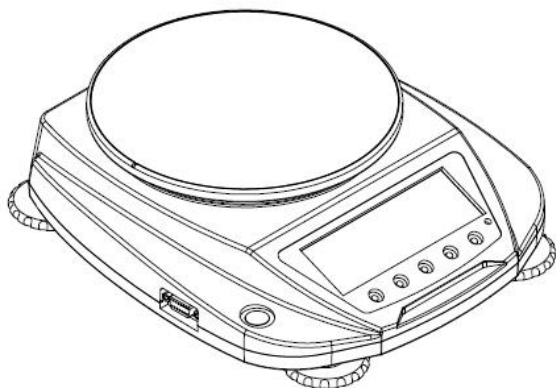




User's Manual

GM Series



Precision Balance

Purpose

GM Series electronic balance ensure the accuracy and reliability of the weighing results.

- Appearance style hale, fashion and brief, sporty powerful;
- Scale pan is made of high quality stainless steel 304, simply and fluency;
- Large screen LCD display, backlight is soft and easy to read;
- Stable and good repeatability
- Sturdy structure

GM Series electronic balance: fast response, easy to operate, greatly simplifying and accelerating the conventional weighing process.

Additional function:

- Weighing unit conversion
- Counting
- % Weighing

Warning and safe instructions

Safety precautions

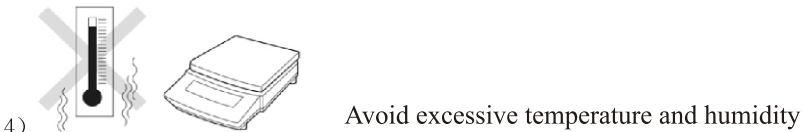
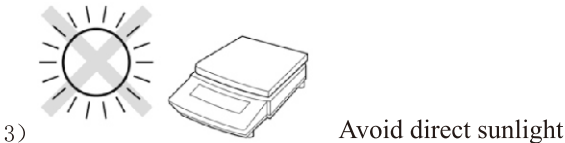
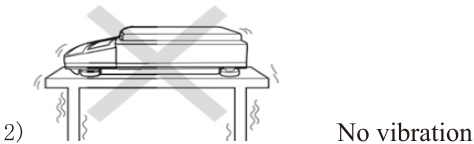
Please read this manual before use the balance to avoid unnecessary damage.

- Verify that the AC Adapter input voltage matches the local AC power supply
- Install and dismantle the balance, need to cut off the power
- Using the balance only in correct environment , work temperature 10°C -40°C
- Avoid strong wind and vibration
- Don't operate the balance in harmful environment
- Don't drop object to the scale
- Don't inversion the balance by tray or supporting
- Service should be performed only by authorized personnel
- Before using the balance, should warm-up 20-30 minutes

Please don't open the shell of balance, otherwise the manufacturer will not provide the warranty service.

Avoid installing and using occasion

Assure that the stability and reliability, Please to avoid follow occasion:



Prepare

Warranty service

Please fill out the warranty card and return to company, then can enjoy a one-year warranty service, Otherwise it will be gave up by yourself.

Storage and transportation conditions

Don't place the instrument in an environment where the temperature is too high or too low, easy to crash, violent vibration, humidity and airflow.

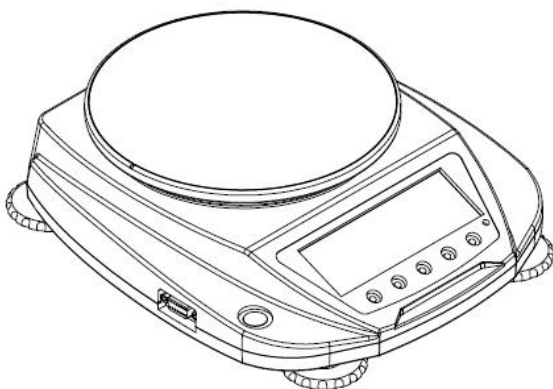
Open-package

- After unpacking, check the appearance of the instrument immediately, to find if there is any damages caused during transport by improper handling.
- If it was found damaged, please contact the factory in time.

Packing list

- Balance
- SUS304 weighing pan
- Plastic windshield (Optional)
- Mass weight (Optional)
- Power adapter
- User' s manual
- Warranty card and certificate

GM series balance



To install the balance, following parts in sequence:

- ① SUS304 weighing pan

Adjust level

Level the balance on a stable desk. When the bubble is in the center of the circle, balance is leveled.

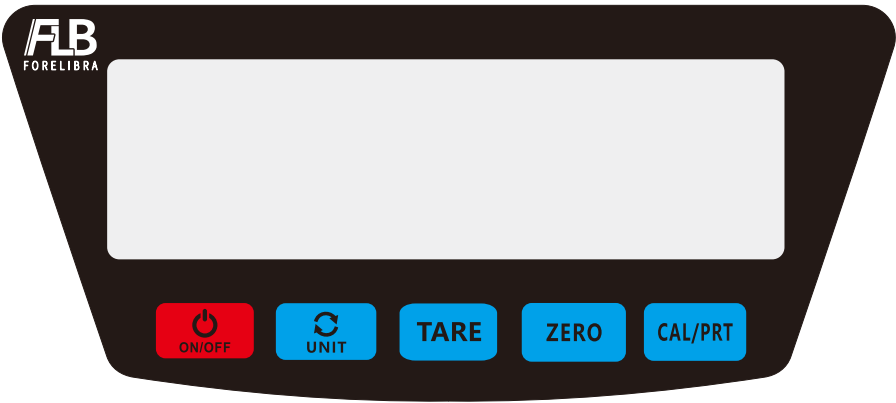
Connect to power

Please use our company power adapter.






