

# ANYLOAD<sup>®</sup>

## EB300

### Precision Balance

Operation Manual (V1908)



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## **1. Introduction**

Thank you for choosing Anyload EB300 Precision Balance Scale. The EB300 series precision balance incorporates a fast and stable display with a variety of functions such as auto shut-off, auto calibration, auto zero tracking, counting functions with memory for 50 items, 20 digital tare memories and 4 units of measurement. The EB300 is equipped with a weight checking function with visual and acoustic annunciators as well as an advanced gravity compensation system for high accuracy weighing. Incorporated into the design of this digital scale are adjustable feet to ensure accurate weighing and an RS-232 communication port for easy data transfer to a PC or printer.

This manual contains operation and maintenance instructions for the scale. Please read this manual completely before installation and operation

## **2. Safety Recommendations and Warnings**

### **2.1 Safety Recommendations**

When using this weighing equipment the following recommendations shall be observed for safety:

The weighing machine may only be used with the power adapter supplied exclusively for use with the weighing machine.

Before inserting the power adapter, the user must ensure that the operating voltage stated on the power adapter agrees 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 machine must immediately be disconnected from the electricity supply (pull out the power adapter).

The weighing machine may only be operated from mains electricity supply with a power adapter which is in perfect condition.

If there should be any reason to believe that it is no longer possible to operate the weighing machine without danger, the weighing

machine is to be immediately unplugged from the electricity supply (pull out power adapter) and secured against inadvertent operation.

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

Care must be taken when weighing liquids to ensure that no liquid is spilt into the inside of the weighing machine or into connections on the rear of the equipment or the power adapter. If liquid is spilt on the weighing machine, it must immediately be unplugged from the mains electricity supply (pull out power adapter). The weighing machine may only be operated again after it has first been re-checked by a service technician.

## **2.2 Safety Warnings**

Please turn off the power before installing or disassembling.

This is a precision instrument, and it should be handled carefully.

Do not operate the scale in hazardous or unstable environments.

Do not place the scale near a heat source or under direct sunlight.

Please keep the scale away from other electromagnetic generating devices. This may interfere the accuracy of reading.

When the “low battery symbol” appears on the screen, the batteries need to be recharged or replaced.

Please confirm that the electrodes “+” and “-” are in the right position.

Do not use both batteries and adaptor at the same time.

Do not leave the drained batteries in the scale

These instructions must be read by each operator of the equipment and must be available at the workplace at all times.

### **3. Features and Functions**

#### **3.1 Scale Features**

- Capacities: 6kg, 15kg, 30kg
- Removable stainless steel platter
- LCD 6-digit display with backlight
- Scale with 4 units of weighing (kg, g, lb, oz) and IP protection (66)
- RS-232 interfaces (for connection to PC / printer)
- 20 target weight memories, numerically and definable
- 50 unit weight memories for the counting function
- 20 numeric tare memory
- Calibration with gravity adjustment
- Check weighing mode HI/LO/OK and status indication.
- Auto power off
- Built in rechargeable battery and AC adaptor
- ABS scale enclosure
- Equipped with adjustable feet and level bubble
- Weight checking functions with visual and acoustic annunciators
- Better weighing accuracy with advanced gravity compensation system
- 4 levels of auto hold function

#### **3.2 Scale Functions**

- Auto calibration
- Auto-off
- Auto zero tracking
- Counting function
- Low battery indication
- Net weight indication
- Stability indication
- Hold functions
- 

### **4. Options**

- Rechargeable battery
- RS232 output (PC or printer)
- External tare input

## 5. Product Package

- 1 X EB300 Scale
- 1 X Stainless steel plate
- 1 X AC adaptor
- 1 X User manual
- 1 X Rechargeable battery (installed in the scale)

## 6. Display and Keypad description



**POWER key:** Turns scale on/off. Press button to turn on. To turn off, press and hold the button.



**UNIT key:** Press to change unit. In menu mode, press to escape from menu and return to normal



**GROSS/NET key:** When using tare mode, press to show the gross weight, press again and it will show the net weight. To select "weight limit" mode, press and hold it for a few seconds.



