

FA-B SERIES ELECTRONIC ANALYTICAL BALANCE

OPERATION INSTRUCTION

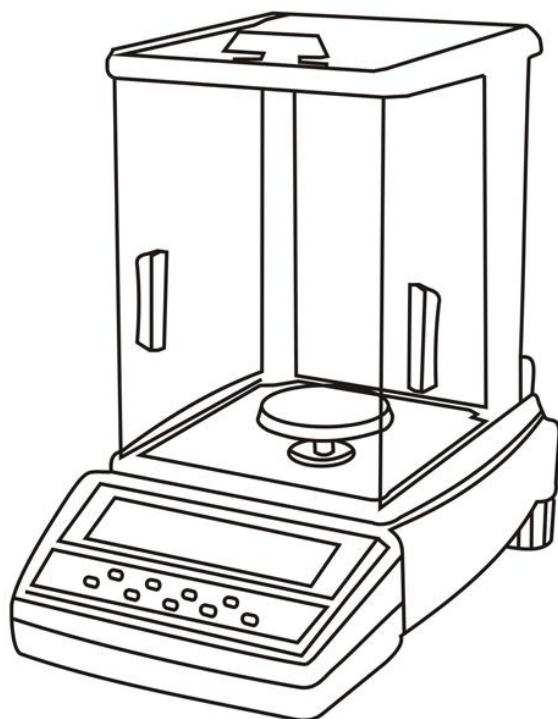


Table of contents

1. Summary
2. The main technical parameters
3. Structure diagram
4. Operate Instructions
 - 4.1preparation
 - 4.2Operation
 - 4.3Power on
 - 4.4Calibration
 - 4.5Unit conversion
 - 4.6Integration time adjustment
 - 4.7Stability adjustment
 - 4.8Counting function
 - 4.9Weighing, tare, adding, reading deviations, etc.
 - 4.10 Print
5. Maintenance
6. Data port
7. Shipping list(Accessories together with balances)

1. Summary:

Thank you for purchasing the FA-B series electronic balance. In order to install and operate safely and accurately, and to fully utilize the functions of the product, it is recommended that you read this instruction manual carefully before use. Keep the instructions in a safe place so that you can check them later. When installing and operating, please follow the operating procedures and precautions of this manual. If there is a big fault in the balance, please do not repair it yourself.

This balance is widely used in enterprises and institutions, schools, research laboratories, to quickly and accurately measure the weight of objects, is an ideal laboratory instrument

2. The main technical parameters

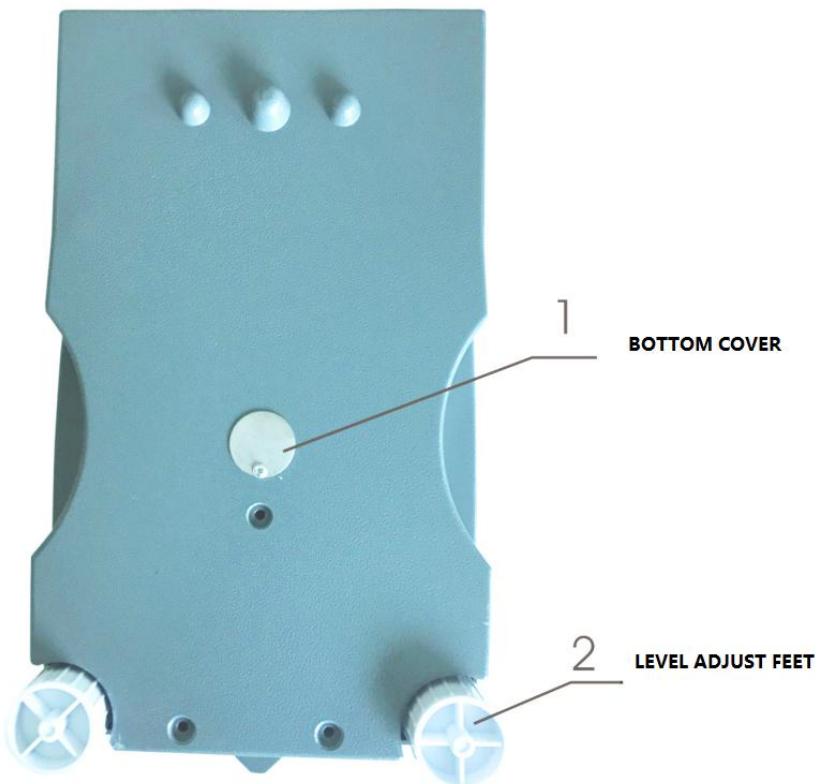
Model	FA1004B	FA1104B	FA1604B	FA2004B	FA2104B	FA2204B
Capacity	100g	110g	160g	200g	210g	220g
Readability	0.1mg	0.1mg	0.1mg	0.1mg	0.1mg	0.1mg
calibration weight value	100g	100g	100g	200g	200g	200g
Pan size	Φ80mm	Φ80mm	Φ80mm	Φ80mm	Φ80mm	Φ80mm
Dimension	360x220x360mm					
Net weight	6kg					
Power supply	220V/50Hz					
Stabilization time	≤6s	≤6s	≤6s	≤8s	≤8s	≤8s
Warm up time(min)	180	180	180	180	180	180

