

# Operating Manual for JJ Series of Electronic High Precision Balances

(for following models: JJ100, JJ200, JJ300, JJ500, JJ600, JJ1000, JJ2000, JJ3000, JJ5000, JJ6000)

## 1. Overview

Following T series electronic balance, manufactured by G&G GmbH, JJ series of electronic balance is new generation with more high precision. In addition to all the advantages of T series, it has following characteristics:

1.1 More high precision, hypersensitivity.

1.2 With auto calibration

1.3 Unit conversion feature: changing between g, ct, ozt

1.4 Balance is targeting output data interface and can be connected directly to the printer and computer to collect and analyze the data. Balance can even be remote controlled by computer.

1.5 With counting function

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, JJ series electronic scales are classified to 10 types as shown:

Model	JJ100	JJ200	JJ300	JJ500	JJ600	JJ1000	JJ2000	JJ3000	JJ5000	JJ6000
Capacity	110g	200g	300g	500g	600g	1000g	2000g	3000g	5000g	6000g
Resolution Ratio	0.01g	0.01g	0.01g	0.01g	0.01g	0.01g	0.1g	0.1g	0.1g	0.1g
Calibration Graduation	10d	10d	10d	10d	10d	10d	10d	10d	10d	10d
Tare Scope	110g	200g	300g	500g	600g	1000g	2000g	3000g	5000g	6000g
Calibrating Weight	100g	200g	200g	500g	500g	1000g	2000g	2000g	5000g	5000g
Dimension of Platform	Φ135mm						190X160mm			
Volume	196 (W) X 215 (D) X 62 (H) mm									
Power Supply	AC 230V 50Hz/60Hz 3W									
Use Temperature	0-40°C									
Use Humidity	≤ 80% R. H									

P.S. JJ100-JJ1000 is targeted windscreen and calibration weights

## 3. Operational Method

3.1 Turn on the power. Open the switch. The displaying windows displays from “F----1” to “F----9” and after stabilizing for a certain time, “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 In case of 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 displays “C2000” and the balance will automatic calibrate (2000g 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 and the unit is “g”; till now the calibration is completed 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. If weight of a weighed article exceeding the scale measuring range, the scale will warn “F----H”.

3.4 If needing 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”

### 3.5 Count

3.5.1 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.

3.5.2 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 and samples must be the same, and then place the similar articles. The total amount of objects is showed. Press the “Count” again back to the normal situation.

3.6 The units can be changed between “g”, “ct”, “ozt”. Press “Units” to change the units during weighting. At the same time the light on the right of the screen will be on.

### 3.7 Data Output

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

3.7.1 Transmission format: serial asynchronous

3.7.2 Serial communication protocol:

Baud rat:600,  
data units: 8 units,  
starting unit: 1 unit,  
ending unit: 1unit

- 3.7.3 Data format: starting data symbol ending enter  
 2unit 7units 3unit 1 unit 1 unit
- 3.7.4 Calibration: no calibration
- 3.7.5 Output pins content (9-core socket): 2 pins: RXD 3 pins: TXD 5pins: GND
- 3.7.6 Computer can control balance though RS232. The orders to balance are:  
 1BH+70H: sending data  
 1BH+71H: calibration (like "CAL")  
 1BH+72H: counting  
 1BH+73H: Units change  
 1BH+74H: Tare

The important instructions and software could be downloaded from our website:

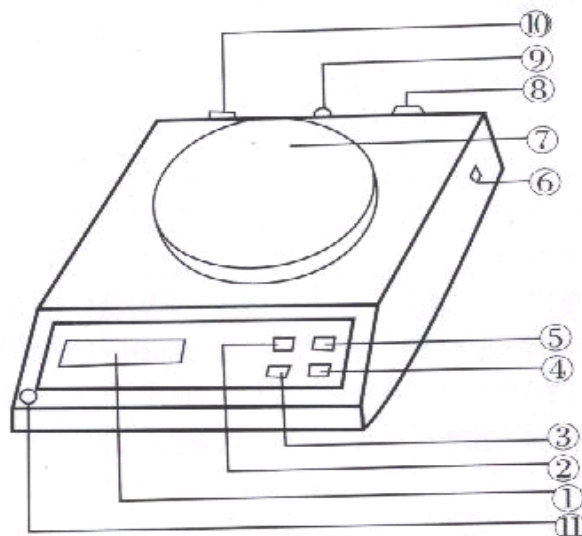
<http://www.gandg.de>

### 3.8 Attachment: settings and meanings

Start the unit by holding down the "CAL" key till it comes to "F---3" and you are in the setting mode. And pressing "CAL" can change the parameters; pressing "TARE" can change the values of parameters.

- 3.8.1 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
- 3.8.2 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
- 3.8.3 C3-----Baud rate setting 2(600) 3(1200) 4(2400) 5(4800) 6(9600). Default setting is 2
- 3.8.4 C4-----communication setting. "TARE" changes the lower unit. "COUNT" changes the higher units. This data is the first data during communication. Default setting is 27.
- 3.8.5 C5-----Set the function of "UNIT" key. 0 is for units changing function and 1 for printing function. Default setting is 0.
- 3.8.6 Re-pressing "CAL" after setting. Then the balance is auto calibrated to 0.
- 3.8.7 Start the unit by holding down the "TARE" key till it comes to "F---3".All the parameters can be reset to default settings. Re-calibration before using

## 4. Structure and buttons



- |                       |                   |
|-----------------------|-------------------|
| (1) Displaying window | ( 2) UNIT         |
| (3) CAL               | (4) TARE          |
| (5) COUNT             | (6) ON/OFF Switch |
| (7) Scale pan         | (8) Power         |
| (9) Fuse              | (10) Data output  |
| (11) Level indicate   |                   |