**MENU key:** Press this key to enter the menu, and access limit memories, piece counting, tare mode as well as other utility functions.



**ZERO key:** Adjust the scale to zero, correcting its divisions. Perform when plate is empty. Press and hold to display test.



**TARE key:** Deducts the weight of the container. Press and hold to access tare memory.



**LEFT key:** Press to show accumulated total weight. In menu mode, confirm the selected adjusted value and return to previous menu.



**RIGHT key:** Press to save the value shown on the display. In menu mode, it will show the next function.



**UP key:** In menu mode, it increases the value (number) on display.

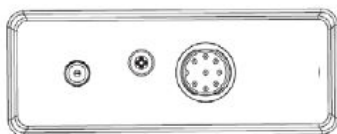


**DOWN key:** Press to erase accumulated weight memory. In menu mode, it decreases the value (number) on display.



**ENTER key:** Confirms the selection done in programming mode.

## **7. Connections**



AC/DC: Connect the adaptor to the scale

RS-232: Connect the indicator to printer and computer

## **8. Basic Functions Operation**

### **8.1 Zero adjust**

When scale plate is empty and display does not show zero value, press ZERO key to correct.


## 8.2 Tare function

Put the container on the plate. After stable, press the TARE key to deduct the weight value of the container, then put the object in the container. The scale will show the net weight value of the object.



Remove the container and weighing object, the display shows the negative weight value of the container. Press the TARE key to clear the weight value of the container





Advice: If there are instability or temperature differences, display will not show 0 value. In this case, press  key to correct it.


Tare Range: Tare value cannot exceed the maximum scale capacity. The real scale capacity is the maximum capacity minus the tare value (Real cap. = max. cap.- tare)..

### Tare memory











The scale has 20 numeric tares available. To enter tare memory, follow the procedure below:

#### Memory programming


1) Press  key. Display will show "PLUPro". .Press  key several times until display shows "TLUPro"

2) Press  key. Display will show the memory used last time (for instance "TLU01"). Last digits indicate the memory number




Once memory position has selected by  and key , press  and display will show a number. To modify or set a new tare value, use , ,  and  to enter the desired value.. To finish, press  key and tare will be saved. Press  again and follow the above procedure to enter another tare value. To quit, press  to escape to weighing mode.


### Tare memory use

In weighing mode, with empty plate, press  longer than a second until "TLU XX" is shown, where XX is the last digit of the TARE memory saved. To access to another memory position, press  and  to surf along the tare memories until you find the desired memory number



To confirm, press . Display will show tare memory value with negative sign. Now you can place the object on the plate, and the tare value will be deducted from weighing value (shows net weight). Then put the actual object together with the container on the platform and the display will deduct the container weight as the value we selected above and show the net weight of the object on the plate, then display indicates net weighing value.




### 8.3 Auto Tare

This function allows tare function with recipient or box to be done automatically, without pressing  button. Display detects the first weight (recipient or box), then operates tare's function (sets to 0), and gets ready to weigh the product in the box or percipient. Afterwards, it sets to 0 and you can start the same procedure again repeatedly without pressing any button.

1) Press menu key and select to enter "tArE" function, press ENTER key to confirm, then display will show "trty 0" or "trty 1", use UP and DOWN keys to select the right type and press ENTER key to confirm.

## Function activation

To enable Auto Tare, follow these instructions:

1. Press . Display will show "PLUPro". Press  several times, until display shows "AUT-t"
2. Press . Display will show in the last position one digit, in accordance with the following:

- 0— Disable function.
- 1— Enabled Function.

3. Press  to confirm. Press  to return to weighing mode



## Function use

1. Place the recipient or box over the plate. Scale will operate the tare function and display will show 0 and tare symbol will be on.
2. Place the object or objects inside the recipient or box. Display will show net weight, deducting the tare (recipient/box weight).
3. Remove all objects from the plate. Display will cancel tare and set to 0.
4. To weigh again, repeat the same procedure. It can be used indefinitely without pressing any button.

## 8.4 Current weighing

Switch on the scale by pressing  button. Display will show zero value after a few seconds.