Model	FA1003B	FA2003B	FA3003B	FA5003B	FA11003B
Capacity	100g	200g	300g	500g	1100g
Readability	1mg	1mg	1mg	1mg	1mg
calibration weight value	100g	200g	200g	200g	500g
Pan size	Φ80mm	Φ80mm	Φ80mm	Φ110mm	Φ110mm
Dimension(mm)	360x220x355				
Net weight	6kg				
Power supply	220V/50Hz				
Stabilization time	≤6s	≤6s	≤6s	≤8s	≤8s

Note: If use the machines everyday, no need to unplug, just press power off button on panel. Then don't need to warm up the machines everyday before use it. (Don't use it for long time, it means more than 5days)

3. Structure diagram





4. Operate instructions

4.1. Preparation

- 4.1.1 Unpack the box and removing all packing, install the pan(reserve packing,in case of maintenance need later)
- 4.1.2 Place the balance on a stable work surface, keep balance away from vibration,sunshine and air flow.
- 4.1.3 $20^{\circ}\text{C} \pm 2.5^{\circ}\text{C}$ for first class balance with a fluctuation of temperature not greater than $1^{\circ}\text{C}/\text{H}$
 $20^{\circ}\text{C} \pm 7.5^{\circ}\text{C}$ for second class balance with a fluctuation of temperature not greater than $5^{\circ}\text{C}/\text{H}$
- 4.1.4 Relative humidity: First class balance 50%~75%
Second class balance 50%~80%
- 4.1.5 Working voltage 220V+22v/-33v, 50Hz

4.2 Operation

- 4.2.1 Check level indicator before use it,if bubble is not in center, adjust the level feet and make it in center.
- 4.2.2 The balance uses touch button, can carry out multiple keyboard control, operation flexibility, can press corresponding button for conversion and select each function simply

4.3 Power on

4.3.1 After plug in, the balance start electrify(the display doesn't work), normally power on the display and start operation after warm up the machine.

4.3.2 Keyboard operation function

ON- power on the display

8888888

Press this button, the display on

Check the function of the display, after about two seconds, display the model of the balance, for

-164-

example

0.0000g

Then the weighing mode

OFF-power off the display, press this button, the display power off. If you want to stop using the balance for a long time, please unplug the power cord.

TARE- clear, tare button

Place the container on the weighing pan to display the weight of the container, for

+19.8881g

example

Then press the tare button to display the blanking, the all-zero state appears, and the weight value

0.0000g

of the container has been removed, ie the tare weight

When the container is removed, the negative value of the container weight is

-19.8881g

displayed.

Press the tare button again, the display is all zero, that is, the balance is

0.0000g

cleared.

4.4 Calibration

Due to long time storage, positional movements, environmental changes or for accurate measurements, the balance should generally be calibrated before use.

Remove all objects from the weighing pan, press TARE buttons, balance clear.

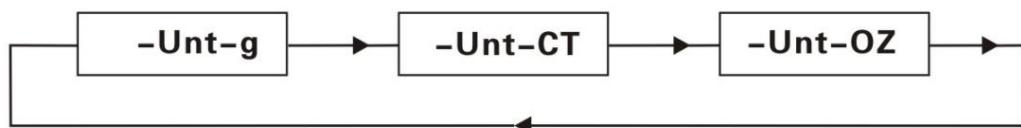
Press the CAL button and when the display shows CAL-, for example CAL-200 flashing, Indicates that a standard weight of 200 grams is required to calibrate, At this time put a standard weight of 200 grams, the display will appear in waiting status, after a few seconds, the display will appear 200.0000g, remove the calibration weight, the display should display 0.0000g, if the display is not zero, then clear, and repeat the above calibration Operation (in order to get accurate calibration results, it is better to repeat the above calibration operation twice)

The calibration sequence is as follows



4.5 Unit conversion

Press UNIT button, the display will appear as shown below, and it will continue to cycle.

