

Product Manual

Precision Balance 300g x 0.001g

Code 665-080

PLEASE READ THESE INSTRUCTIONS BEFORE USE.

1. Product Description

1.1 Introduction

Designed with high precision load cells and solid structures, Westlab's Precision Balances guarantee reliability and stability. The stainless-steel pans are corrosion resistant and easy to clean.

The integrated rechargeable battery allows the user to move from lab-to-lab or use the unit in an area with no access to a power source. In a teaching environment, science educators can charge the balances before a lesson to avoid the power cords being tangled. Additionally, the low or charged battery indicator displayed on the screen ensures that sample weighing is not interrupted.

With a backlit LCD screen, the balances feature a simple four key menu for easy navigation.

1.2 Intended Use

The Westlab Precision Balances are intended for use in laboratories.

1.3 Features

- LCD Display, Backlit
- High Precision Load Cell
- Integrated Rechargeable Battery
- Selectable Measuring Units
- Overload Display Indicator
- Piece Counting Function
- Height Adjustable Feet
- Intelligent Calibration
- Full Capacity Taring

2. Technical Specification

Display	LCD, backlit
Load Rating	300g
Accuracy	0.001g
Tare Range	0 – 300g
Repeatability	1mg
Linearity	± 3mg
Overload Protection	Yes
Feet	Height adjustable
Power Supply	220 – 240V or rechargeable battery
Pan Diameter	110mm
Unit Dimensions	280mm L x 180mm W x 180mm H

TABLE OF CONTENT

1. Product Description
 - 1.1 Introduction
 - 1.2 Intended Use
 - 1.3 Features
2. Technical Specifications
3. Safety Precautions
4. Maintenance & Cleaning
5. Installation
6. Operation
7. Product Disposal

PRODUCT CODE

665-080

Australia

1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada

1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand

+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States

646 568 5391
sales.us@westlab.com
www.westlab.com

3. Safety Precautions

- The improper use of the unit can result in accidents and electric discharges, circuit breakers, fires, and other damages.
- Ensure that the balance is protected from any sudden movements or knocks, as well as direct sunlight or air flows.
- The balance is supplied with an adapter that is required to be plugged to an earth connection. The socket should be ready to unplug the unit in case of an emergency.
- Do not unplug the adapter by pulling the wire. Always unplug it from the base.
- Do not use the balance in a wedged location such as a shelf.
- Do not use sharp objects such as pens to press the buttons of the control panel. Only use your fingers.
- To prevent damage to the sensor, do not place an object on the pan that is heavier than the maximum capacity of the balance.
- Do not submerge the balance or spill liquids on it.
- When the balance is in use for extended periods of time, lock the rechargeable battery.
- If any liquid contacts the electric parts of the balance, immediately disconnect the unit and send it to an approved service technician.
- Always use the original components and supplies. Other devices and components may be similar, but they can damage the unit.

4. Maintenance & Cleaning

- Do not use scourers or substances that can grate for cleaning the metallic parts such as the stainless steel, aluminium, coatings etc on the balance. Note they can damage and result in the early aging of the unit.
- Use a fluff free cloth dampened with soaped water to clean the unit. Ensure that the soaped water does not contain abrasives.

ATTENTION! If the balances are not properly cleaned and disinfected, they will not be repaired by our service team.

Australia
1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada
1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand
+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States
646 568 5391
sales.us@westlab.com
www.westlab.com

5. Installation

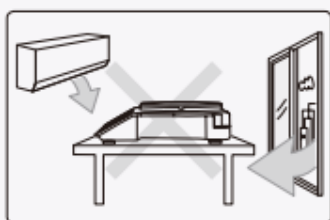
Location

The performance of the balance is heavily influenced by the environment where it is located.

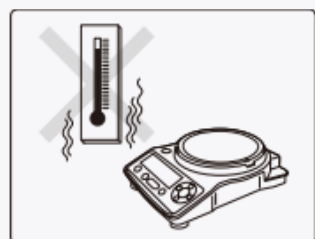
- Do not expose the balance to anything explosive, combustible or corrosive.
- Use the correct power supply and voltage with the balance. Failure to comply will lead to fire or trouble with the unit.