If there is an object on the plate, display will show the object's weight; in case the weight is low, the scale might activate zero start up and return the 0 value




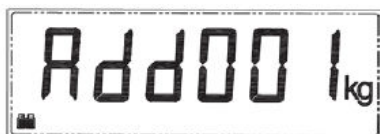
Press the UNIT key to select the required weighing UNIT


## 8.5 Accumulative Weighing

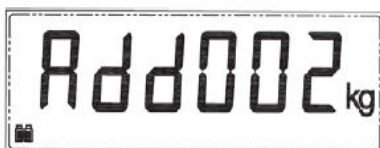
This function adds up all weighing values accumulated, and shows its total value.





To use, place the object you desire to weigh, when display shows stabilized weight value (stability symbol on), Press . Then weight value adds to total.



Put object 2 on the platform and the LCD will show the weight of the object 2, press  key to remember the weight of object 2, then LCD will show "Add002". Remove object 2 and the value of the weight turns to "0" again.



To know accumulated weight value, press  and display will show total accumulated value. You can check accumulated weight value when you desire, and keep on accumulating weight values.

To erase memory, press  and accumulated value will be deleted.





## 8.6 Piece counting function

The purpose of this mode is to count pieces of homogeneous weight. After doing a simple sampling, scale saves the weight of sample pieces, and indicates the number of pieces placed on the plate.

## Sampling

Turn on the scale

### 1) Preset the target sample

Keep press "UNIT" key and enter sample preset function, then there will be a symbol  on the right of the LCD display and the sample value will flash. Press  and  key to set the right sample size, put the sample on the platform and press key  to confirm.



Move the samples away and the LCD display turns to "0".

### 2) Counting



Put the total objects (no more than the max capacity of the scale) on the platform and then you can find the counting number on the screen of the scale




### 3) Escape





Press "UNIT" key to escape after finished counting function.




## 8.7 Piece Counting Preset

When the scale in Piece Counting mode (  on ) and the Stability Symbol on, press .

Press  once, and display will show "CLUPro"

The two digits on the right indicates the 100 memory positions available (from 00 to 99)


Use  and  to set the target value in the flashing digit, use  and  to set the other digits.

Use  and  to set the desired memory position value, and confirm with .








Display will show "CLUPro" again. Press  to escape to counting mode.



To access to memory database and change to another pre-set value, press and hold . Scale will show "CLU XX", where XX is the memory position.






Use  and  to change the flashing digit, use  and  to move the digit to the right or the left. Press  to set the memory position.


Piece counting can begin by placing pieces on the counting plate or in the tare function recipient.

## 8.8 Weighing limit function (+/-)

### Preset

1) Press  key and enter "PLUPro" function, press  to confirm, then display will show "PLU01" or "PLUn" (n≤20), select the memory address you want to set and press  to confirm.



2) Enter the target weight, then press  to confirm



3) Select the upper limit and lower limit of the target weight as shown in step (2).




### Advice mode selection

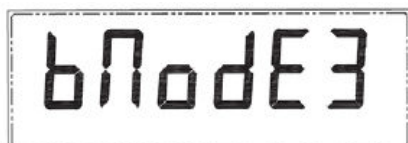
Advice mode should be programmed for limit function. Scale indicates by a "BEEP" if weight is in or out the set limits. It can be programmed in two different ways:




- 1----- Beeps when the weight is within the limitation
- 2----- Beeps when the weight is beyond the limitation



### Type of advice selection

Advice mode could be either a continuous beep, or just a one time beep. To set, use  and  to select the desired value, and press  to confirm




- 1----- No beep
- 2----- Beeps one time
- 3----- Beeps continuously

Press  to confirm the target weight serial number

Press  to finish the preset, press  to save and escape


### Limit function activation(+/-)

1) Press and hold  until display shows “Hi-Lo X”, where “X” indicates if function is enabled or disabled.




0----- Weighing without target weight alarm function

1----- Weighing with target weight alarm function

2) Select the right target weight you have preset before and press  to confirm



3) Confirm and change the preset information and press  to escape.