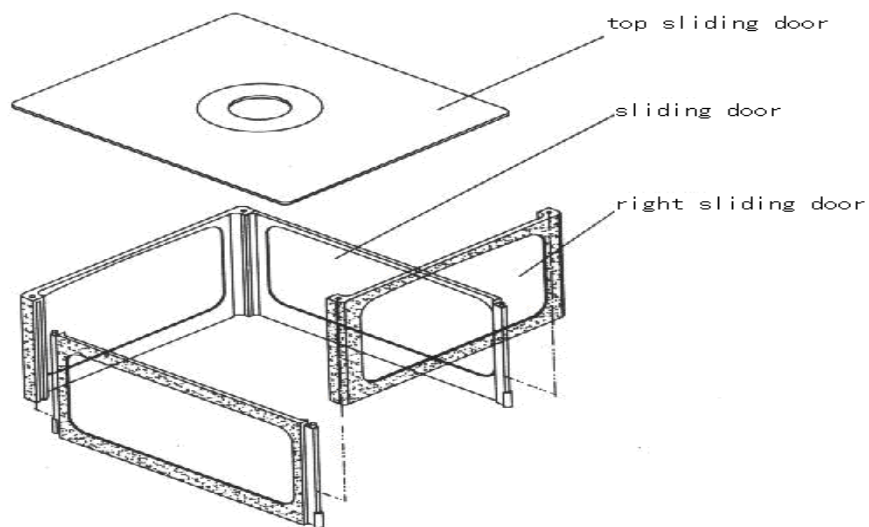
P.S.

From JJ100 to JJ1000 is targeted windscreen and test weights. The installation of windscreen, see follows:

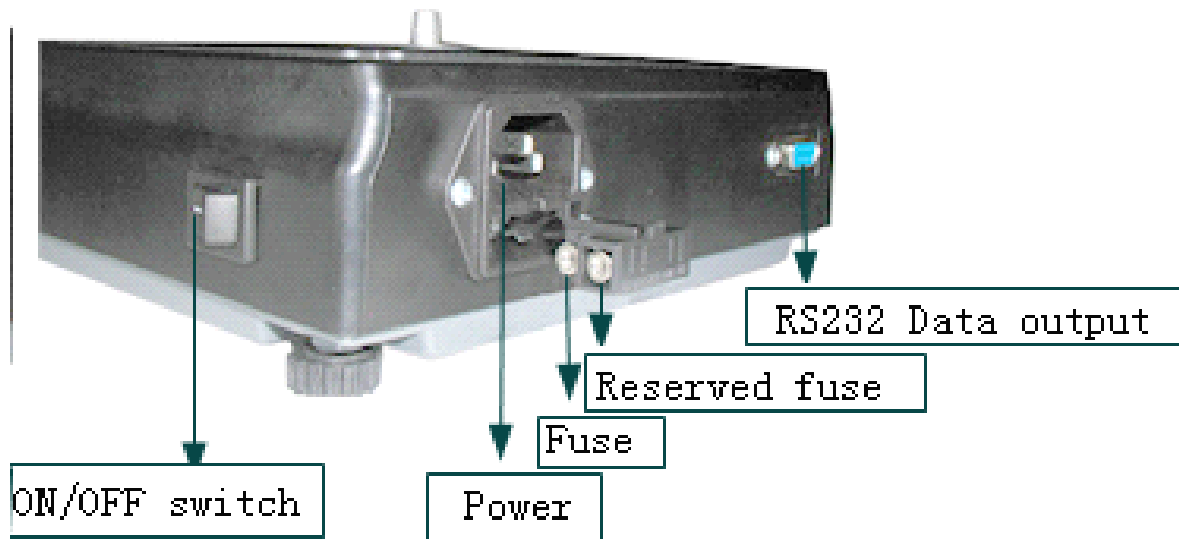
From JJ2000 to JJ6000 there is no windscreen.

#### 4.1 Windscreen installation

windshield construction



#### 4.2 Scale installation



## 5. Cautions for operation

- 5.1 Using environment: indoor, max. Altitude: 2000m, temperature: 0-40°C, humidity  $\leq 80\%$ , Power fluctuations less than  $\pm 10\%$
- 5.2 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.
- 5.3 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.
- 5.4 Ensure the warm-up time after power-on..
- 5.5 Warning: If the equipment is used in a manner not specified by this instruction the protection provided by the equipment may be impaired
- 5.6 Gentle handling in daily using, with dry and clean cotton cloth cleaning.

## 6. The Warranty

- 6.1 We provide warranty within the scope of the statutory regulations, however we are entitled to either repair or replace the defective product.
- 6.2 Within two years after purchase, the producer offers a free repair service to all G & G Product, which become defect under proper usage without human damage. The customers are kindly requested to mail the product as well as its original proof of purchase to the producer. Notification of defects and complaints shall be made in writing after the delivery has been received at the point of delivery. For legitimate notifications of defects and warranty cases we are entitled at our own discretion to either replace the delivery at the prices which were valid at the time of the complaint or to rectify the defect.

6.3 We have the right to try to replace the defective product at least twice. There will be a slight charge for the repair service of those products, by which the warranty period expires. Defective goods may only be returned to us by the customer with our express approval and at the customer's cost and risk. The notification of the defect does not release the customer from his obligation to pay.

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

## 7. 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 information 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 new ones, the retailer is legally obligated to take back your old appliance for disposals at least free of charge.

## 8. Contact

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