Diamond

MOD : BAL/15-2

Production code : ABW 15

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BAL

WASHDOWN SCALE

EN

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WARNING:	Please read carefully following instructions for installation and use before starting your work with a new balance. Failure to use the balance in accordance with the advice in the user manual could mean that the product gives incorrect readings.

1.0 INTRODUCTION

- The scales are supplied with a power supply adapter, to charge the internal rechargeable battery.
- In use cover fitted as standard on all models.
- Three models:

  6 kg x 1g

  15 kg x 2g

  30 kg x 5g
- All models rated at IP67
- Front and rear display
- 5 weighing units: kg, g, lb, oz, and lb:oz
- Check-weighing function
- 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
- External calibration, zero tracking and tare

2.0 SPECIFICATIONS

Model name	**BAL/6**	**BAL/15**	**BAL/30**
Capacity	6 Kg	15 Kg	30 Kg
Readability	1g	2g	5g
Repeatability	2g	5g	10g
Linearity ±	2g	5g	10g
Units	kg / g / lb / oz / lb:oz		
Stabilization time	1 second		
IP rating	IP67		
Operating temperature	0ºC to 40ºC 32ºF to 104ºF		
Power supply	12VDC @ 800mA adapter 6v 3.2aH rechargeable battery Typical battery life expectancy**:** 55 hours		
Calibration	External calibration		
Calibration Weights	2kg,4kg,6kg	5kg,10kg,15Kg	10kg,20kg,30kg
Display	Front: 6 digits 20mm LED Rear: 6 digits 14mm LED		

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 running low on charge, the battery light will flash Red every 1 second, when the battery gets very low on charge, the display will show “BAT LO” and then turn off within 2 seconds.

4.0 SET UP

4.1 ASSEMBLING OF SCALE

- Put the scale on a stable and even table.
- Adjust the height of the feet to level the scale; the spirit level bubble should be in the center of the spirit level.
- Put the pan support in place, inserting the pan support pins into the holes on top of the scale. Place the stainless steel pan on the support.
- Avoid excess force to weighing pan or the load cell could be damaged.

5.0 WEIGHING

5.1 BEFORE WEIGHING

Check the setting of the auto power off function, see section 6. If the auto power off function is on, the scale will power off after a period of time if the scale is not used and it has a stable reading.

5.2 WEIGHING

- Press ⏻ /Esc to turn on the scale. The display will show the software revision. Then it will begin its self-checking test from 9 to 0. When reading is stable, the display will show "0", stable symbol, zero symbol, and the weighing unit used the last time the scale was used.

- Press and hold **[FUNC/→]** until **''S1 Un''** will be displayed then press **[➔0🡐/ ↵]** to confirm selection and use **[Tare/↑]** key to select units from "kg" / "g" / "lb" / "oz"/"lb:oz".

- Press ⏻ /Esc to return to normal weighing.

- Check if the reading is "0", if not, press **[➔0🡐/ ↵].** "0" and the zero symbol will be displayed.

- Put the item to be weighed on the pan. When the reading is stable, the gross weight will be shown.

If a container is used, put the container on the pan and press the **[Tare/↑]** key when the reading is stable. The display will show "0", the zero symbol and 'NET'. Load the container or remove material from the container, the scale will show the net weight of the material added or removed.

5.3 USER FUNCTIONS

The check weighing function can be accessed using the **[FUNC/→]** key.

5.3.1 CHECK WEIGHING

- When in normal mode, press **[FUNC/→]** and the display shows "**F1 CHK**".
- Press **[➔0🡐/ ↵]** to set the high limits. The display will show the "000000" with one digit flashing and the 'HI' LED lit.
- Press **[Tare/↑]** to increase the flashing digits;
- Press **[FUNC/→]** to select the digit;
- Press **[➔0🡐/ ↵]** to accept the value and move to set the low limits. The display will show "000000" with one digit flashing and the 'LO' LED lit.

- Use the same method the set the low limits.
- In order to change the display to “bP inL” or “bP otL” or “bP oFF” to have beeper sound when the weight is between the limits, outside the limits, or off please check section 6.

