



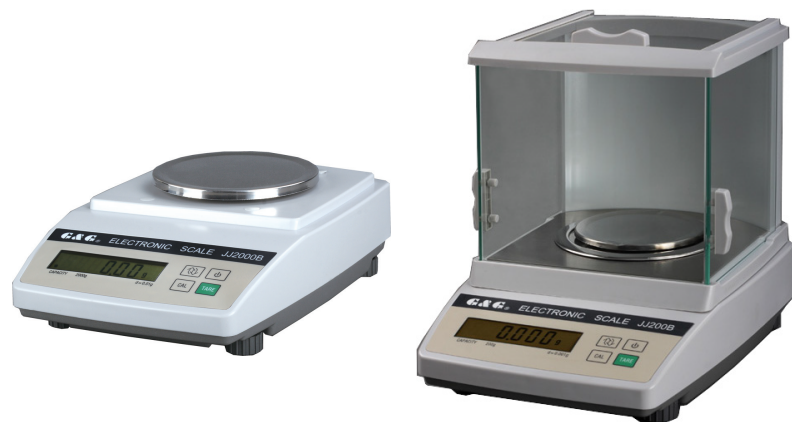
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Operation Manual

For Models:

JJ100B JJ200B

JJ1500B JJ2000B



To guarantee the best performance of the device, please read this operation manual carefully before use.

G&G GmbH

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Operating Manual for JJ-B Series of Electronic High Precision Balances

(for following models: JJ100B, JJ200B, JJ1500B, JJ2000B)

1. Overview

Manufactured and well-designed by G&G Measurement Plant, adopting industrial-class high precision sensors, measurement circuit, a “G&G” dedicated single-chip computer system, and controlling system, JJ-A series electronic balances are high-quality electronic weighing machines. Advanced technology, well-selected, exquisite processing and strict testing make JJ-A series of electronic balances be possession of following strong points:

- Simple operations.
- Integrated water level on the scale
- High precision, hypersensitivity and fast reaction speed
- High quality, strong anti-interference capability, long life, long-term using stability, adapting to the adverse environment and long hours continuous work
- With auto calibration
- Unit conversion feature: in seven units between arbitrary conversions
- Balance is targeting output data interface and can be connected directly to the printer and computer to collect and analyze the data. The balance can even remote controlled by computer.

In general, with high precision, high stability, high reliability and high efficiency, the “G&G” electronic balances has widely replace the traditional mechanical, tray balances. The “G&G” electronic balances have been widely used in all callings, in different kinds of measurement and test. Those have played an important role in improving products quality, cost-effectiveness and efficiency.

2. Specifications and Performance indexes

Depending on the difference of range and resolution, G&G Brand JJ-B series electronic scales are classified to 4 types as shown

Model	JJ100B	JJ200B	JJ1500B	JJ2000B
Capacity	110g	200g	1500g	2000g
Resolution Ratio	0.001g	0.001g	0.01g	0.01g
Calibration Graduation	10d	10d	10d	10d
Tare Scope	2000g		3000g	
Calibrating Weight	2000g		2000g	
Dimension of Platform	Φ 135mm			
Volume	325(W)X 211(D)X 111(H) mm			
Power Supply	AC Adapter (AC 230V 15V 300 mA 50Hz-60Hz)			
Use Temperature	0-40°C			
Use Humidity	≤80%R.H			

P.S. Only use the provided adapter or the same specifications of the adapter, otherwise there will be dangerous.

3. Operational Method

3.1 Turn on the power. Open the switch. The displaying windows displays from “F----0” to “F----9” and after a certain time for stabilizing, “0-0” appears; Then preheats for 15 minutes. Instability of the displaying at every beginning is normal; after a certain time, the displaying will stabilize.

3.2 With empty scale platform, the displaying deviates from zero, pressing “TARE” key, then the displaying will return to zero.