Power adapter one end is connected to balance, the other end to AC base.

Operation panel and keyboard functions definition

Operation panel introduction





Keyboard definition

Key	Operation	Function description
	Short press	Turns balance on/off,
	Short press	Sets active units and modes
	Short press	Tare the weighing
	Short press	Sets display to zero
	Long press 3s	Calibration by long press 3s Sends data

Basic weighing operation

Powerboot




Short press  on/off switch, LCD、EL、LED all light,

Screen display about 1.5s, as follow: , Then screen display from 9999999 to 1111111, with beeper, finally LCD show: 

External calibration

To assure the balance accuracy, The first time to using the balance, must to do calibration, This product calibration with external, Before calibration, it need to adjust the balance level.

Calibration as follow:

- 1) Press  to open balance , firstly warm-up 20-30 minutes;
- 2) Calibration, press  3sec, LCD display“ 0 ”, waiting for a sign “-----”, then LCD display twinkling numerical data, At this time , put down the corresponding weight , then LCD display corresponding weight , remove weight, LCD display 0, completed calibration.

Unit details

1. g	10. mm
2. c t	11. t L J
3. o z	12. t L t
4. o z t	13. t L h
5. l b	14. GSM
6. k g	15. t m R
7. d r	16. t A R
8. G N	17. P K t
9. d w t	

Basic weighing operation

Zero

No load on the balance, short press **ZERO** LCD firstly display “~~Zero~~” (ZERO), then display 0, Zero effect is inside of the maximum 4%

Taring

When there is a load on the balance, short press **TARE** LCD firstly display “~~Tare~~” (TARE), then display 0, Have the full range taring function.

Simple counting

1) On the opening state, long press **UNIT** LCD display numerical data , put on counting quantity, when the LCD data display at the same quantity, press **UNIT** to confirm, then can do the counting function.

(PER) % Weighing

1) Long press UNIT key to select “PCS”

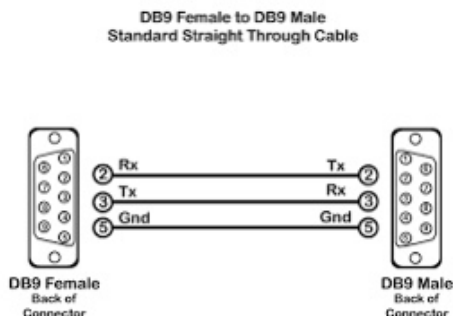
2) Short press **CAL/PRT** key to set Percent mode

3) Place sample on weighing pan and Short press **UNIT** to set the sample % required as it is displayed(usually use 100%)

4) Sample size is now set and Percent weighing display will show the weight compared to the PERCENT weight selected.

Rs232 Serial Port

The RS232 communication port is configured to 9600 Baud and continuous data stream. The connections are as follows;



Technical instructions

Technical data

Working Temperature: 0°C-40°C

Working Voltage: DC12V

Working humidity range: 40%-85%

Adaptor data: Input: AC100-240V 50/60Hz 0.3A, Output: DC12V 1000mA

Normal fault and solving countermeasure

Error information	Reasons analysis	Solution
Can't turn on	No power	Check adaptor connect or battery voltage is ok ?
Reading not correct	No calibration balance by right way Work environment not stable	calibration balance Put the balance by stable
Can't calibration the balance	No calibration balance by right way Work environment not stable	calibration balance Put the balance by stable
Auto turn off	Battery voltage too low (only cell supply power)	charge
OVER	Check the weighing (if over the max capacity 9e)	Check the weighing Check the pan whether interference with the limit screw or support block

Technical instructions

Specification

Item No.	GM103	GM203	GM303	GM503
Capacity(g)	100	200	300	500
Readability(g)	0.001			
Repeatability(g)	±0.002			
Linearity(g)	±0.002			
Working Temperature(℃)	0-40			
Working voltage	DC12V			
CAL	External calibration(weights optional)			
RS232 connector	have			
Warm-up time(min)	20-30			
Frame Size(LxWxH) (mm)	230×270×70			
Packing Size(LxWxH) (mm)	300×135×340			
Pan Size (mm)	Ø 115			
Gross weight (kg)	2.45			
Net weight (kg)	1.75			

Item No.	GM302	GM502	GM602	GM1002	GM2002	GM2002S	GM3002	GM5002
Capacity(g)	300	500	600	1000	2000	2000	3000	5000
Readability(g)	0.01							
Repeatability(g)	±0.02							
Linearity(g)	±0.02							
Working Temperature (℃)	0-40							
Working voltage	DC12V							
CAL	External calibration(weights optional)							
RS232 connector	Optional							
Warm-up time(min)	20-30							
Frame Size(LxWxH) (mm)	230×270×70							
Packing Size(LxWxH) (mm)	300×135×340							
Pan Size (mm)	Ø 150 or 192×171×8							
Gross weight (kg)	2.45							
Net weight (kg)	1.75							

Technical instructions

Cleaning

- Unplug the power from the unit.
- Clean the balance by cloth and mild soap.
- After cleaning, wipe the balance by a soft dry cloth.
- Re-calibrate after each cleaning.

Warranty and Repairs

- One-year warranty for the balance from the date of initial shipment.
- We make in-warranty repairs or replacement quickly, or will offer a full refund, at our sole discretion.
- Any in-warranty repairs or service will exclude all damage due to by abuse and misuse.
- If you have any quality problem, please pack the product well, and request a Return Material Authorization (RMA) code and return instruction from Nanjing Bonita Scientific Instrument company, Ph. 86-25-84169936.

MADE IN CHINA