



# User Manual

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- Models:
- BL 303
  - BL 602
  - BL 2002
  - BL 3001
  - BL 6001
  - BL 30K1

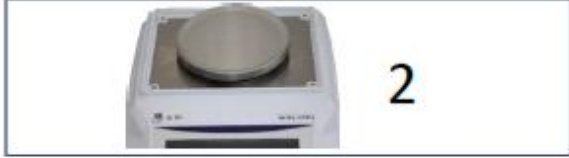
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# Glass protection

## BL 303



# BL 602

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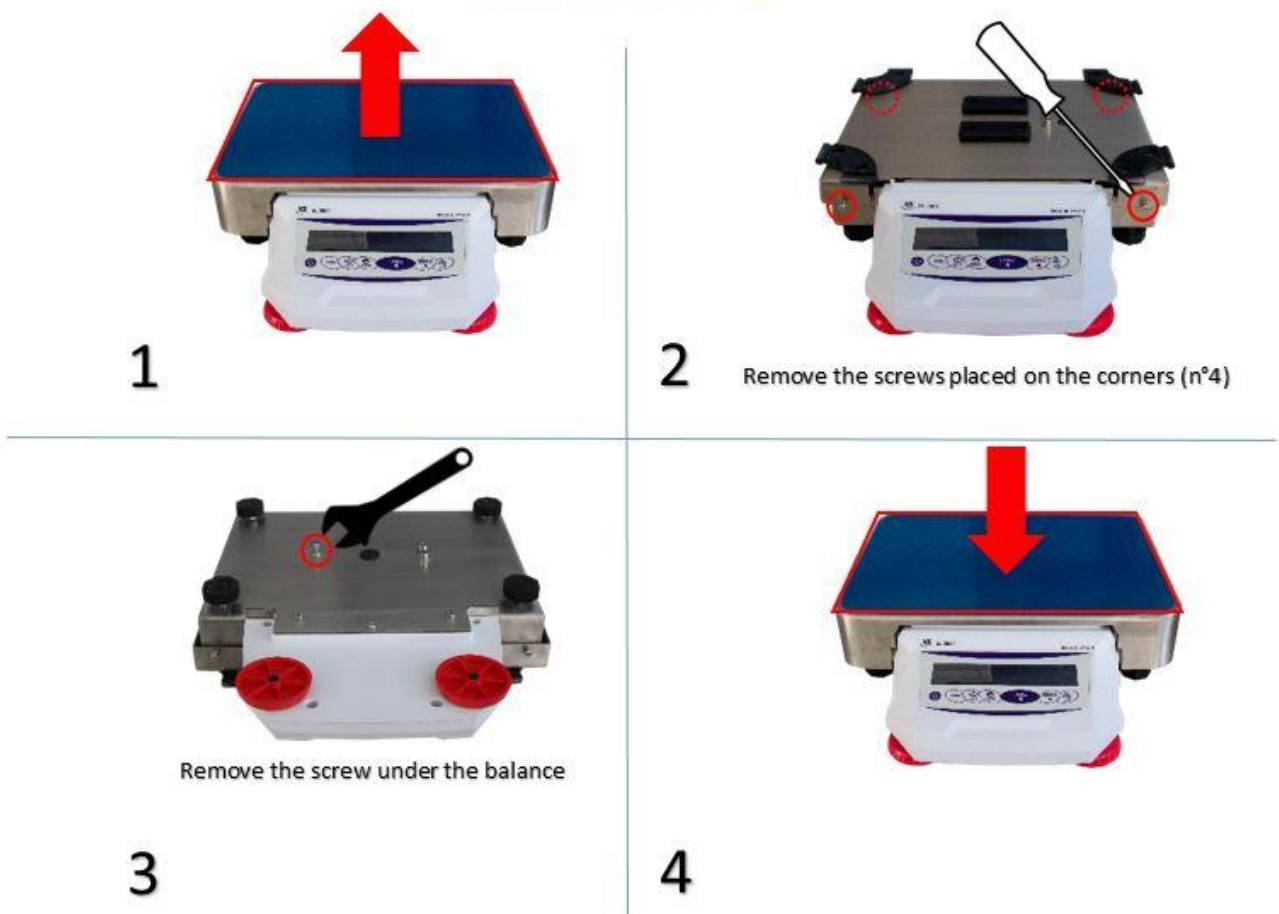
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# BL 2002 – BL 3001 – BL 6001