4) Put the objects on the platform and the beep will alarm when the weight is beyond or within your limitation

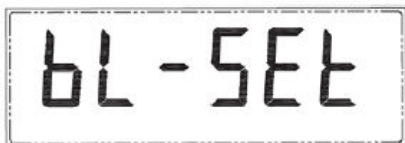


## 9. Advanced Functions Settings

To access to function menu, press , and display will show “PLUPro”

## 9.1 Backlight Setting

Press  and select to enter "bl-SEt" function, press  to confirm



Then select the preferred mode



No----- The backlight will always on when power is on




Off----- The backlight will be off all time

Auto----- The backlight will automatically turned off after the weight is stable for about 5 seconds.

Press  to confirm and press  to save and escape the preset

## 9.2 Hold Mode Setting

To access function menu, press , and display will show "PLUPro". Press  until display shows "Hold".

Press  to confirm and display will show "Hold X". 'X' which is the saved option. To change it, press  or , according to the following values:



0----- Without hold function

1----- Hold at peak value, press any key to release


2----- Hold when stable, press any key to release

3----- Remove the weight to release

4----- Animal scale hold mode, after W<10d cancels holds

Press  to confirm and press  to save and escape the preset.



## 9.3 Auto Power Off

Press  and display will show "PLUPro". Press  until display shows "AUT-0". Confirm by pressing .


Display will show one digit at the right, according to the following table:





- 0----- Without auto power off function
- 1----- Auto power off after 1 min without any operation
- 2----- Auto power off after 2 min without any operation
- 3----- Auto power off after 3 min without any operation
- 4----- Auto power off after 4min without any operation
- 5----- Auto power off after 5 min without any operation





To change it, press  or .

## 9.4 Stability Filter

In adverse environmental conditions, or when scale is being used in unstable weighing environments, you can increase the weighing stability with filters. To access this function, press  and display will show "PLU XX".



Press  until display shows "FiLTER". Press  to confirm, and display will show a digit on the right, in accordance with the following table:



- Filter 0 - Factory programmed (Recommended)
- Filter 1 - Stable environments (fast response)
- Filter 2 - Not really stable environments (medium response speed)
- Filter 3 - Instable environments (low response speed)
- Filter 4 - Very unstable environments (slow response speed)
- Filter 5 - Strongly unstable environments (very slow response speed)
- Filter 6 - Extremely unstable environments (very slow response speed)

To change, press  or , confirm by pressing . To escape, press .

### 9.5 Sound activation

Keypad produces a sound when pressing keys. This sound can be disabled, press




 and then press  until display shows “Beep” on display.

Press  to confirm, use  to select the right digit in accordance with the following options:

- 0- Sound off
- 1- Sound on

### 9.6 AD converter verification function

This function shows the value of analogical/digital converter to verify the proper function of the entire scale including load cells. It is useful for our technician to check and identify eventual scale failures.


Press , then press  until it shows: “i count”. Press  to confirm, and display will show a 6 digit number which normally changes.

To escape this function, press  and then press .

### 9.7 RS-232C data output configuration (optional)




Out of the two data outputs, one can be configured, and one can be used to connect to a PC or other accessories.


To access configuration, press  and then press  until it shows “UArT”



Press  to confirm, it will show the following speed transmission data options:

- 001 – 1200 bauds
- 002 – 2400 bauds
- 004 – 4800 bauds

009– 9600 bauds  
 0019 – 19200 bauds  
 0038 – 38400 bauds  
 057 – 56800 bauds  
 058 –115000 bauds

Use  and , select the desired option, and confirm by pressing  .  
 It will show “dbit 8” message.

This is an option which cannot be modified and means that the length is 8 bit.  
 Confirm by pressing .

Afterwards, display will read “PAri 0”, which is also an option which cannot be modified and means parity. Confirm by pressing  and escape by pressing .