3.3 If the scale has not been used for a long time or just bought, the scale should be calibrated. Firstly, the scale is fully preheated (over 15 min.) with empty scale platform. Then press “CAL”, the displaying window shows “CXXX” and the balance will automatic calibrate (XXX should be the weight of standard weights). At the same time, only place calibrating weights on the scale platform. After stabilizing, the scale displays the weight of the calibrating weights; till now the calibration is completely finished and the scale can be normally used. If press “CAL”, but display “C---F”, which indicates the Zero point is not stable. Then re-press “TARE” to make “zero” point stable; and re-press the “CAL” to carry out calibration.

3.4 The units can be changed between “g”, “ct”, “ozt”, “oz”, “GN”, “dwt”, “lb”. Press “Units” to change the units during weighting

3.5 If needs to tare, first place the container on the platform, after stabilizing, press “TARE”; the scale displays “zero”. Then place the article in container, at this time, it shows the net weight of the article. Remove the article and the container. The scale shows a negative value of container weight. Still press “TARE” to return to “zero”

3.6 .Count function

3.6.1 Change the balance modus into count modus according to the Attachment.

3.6.2 Choose samples. To precisely count the articles, firstly the quantity of samples for counting should be chosen in according with the weights of the articles. The quantity of samples can be chosen from “1-10-20-50-100”. For a small number of articles, the larger quantity of samples, the more precise.

3.6.3 Place the samples on the pan, the balance will show the total weights of samples. Then press “Count”, balance will show “1”, and unit will show “pcs”, which indicate that balance is now counting. And all the samples are one unit. Then press “Count”, the displaying will show between 1-10-20-50-100. The quantity of articles must be the same with the quantity of samples, and place the similar articles. The total amount of objects is showed. Press the “Count” again back to the normal situation.

4. Attachment: settings and meanings

Turn on the Scale by pressing “CAL” key, in order to change the configuration and function. the display shows C1 and the relevant number, which can be changed. Pressing “CAL” can change the parameters; pressing “TARE” can change the values of parameters.

4.1 C1----- sensitivity setting 0 1 2 3 4, the larger number is, the less sensible but the better stable. Default setting is 2 or 1

4.2 C2-----filtering strength setting 0 1 2 3, the larger number is, the

lower reaction speed, but the better stable. Default setting is 2 or 1

4.3 C3-----Baud rate setting 2(600) 3(1200) 4(2400) 5(4800) 6(9600). Default setting is 2

4.4 C4-----communication setting. “TARE” changes the lower unit. “COUNT” changes the higher units. This is the first data during communication. Default setting is 27.

4.5 C5-----units change. 0 is for units changing and 1 for printing. Default setting is 0. Counting is 2.

4.6 Re-pressing “CAL” after setting. Then the balance is auto calibrated to 0.

4.7 Press “TARE” and do not loose till “F----3” (Balance should be switched on).

All the parameters can be reset to default settings. Re-calibration before using.

5. Data Transmission

Balance is targeting data output interface RS232C and can be directly connected to the printer. The following soft wares are needed, when connects to computer:

3.8.1 Transmission format: serial asynchronous

3.8.2 Serial communication protocol: Baud rat: 600, data: 8 units, starting: 1 unit, ending: 1 unit

3.8.3 Data format:

Starting spaces data symbol ending enter

2unit 7units 3unit 1 unit 1 unit

3.8.4 Check bits: no check bits

3.8.5 Output pins content (9-core socket): 2 pins: RXD 3 pins: TXD 5pins: GND

3.8.6 Computer can control balance though RS232. The orders to balance are:

1BH+70H: sending data

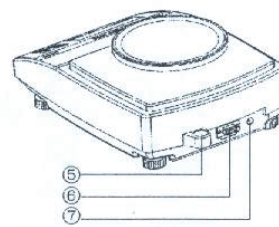
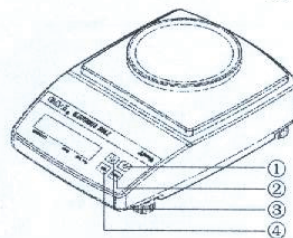
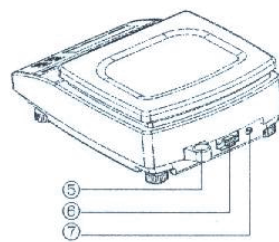
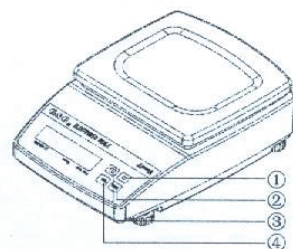
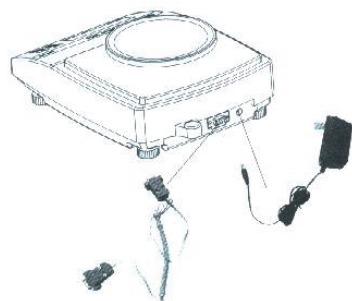
1BH+71H: calibration (like “CAL”)