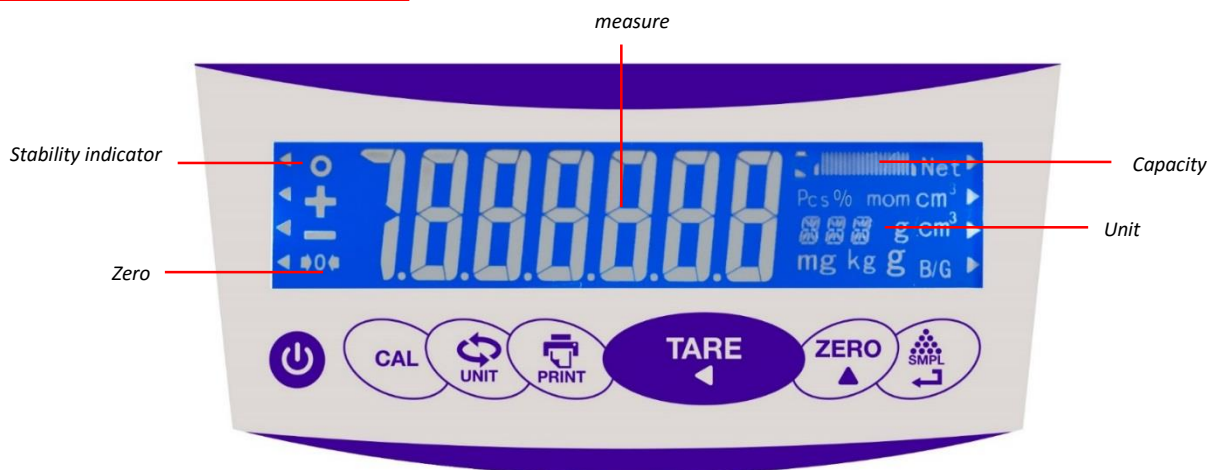
# BL 30K 1










# Installation

- Place the balance and, using the adjustable feet and the bubble on the back, adjust the inclination. The scale MUST be leveled.
- Protect the balance from drafts, so do not install near windows or air conditioners;
- Protect the balance from vibrations;
- Working temperature: 10°C – 40°C;
- Working Humidity: 40% - 85%.;
- Installation and removal of the scale must be done with the machine switched off;
- Do not use the scale upside down;
- After switch On, wait at least 30 minutes warming up before the first weighing;
- For assistance, contact your dealer or an authorized service center.

# Keyboard



	On / Off
	Hold for 3 seconds to start Calibration procedure
	Unit selection
	Print data (RS 232 printer / PC)
	Tare
	Zero
	Counter function, set unit in %, ‰, PCS, B/G

# Start

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Place the scale, and using the bubble on the backside for level it.

Press On / Off to turn on the scale. Following a countdown, marked also by the beep, you will see the software version, the capacity of the scale, and then you enter the measurement mode.

Wait at least 30 minutes to warm up before the first use.




## Date and Time settings

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Switch on the balance. Keep pressed  for 3 seconds for date and time settings menu: "RTC-SET".

First value requested is the year: the display shows "YEAR \*\*":

Use the following buttons to modify the blinking value:

-  set the value,
-  scroll to the next value
-  confirm.

Successively are required:

1. Month            MONTH
2. Day             DAY
3. Hour            HOUR
4. Minute         MIN


## User Calibration

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*Each balance is calibrated in the laboratory by technicians using certified sample masses.*


*Provided with all models there is a sample mass useful to test the functionality of the instrument.*

### Calibration procedure:

- Turn on the balance and wait at least 30 min. of warmup
- Keep pressed  button for 3 seconds, the display shows first "CAL 0", "-----", and then it shows the sample mass [g] requested for the calibration. \*
- Place the sample mass on the plate.
- Display first shows "-----", than the weight measurement.

**Calibration is complete.**

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\* With the  button is possible to change this value, choosing one of the allowed for that model (Tab 1)

## Allowed calibration weights [g] for each model

BL 303	100 – 200 - 300
BL 602	200 – 400 - 600
BL 2002	1000 – 2000 - 3000
BL 3001	1000 – 2000 - 3000
BL 6001	2000 – 4000 - 6000
BL 30K1	10000 – 20000 - 30000

Tab 1


Examples:

If the display shows the blinking value: 2000, put on the plate a certificated sample mass of 2000g.

If the display shows the blinking value: 100, put on the plate a certificated sample mass of 100g.

## Unit setting

### Unit selection

Press  button to select the desired unit.



### Default unit settings

Default unit selected is gram [g].


To change the default unit, turn on the balance, and

keep pressed  button for 3 seconds.

Display shows on the right the unit selected, and ON if the unit is enabled, OFF if it is disabled.


-  to scroll units.
-  to switch ON/ OFF

Setting OFF, that Unit will not be selectable in the measurement mode.


To choose a new default unit, scroll the units and when is reached the desired one, press  button.