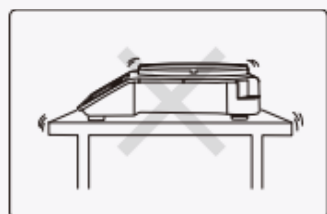
- Avoid locations where the balance will be exposed to any of the following situations:



Airflow from an air conditioner, ventilator, door, or window



Extreme temperature changes



Vibration from surroundings or nearby equipment

Australia

1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada

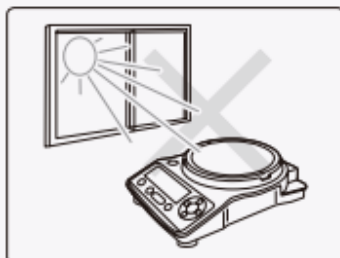
1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand

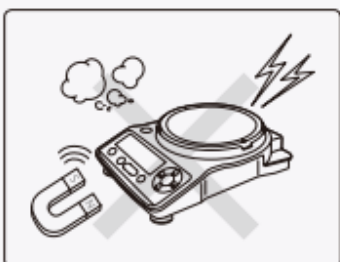
+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States

646 568 5391
sales.us@westlab.com
www.westlab.com



Direct sunlight



Dust, electromagnetic waves, or a magnetic field

- Place the balance on a strong, stable, and flat table or floor. Using an unstable location can cause damage to both the balance and the user. When choosing the intended location for the unit, consider the combined weight of the balance and the item to be weighed.

Unpacking the balance

Check that all the below items are included in the package and that they are undamaged:

- Precision balance
- Stainless steel pan
- Instruction manual
- Power cable
- Calibration weight

Contact your distributor immediately with your order details if the balance or any components are damaged due to transport.

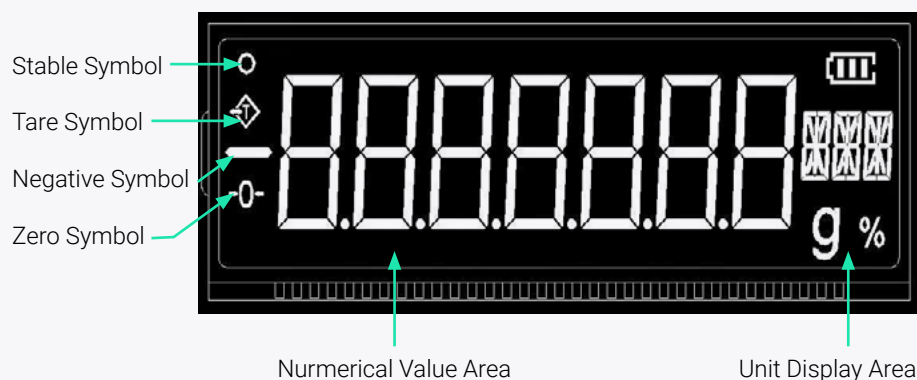
Australia
1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada
1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand
+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States
646 568 5391
sales.us@westlab.com
www.westlab.com

6. Operation



Operation buttons functions

Key	In weighing mode	
	Press once and release	Keep pressed for a while
ON/OFF	Turn the balance ON and OFF	-
CAL	-	To calibrate the balance
UNIT/COU	Convert the units	Piece counting
TARE	To tare the balance	-

Turning on the balance

1. Insert the plug of the power cord into the DC connector at the back of the unit.
2. Unlock the rechargeable battery using the switch at the base of the unit.
3. Connect the power cord to the power outlet.
4. Press the 'ON' button. The display will automatically light up and display '0.000g.'

Warming up

Before calibrating the balance or measuring its accuracy, it is necessary to ensure that the unit is stable.

For balance stabilisation, it is vital that the environmental temperature is stable.

Leave the balance ON and in weighing mode for at least 15 to 30 minutes before performing the calibration of the unit.

Calibration

Perform a balance calibration for each of the below circumstances:

- After moving the unit
- If the temperature changes a lot
- If the humidity changes a lot

The necessary calibration weight depends on the maximum capacity of the balance.

Australia

1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada

1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand

+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States

646 568 5391
sales.us@westlab.com
www.westlab.com

Before performing the calibration, warm up the balance in advance.

1. Long press the 'CAL' button until the weight value flashes.
2. Place the calibration weight on the pan and wait until the flashing weight value display changes to a steady state. [e.g., 200.000 g]
3. Remove the weight from the pan. The screen will display '0.00' and the balance will return to the weighing mode.

Linearity calibration

If the tolerance [error] after calibration is too high, then linearity calibration is necessary.

1. Long press the 'CAL' button until the number flashes, and long press the 'CAL' button again.
2. The necessary weight value will flash.
3. Add the weight accordingly until the display shows 0.000g.

Weighing function

1. Enter the weighing mode.
2. Place a container on the pan.
3. Once the weight on display has stabilised, press the 'TARE' button.
The display will show 10-20-50-100 in circle.
4. Place the sample to be weighed in the container.
5. Once the value on display has stabilised, read the display.

