When in the normal weighing mode, hold **[Zero]** and press the **[Tare]** key to enter the parameter menu as shown in section 9.0..
- The display will show the revision number in the **"Weight"** display ,The **"Unit Weight"** display will show **"- - - - "** requesting the password number to be entered.
- The default password is **"0000"** but other numbers can be set using the parameter menus. Press the **[0]** key four times. The display will jump to the first parameter. **"FILt ?"** with the Unit weight window showing the current filter setting.
- Press **[M+/↵] 8 times** until the display shows **"CALI".** Note that the display will also show **"CALI" "Unit ?" " xx"** for selecting the unit of weight to be used when calibrating after 6 presses. Ignore this function unless yu want to change the weighing unit during calibration.
- Press the numeric keys to enter the calibrate mass value. For kilograms and pounds enter the value as a number, for example "3" for 3 kilograms. For grams enter the weight in grams, i.e. "1000" grams.
- Place the calibration mass on the weighing platform.

  The suggested calibrate values for all model :

LBC 3	LBC 6	LBC 15	LBC 30
2kg or 3kg	5kg or 6kg	10kg or 15kg	20kg or 30kg
5lb or 6lb	10lb or 12lb	20lb or 25lb	40lb or 50lb

  However any whole value of weight can be used by entering the correct value.

  - Press the **[M+/↵]** key**,**
  - The display will show "**PASS**",
  - Press the **[M+/↵]** key to return to normal weighing.
  - If the calibration is outside of the previous calibration value by more than 5% ,it will show **"FAIL L"** or **"FAIL H"** indicating the new calibration weight was too low(FAIL L) or too high (FAIL H) in respect to the previous calibration value.

10.0 ERROR MESSAGE

Z-ERR-	A/D counts are too high or low
EEEEE	Overload 9d
Arrow above Lo-Bat	Low battery indication

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Shielded interconnect cables must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device.

Changes or modifications not expressly approved by Adam Equipment could void the user's authority to operate the equipment.

WEEE COMPLIANCE

Any Electrical or Electronic Equipment (EEE) component or assembly of parts intended to be incorporated into EEE devices as defined by European Directive 2002/95/EEC must be recycled or disposed using techniques that do not introduce hazardous substances harmful to our health or the environment as listed in Directive 2002/95/EC or amending legislation. Battery disposal in Landfill Sites is more regulated since July 2002 by regulation 9 of the Landfill (England and Wales) Regulations 2002 and Hazardous Waste Regulations 2005. Battery recycling has become topical and the Waste Electrical and Electronic Equipment (WEEE) Regulations are set to impose targets for recycling.

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-Compact and Portable Balances
-High Capacity Balances
-Moisture analysers / balances
-Mechanical Scales
-Counting Scales
-Digital Weighing/Check-weighing Scales
-High performance Platform Scales
-Crane scales
-Medical Scales
-Retail Scales for Price computing

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