N°	Unit	Symbol	Conversion
1	grammo	g	1
2	Carat	ct	0,1999694 g
3	Avorirdupois Pound	lb	453,59237 g
4	Avorirdupois Ounce	oz	28,349523 g
5	Troy Ounce	ozt	31,103477 g
6	Avoirdupois Dram	dr	1,7718451 g
7	Grain	GN	0,0647989 g
8	Penny weight	dwt	1,5551738 g
9	Momme	mom	3,749996 g
10	Hong KONG JEWELRY TAEI	K.tl	37,429002 g
11	Taiwan Tael	T.tl	37,49995 g
12	Hong Kong tael	H.tl	37,799375 g
13	Singapore tael	S.tl	37,799366 g
14	Tola	t	11,663804 g
15	Mesghai	M	4,6083162 g
16	Tical	cl	16,3293 g
17	Kilogram	Kg	1000 g
18	British Gravitational System	B/G	
19		PCS	
20		%	
21		‰	

## Zero


With no weight on the scales, press the  button to take the 0.00 reading on the display. The ZERO function is only effective if the value shown is less than 4% of total capacity. If the value is greater than 4%, the load is regarded as a tare.

## Tare

After placing the tare on the scales, press the  button to reset the value displayed to 0.00. The load used for Tare has to be subtracted by the overall capacity weighing.


## Measure


Place the sample on the plate.

Wait for the stable indicator  on the left of the display before taking the measurement.



# Counter Function

Set one of these units: PCS, % or ‰, and press  button.



Display shows "S - 5": 5 is the number of required pieces for the sampling, or the % to associate with the reference sample. With the  button, select the desired value between these: 5, 10, 50, 100, 500 e 1000.

Place samples on the plate and press  button.

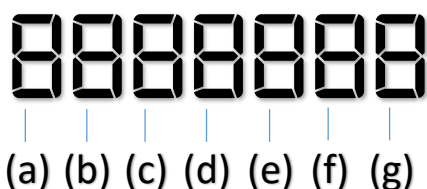
Now It is ready for count all your samples.



# RS-232 Settings


Connect the Rs-232 printe on the backside of the scale.

Keep pressed  button for 3 seconds, the display shows first "RS-SET", .

According with the following table, set the correct values:



-  modify the value,
-  switch to the next position




a	0= 9600	1= 19200	---	---
b	0= print in continuos	1= print when stable	2= press  to print	---
c	0= ---	1= print the date	---	---
d	0= ---	1= print the item *	---	---
e	0= PC Mode	1= special paper	2= continuos paper	3= micro-printer
f	0	---	---	---
g	0	---	---	---

Confirm with  button.

## Item settings

Is possible to set an "Item", that will be printed with the other values, for example the serial number. To do that, keep

pressed  button for 3 seconds. Display shows first "ITEMSET", than "1234567". Modify the string using following key:

-  set the value,
-  switch to next value
-  confirm.

# Battery

The scales mount a rechargeable battery.

To recharge the battery use the power supply included in the packaging, and plug it into the jack on the backside of the balance.

Is possible to use always the balance with the power supply connected.

## Troubleshooting:

Description		Solution
Does not turn on	No power	Connect the power supply. Verify the power supply status and connection.
Reading error. Does not calibrate.	Wrong calibration. Wrong work conditions.	Recalibrate the scale. Look for the right work conditions (pag3).
It switch off	Low batteries	Connect the power supply
"Over"	Sample is heavier than the capacity supported.	Check the sample. Check if the plate interferes with the safety screws present above and below the instrument, in correspondence of the load cell.

## Datasheets

Models	BL 303	BL 602	BL 2002	BL 3001	BL 6001	BL 30K1
<i>Cod</i>	27000513	27000323	27000313	27000113	27000123	27000133
<i>Capacity</i>	300 g	600 g	2000 g	3000 g	6000 g	30 000 g
<i>Division</i>	0,001 g	0,01 g	0,01 g	0,1 g	0,1 g	0,1 g
<i>Repeatability</i>	0,001 g	0,01 g	0,01 g	0,1 g	0,1 g	0,2 g
<i>Linearity</i>	± 0,003	± 0,03	± 0,02	± 0,2	± 0, 2	± 0, 2
<i>Sensor</i>	<i>Strain gage</i>	<i>Strain gage</i>	<i>Strain gage</i>	<i>Strain gage</i>	<i>Strain gage</i>	<i>Strain gage</i>
<i>Calibration</i>	<i>External</i>	<i>External</i>	<i>External</i>	<i>External</i>	<i>External</i>	<i>External</i>
<i>Pan size</i>	Ø 118	Ø 118	188 x 148	188 x 148	188 x 148	330*260*80
<i>Dimensions (L*H)</i>	292 x 218 x 227	292 x 218 x 227	292 x 218 x 80	292 x 218 x 80	292 x 218 x 80	330*260*83
<i>Weight</i>	3,1 Kg	3,1 Kg	2,8 Kg	2,8 Kg	2,8 Kg	6 Kg
<i>Units</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>%</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>RS 232</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>PCS Counter</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Rechargeable batteries</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Dust cover</i>	Optional	Optional	Yes	Yes	Yes	No

# Disposal of electronic devices

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The electrical and electronic equipment marked with this symbol cannot be disposed of in public landfills. According to the UE Directive 2002/96/EC, the European users of electrical and electronic equipment can return it to the dealer or manufacturer upon purchase of a new one.

The illegal disposal of electrical and electronic equipment is punished with an administrative fine.

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