Piece counting function

1. Long press the 'UNIT/COU' button to activate the piece counting function.
The display will show 10-20-50-100 in circle.
2. Place the corresponding sample of pieces in the pan [e.g., add 10 pieces on the pan when the display shows 10 and press the 'UNIT/COU' button to save the data].
NOTE: In counting mode, the weight of the pieces must be even, and the weight of an individual piece should not be less than the repeatability of the balance.
3. To return to the weighing mode, press the 'UNIT/COU' button again.

Weighing unit selection

The balance can perform weighing in different measuring units. In weighing mode, press the 'UNIT' button repeatedly to consecutively display all the available weighing units and select the appropriate one.

The weighing unit be default is g.

Overload

The weight of the sample cannot exceed the rated maximum capacity of the balance. When exceeded, the upper line '-----OL-----' will be displayed.

Remove the sample immediately to avoid any damage to the balance.

Australia

1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada

1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand

+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States

646 568 5391
sales.us@westlab.com
www.westlab.com

Energy saving mode

1. Press the 'ON/OFF' button before entering the weight mode.
2. Double press the 'TARE' button and then press the 'UNIT/COU' button to enter the setting mode. It will display as '01-diu.'
3. Press the 'TARE' button until it shows '07-LED.'
4. Press the 'CAL' button to enter the setting for backlight saving mode.
5. Press the 'UNIT/COU' button to choose one of the below modes:
 - 0: Display backlight is OFF
 - 1: Display backlight ON
 - 2: Display backlight will turn OFF after 15 seconds of inactivity
6. Press the 'CAL' button to confirm the selected setting.
7. Turn OFF the balance to activate the new mode.

Baudrate setting

1. Press the 'ON/OFF' button before entering the weight mode.
2. Double press the 'TARE' button and then press the 'UNIT/COU' button to enter the setting mode. It will display as '01-diu.'
3. Press the 'TARE' button until it shows '08-BUD.'
4. Press the 'CAL' button to enter the Baudrate setting mode.
5. Press the 'TARE' button to choose the required Baudrate.
6. Press the 'CAL' button to confirm the selected setting.

Data output setting

1. Press the 'ON/OFF' button before entering the weight mode.
2. Double press the 'TARE' button and then press the 'UNIT/COU' button to enter the setting mode. It will display as '01-diu.'
3. Press the 'TARE' button until it shows '09-odE.'
4. Press the 'CAL' button to enter the data output setting mode.
5. Press the 'TARE' button to choose one of the below modes:
 - 0: No output
 - 1: Press key to output [press 'CAL' as print]
 - 2: Timing output
 - 3: Continuous output
6. Press the 'CAL' button to confirm the selected setting.
7. Turn OFF the balance to activate the new mode.

Australia

1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada

1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand

+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States

646 568 5391
sales.us@westlab.com
www.westlab.com

RS232 interface

Balance, DB9 pin

Connection	Balance (9 pins)	PC/Printer (9 pins)
RXD (Input)	2.....	3
TXD (Output)	3.....	2
GND (Ground)	5.....	5

Balance, USB

USB male ports.....USB male ports

When the balance connects with the PC, download the PL2303 driver software.

- The Baudrate by default is 9,600 bps [see Baudrate setting]
- Date format: 10 bits, 0 as start bit, 1 as stop bit, 8 digits [ASCII code]
- No odd and even numbers adjusting
- Data output: the continuous mode is set as the default. The data output mode can be changed into press output, timing output and continuous output [see Data output setting]
- Output data format

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Space	Space	Space or *	±	Data	Data	Data	Data or dot	Data or dot	Data	Data	Data	Unit1	Unit2	End	Return

7. Product Disposal

In the case that the product is to be disposed of, the relevant legal regulations are to be observed.

ORDERING WITH WESTLAB IS EASY

Online

www.westlab.com.au

Order online with our easy Express Order form for fast, secure ordering.

Phone

1800 358 101

Speak to one of our friendly, efficient staff from

8.00am - 5.00pm (Mon/Fri)

Email

sales@westlab.com.au

24 hours, 7 days a week convenience.

Australia

1800 358 101
sales.au@westlab.com
www.westlab.com.au

Canada

1 877 822 1455
sales.ca@westlab.com
www.westlab.com

New Zealand

+64 9 553 3677
sales.nz@westlab.com
www.westlab.co.nz

United States

646 568 5391
sales.us@westlab.com
www.westlab.com