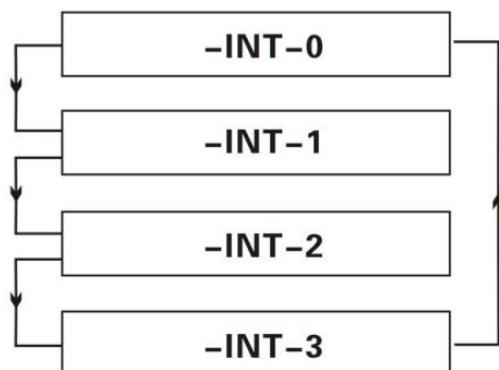


g means unit gram, ct means carat, oz means ounce. Please choose the unit you need.

4.6 Integration time adjustment

The integral function is the speed at which the object is weighed.

The integration time has four modes to choose from, as shown below



The corresponding integration time is

-INT-0 fast

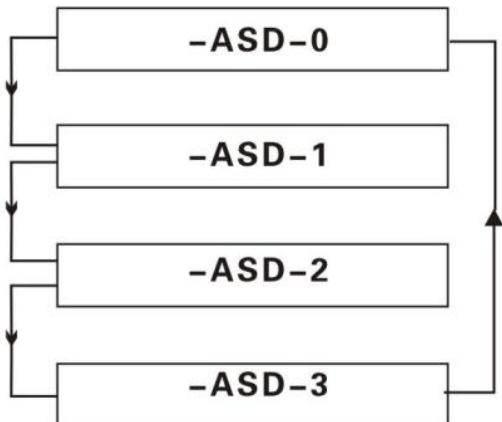
-INT-1 short

-INT-2 shorter

-INT-3 longer

4.7 Stability adjustment

The stability has four modes to choose from, as shown below



The Corresponding stability is

-ASD-0 highest

-ASD-1 higher

-ASD-2 high

-ASD-3 low

-ASD-0 is Production debugging mode, Users should not use

the stability and integration these two modes are combined for user reference as below

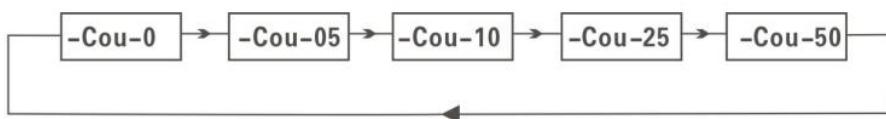
Fastest weighing speed -INT-1 -ASD-3

Usual use -INT-3 -ASD-2

Environment not good -INT-3 -ASD-3

4.8 Counting function

The balance has counting function, and its average has 5, 10, 25, 50 four grades. The average range setting: pressing COU button and don't let go, the display will appear as shown below, continuously cycling.



If you need general weighing function, when the display appears Cou-0, release the COU button, and then the waiting status appears “.... ..”, and finally the weighing status appears “0.0000g”.

If you need to enter the counting status, when any one of Cou-5 ,Cou-10 ,Cou-25 and Cou-50 appears, release the COU button, the display will show the corresponding status

Cou-5 ,Cou-10 ,Cou-25 and Cou-50, representing the average of 5, 10, 25, 50 respectively.

For example, when the display appear COU-5, release COU button, the display will show the COU-5. At this time, 5 pieces objects are placed on the weighing pan, and then press CAL button, and the waiting status appears “.....”. After a few seconds, display 5 , remove the objects, the display shows 0, At this time, the same object can be counted.(Note: The weight of the objects weighed cannot exceed the capacity of the balance) If you average with 10, 25 or even 50pieces, the accuracy of the count will be higher.

Since the balance has a power-off memory function, if you think that the original average is accurate, you can eliminate the operation steps of the average function. The operation is as follows, press and hold the COU button, the display will appear in any status of Cou-5 ,Cou-10 ,Cou-25 and Cou-50, release COU button, then press TARE button, the display shows 0, you can start counting operation.

4.9 Weighing, tare, adding, reading deviations

Weighing

After the above mode is selected by the user (this balance has memory function, the selected mode can be used for weighing after power failure, and can be used for weighing without losing). Press TARE key, after display 0, place the objects on the weighing pan. Wait until the balance is stable(after the stability mark “o” on the left side of the display is off), the displayed value is the weight value of the object being weighed.

TARE

Place the container on the weighing pan, the balance shows the weight of the container, press the tare button to display zero, ie tare weight. Then place the scaled object in the container, then the net weight of the object is displayed.

Cumulative weighing

Using the tare and weighing method, put the weighed objects on the weighing pan one by one, and tare them one by one corresponding, and finally remove all the weighed objects. The absolute value displayed at this time is the total weight value of the weighed objects.