1BH+73H: Units change

1BH+74H: Tare

Sampling demo, connection method of balance and computer, please download from our website: <http://www.gandg.de>

6. Structure



1. Glass Windshield

3. Part from Windshield

5. TARE key

7. CAL key

9. RS 232 interface

2. Scale pan

4. ON/OFF key

6. Multi-function key

8. Water level

10. Power supply

7. Cautions for operation

7.1 Using environment: indoor, max. Altitude: 2000m, temperature: 0-40°C, humidity $\leq 80\%$, Power fluctuations less than $\pm 10\%$

7.2 The electronic scale is a precision instrument which needs to be gently handled during the weighing of articles. Avoid impact and heavy load on top (never exceed its max. weighing limit). Any forms of impact or overloading many cause permanent damage to the electronic balance, even in the use of electronic balance without power supply.

7.3 Place the scale on a firm table for operation, and make sure that the operating environment of the balance is free of great vibration and interference of power supply, and of corrosive gases and liquids.

7.4 Ensure the warm-up time after power-on..

7.5 Warning: If the equipment is used in a manner not specified by this instruction the perfection provided by the equipment may be impaired

7.6 Gentle handling in daily using, with dry and clean cotton cloth cleaning.

8. Trouble Shooting

Problems	Possible causes	Measures to take
Display shows nothing	1. The ON/OFF switch is defect 2. Internal Circuit is defect	1. the ON/OFF switch must be changed 2. please contact our service department
The message “F-2”	1. A/D-switch problem 2. Sensor is defect	please contact our service department
The message “F-3”	Keyboard defect	please contact our service department
The message “F-5”	1. Sensor is defect 2. A/D switch problem	please contact our service department

The message “F-L”	1.Error by sensor 2.Error by calibration	restore the fabric configuration
The message “F-H”	1.Object weight beyond capacity 3.Error by sensor	1.remove the object 2. restore the fabric configuration
The message “C-L” by Calibration	Error by sensor	restore the fabric configuration
The message “C-F” by Calibration	Unstable zero or zero not correctly set	Press the “TARE” key with empty pan, the balance shows 0, then calibrieren.
The message “C-H” by Calibration	1.Object weight beyond capacity 2.Error by sensor	1. remove the object, Press the “TARE” key with empty pan, the balance shows 0, then calibrieren. 2. restore the fabric configuration
Störung der R-232 Übertragung	1.Parameter configuration Error 2.Cable connection problem or cable is defect 3.internal R232 Chip is defect	1.check the C3 and C4 configuration 2.check the cabel 3. please contact our service department

9. Packing List

Article Description	Quantity	Remarks
Operation manual	1	
Scale pan	1	
Power cable	1	
Calibration weight	1	
Wind shield	1	Option by JJ100B; JJ200B

10. Trash



Meaning of crossed-out wheeled dustbin:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact you local government for in formation regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with newones, the retailer is legally obligated to take back your old appliance for disposals at least free of charge.

11. The Warranty

11.1 All product, which produced by the G&& Testing Instrument Factory in Changchu city, have direct warranty provided by the producer, this including refund, exchange and repair service.

11.2 Within one year after purchase, the producer offers a free repair service to all G & G Product, which become defect under proper usage without human damage. The customer are kindly requested, to mail the product as well as its original package back to the producer, the producer will send the repaired or exchanged product to the customer back within one week.

11.3 There will be a slight charge for the repair service of those products, by which the warranty period expires.

11.4 Please attach the address, postal code and telephone number of the buyer, so that we can mail the repaired product back in time.

12. Contact

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