## 9.8 Print Format

Printer data output can be configured with 5 different print formats, in accordance with the following versions:

### Format 1:

**Weighing Number: #00002**  
**Net: 0.000kg**  
**Gloss: 0.000kg**

### Format 2:

**Weighing Number: #00002**  
**Net: 0.000kg**  
**Tare 0.000kg**  
**Gloss: 0.000kg**

### Format 3:

**Weighing Number: #00002**  
**Unit W: 0.000kg**  
**Tare 0.000kg**  
**Gloss: 0.000kg**  
**Net: 0.000kg**  
**Quantity:**

**Format 4:**

**Weighing Number: #00002**

**Unit W: 0.000kg**

**Gross: 0.000kg**

**Net: 0.000kg**

**Quantity:**





**Format 5:**


**Weighing Number: #00002**

**Target Weight: 664.224kg**

**Actual Weight: 0.000kg**

**Deviation: -664.224kg**




To select the desired format with the scale in weighing mode, press "PLU". It will show "PLUPro". Press  until display indicates "PrnFrn". Press  to modify print format, from 1 to 5, in accordance with the shown models. To use one of them, select the number with  and  keys.

Press  to confirm function. Display will show "LFn" follow with two digits. Its function is to select the number of empty lines you desire to print after data blocks. If you set the value to 1 or 0, the printer will not let empty space between data blocks, if you set a high value (10), printer will allow 10 empty lines after printing.

Select the desired value using  and  arrows  or  to modify the next digit. Confirm the final value with .


Display will show "Lan" message followed by a number, which is the print language. This digit has to be set according to the following table:


- 0 --- English
- 1 --- Spanish
- 2 --- French
- 3 --- German


Press  and  to select the desired language. To save, press . Display will show "COM" message followed by a number, in accordance with the following description:

COM 0 RS-232C Printer Output


Press  to confirm.

Press  to escape from menu.









In weighing mode, press , scale will send weighing value in the print format indicated.

In the weighing format, it is numbered from "#00001" value to "#99999#". To set to zero, press  in weighing mode

## 10. Calibration

Press the  key long (for about 2s), the LCD displays PASS; input the Password ( 505388 )

1.Set Units

2.Press  arrow until the LCD displays Si.CAL; press  the LCD displays Si-01 (don't touch the platform in the procedure), press , the LCD displays 000000, place the weights on the platform, manually change the 000000 to the real value, and press  again, the LCD displays Si-02; press  key to escape to Si. CAL. Press  or  arrow key until the LCD displays QUIT; press  to save settings and return to normal operation."

Calibration is done.

Note:

1. The above is one-point calibration. If you need multi-point calibration, continue the procedure when LCD displays Si-02 until all the points are calibrated.
2. If the indicator is connected to two platforms, follow the same calibration procedure.

## 11. Parameters

Parameters	Instructions
Units / G	Measurement unit: 1=g; 0=kg
Units / P	Decimal Point ( from 0 to 5 )
Units / FS	Full Scale Capacity
Units/range1 /range2	Range1=Single division Range2=Double Division ( e.g. capacity 15kg, from 0 to 5kg, division is set to 2g; from 5 to 15kg, division is set to 5g )
Si.CAL-01 to 10	Linearity calibration, up to 10-point calibration. Most cases, 3-point calibration is fine.
CALI	After the Linear calibration
Filter/ICS	Weight catching times. By default was set to 103
Filter/rdS	Deviation data. By default was set to 101
Filter/rdM	Increased data. By default was set to 101
OIML	0=manual setting, 1=machine automatic setting
OIML/rS	Percentage range of full capacity for manual zeroing ( e.g. capacity is 10kg, if it is set to 05 meaning it is 5% of the full range )
OIML/Or	Percentage range of full capacity for automatic zeroing when switching on the scale ( e.g. capacity is 10kg, if it is set to 05 meaning it is 5% of the full range. The scale displays zero even there are weights lighter than 0.5kg on the platform when it is switched on )
OIML/Ot	No function currently, By default was set to 10
c1/c2	0=Single Platform function, without showing c1 on the LCD, 1=single platform, showing c1 on the LCD, 2=double platform function
Adc/Sr	Sampling speed. By default was set to 20
Adc/Gn	Amplifying Rate. By default was set to 2
rst	0=deactivate, 1=activate. To zero minus weight ( e.g. there is 5kg on the platform when it is switched on, the scale will display zero. If take away the 5kg object, it will display -5kg. You cannot clear this -5kg by pressing ZERO or TARE key. You have to set the rst to 1 )
Zero	Minimum weight the scale will zero: 0=1d, 1=2d, 5=6d
G1set	Factory acceleration of gravity
G2set	Client acceleration of gravity



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