6.0 USER MENU SETTING

In normal weighing mode, press **[FUNC/→]** and hold for 3 seconds. The display will show first parameter ‘’S1 Un ‘’. Use **[Tare/↑]** key to scroll through the menu and **[➔0🡐/ ↲]** key to select your option.

User Function	Description	Options	Default setting
“S1 Un”	Units selection	g, kg, lb, oz, lb:oz	**g**
“S2 CHK”	Check weighing parameter	**F1 LLK**: (*upper and lower limits*) • **LLK oF** - allows user to set upper/lower limits • **LLK on** – upper/lower limit set by user will be locked **F2 Led:** (*LED indicator*) • **Led oF –** LED indicator will be displayed individually • **Led on** – LED indicator will be displayed sequentially **F3 bEP**: (*buzzer sound*) • **bP inL** – beeper sound when check weighing is within the limits • **bP otL** – beeper sound when the check weighing is outside the limits • **bP oFF** – beeper sound off **F4 PS**: (*passcode setting*) • display will show ‘’P1 - - - - ‘’ to set the passcode and then ‘’P2 - - - - ‘’ to confirm the passcode. The passcode will lock all parameters. ***NOTE:*** **If the setting is 0000 no password is required.**	**LLK oF** **Led oF** **bP oFF**

"S3 br"	Brightness setting	You can choose from 4 levels of brightness: **br 1, br 2, br 3, br 4 ,** where 1 is the lowest and 4 is the highest	**br 2**
"S4 AoF"	Auto power saving Auto shut off	***Auto power saving*** **SLP oF**: power saving disabled **SLP on**: auto power saving activates after 10 seconds and display will show 1 segment : ''_''. ***Auto power off of the scale*** After setting the Auto power saving, the display will show "**oFF 0**". Use **[Tare/↑]** key to scroll and select the time you want the scale to power off automatically (0 ,1 ,5 or 10 minutes), by pressing the **[➔0🡐/ ↵]** key**.** **Note: with setting at 0, the scale will not automatically power down.**	**SLP of** **oFF 0**
"S5 diS"	Display mode setting	**ALL** – display will show all the readings **StAb** – display will show only the stable readings	**ALL**
"S6 Fl"	Filter setting	**nor** – medium speed **FASt** – fast speed **SLow** – slow speed	**nor**
"S7 AZr"	Zero tracking range setting	**0.5** **1.0** **1.5**	**1.0**
"S8 CAL"	Calibration	See chapter 7	

7.0 CALIBRATION

- Calibration before use is recommended for best accuracy. It is suggested that the scale be calibrated when first installed and any time the scale is moved to a different environment.
- Ensure weights are ready before calibrating, the weight should be of a known accuracy, for example OIML class M1 or Class 4 of ASTM E617.
- Do not calibrate the scale if a proper calibration weight is not available.
- The scale will calibrate according to the weighing units selected (Imperial or metric)

7.1 AUTOMATIC EXTERNAL CALIBRATION

- In normal weighing mode, press **[FUNC/→]** and hold for 3 seconds. The display will show first parameter ”**S1 Un**”. Use **[Tare/↑]** key to scroll through the menu until it will show **”S8 CAL”.** Press the **[➔0🡐/ ↵]** key, to access the parameter; display will show ” **UnLoAd”.**
- Press the **[➔0🡐/ ↵]** key and display shows last calibration weight with first digit flashing. You can modify the value using **[FUNC/→]** and **[Tare/↑]** keys; then press **[➔0🡐/ ↵]** to accept calibration mass**.** The display will stop flashing and the stable indicator will be on.

- Add the calibration mass ass displayed to the pan and when stable indicator on press **[➔0🡐/ ↵]** key. The display will show “PASS”, and then returns to normal weighing after 3 seconds.

Calibration selectable values for all models:

6kg model	15kg model	30kg model
2Kg/4kg/6kg	5Kg/10kg/15kg	10Kg/20kg/30kg

If it 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.

8.0 ERROR MESSAGE

--AdO	A/D counts are too high
--AdL	A/D counts are too low
BEEP 15	Wrong operation
- -OL- -	Overload 9d
“BATTLO”	Low battery indication
-- Err -	Over zero key range