Adding

Set the integral in INT-0 mode, place the container on the weighing pan and tare. Gradually add the weighing objects to the container and quickly get continuous readings. When the additive objects reaches the required weighing, the “O” mark on the left side of the display is extinguished, and the value displayed at this time is the weighing value required by the user. When adding the mixture, the tare weight method can be used to calculate the net weight of each substance.

Read deviation

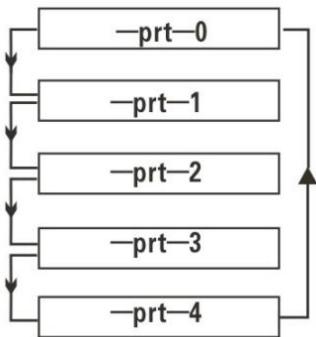
Place the standard weight (or sample) on the weighing pan, tare it. then remove the standard weight, display the negative value, and then place objects on the weighing pan. The weighing object is heavier or lighter than the standard weight, display positive or negative deviation values accordingly.

Under weighing

Unscrew the bottom cover, expose the hook, place the balance on the workbench with opening, adjust the level, and calibrate the balance, then can weigh it with the hook.

4.10 Print

The print has five modes to choose from, as shown below



-prt-0: press to print

-prt-1: Print at intervals of one second

-prt-2: Print at intervals of two seconds

-prt-3: Print at intervals of three seconds

-prt-4: Continuous printing

5. Maintenance

The balance must be used with care. The weighing pan and the outer casing need to be gently scrubbed with a soft cloth. Remember not to scrub with a strong solvent.

Fault and elimination

No	error	Reason instruction	solution
1	The display is not lit at all	1) The balance is not properly connected to the power supply 2) Balance display switch is not open 3) Instantaneous interference 4) Fuse damage	1) connected to the power supply correctly 2)press ON button 3)Re-switch the balance or re-plug the power supply 4)Change fuse
2	Display upper line-----	1) Exceeding the maximum load 2) Internal memory calibration number may be destroyed	1) reduce load 2) calibrate the balance 3) Install the pan correctly

		3) The weighing pan is not installed correctly	
3	Display undeline_____	1) The weighing pan is not installed correctly 2) Without weighing pan	Install the pan correctly
4	Weighing value displayed is unstable (data jitter)	1) Airflow 2) Worktable instability 3) Short integration time 4) Large fluctuations in room temperature	1) Close the windshield 2) Balance placed on a stable workbench 3) Choose a longer integration time 4) Control room temperature
5	Weighing results are not accurate	1) Not cleared before weighing 2) The balance is not calibrated or the calibration weight is not accurate 3) Power supply voltage is not accurate	1) Press TARE key first 2) Calibrate the balance 3) Use the correct power supply
6	The display stays at a certain number or a meaningless symbol appears	1) Possible transient interference 2) Power supply voltage is not accurate	1) Restart or re-plug the power supply 2) Use the correct power supply
7	The stable mark “o” on the left side of the display does not Extinguished	1) High stability 2) The environment not good, such as large airflow, vibration, room temperature fluctuations, etc.	1) Choose a lower stability 2) Change better environment
8	Always display wait status	1) The environment not good, such as large airflow, vibration, room temperature fluctuations, etc. 2) High stability	1) Change better environment 2) Choose ASD-3
9	Display Err-1 or Err-2	1) Possible transient interference 2) The balance is faulty	1) Restart or re-plug the power supply 2) Send for maintenance

10	Display Car or Err	1) There is an object on the weighing pan before the balance is calibrated 2) calibration weight is not accurate 3) Not cleared before calibration 4) Press CAL button without displaying the weighing mode	1) Remove the object, clear and calibrate it 2) Calibrate with the correct calibration weight 3) clear and calibrate it 4) Change into weighing mode
11	The weighing unit on the right of the display is not displayed.	1) Balance not calibrated 2) The calibration number of the internal memory of the balance is washed away	1) Calibrate the balance 2) Calibrate the balance
12	Display Cou-Err	1) averages are not preset when counting operation 2) Weigh too much when preset averages 3) Weigh too small when preset averages	Preset operation for the average of counting

6. Data port

The data interface uses a USB interface. In order to facilitate the user to connect to the system machine or to connect a variety of terminal devices, it can also be connected with the microcomputer and the printer.

7. Shipping list

- 1) 100g or 200g standard calibration weight
- 2) External power supply(adaptor)
- 3) Warranty Card
- 4) user's manual
- 5) Quality Certificate