

Operating Manual for TC Series of Weight Electronic Balances

1. Overview

- (1) High precision, hypersensitivity and fast reaction speed
- (2) High quality, strong anti-interference capability, long life, long-term using stability, adapting to the adverse environment and long hours continuous work
- (3) With auto calibration, counting, total weight with tare, unit change
- (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.
- (5) LED display.
- (6) High-precision strain sensor


2. Specifications and Performance indexes

Depending on the difference of range and resolution, G&G Brand TC series electronic scales are classified to 12 types as shown:

| Model | TC3K | TC6K | TC10K | TC20K | TC30K |
|-----------------------|------------------------|------|-------|-------|-------|
| Capacity | 3kg | 6kg | 10kg | 20kg | 30kg |
| Resolution Ratio | 0.1g | 0.1g | 1g | 1g | 1g |
| Verification Interval | 10d | 10d | 10d | 10d | 10d |
| Tare Scope | 3kg | 6kg | 10kg | 20kg | 30kg |
| Calibrating Weight | 2kg | 5kg | 10kg | 20kg | 20kg |
| Dimension of Platform | 340×215mm | | | | |
| Volume | 350(W)×325(D)×100(H)mm | | | | |
| Power Supply | AC220V±10% 50Hz-60Hz | | | | |
| Use Temperature | 0-40° C | | | | |
| Use Humidity | ≤80%R.H | | | | |

| Model | TC10KB | TC20KB | TC3KA | TC6KA | TC10KA | TC20KA | TC30KA |
|-----------------------|------------------------|--------|-------|-------|--------|--------|--------|
| Capacity | 10kg | 20kg | 3kg | 6kg | 10kg | 20kg | 30kg |
| Resolution Ratio | 0.1g | 0.1g | 0.5g | 1g | 2g | 5g | 5g |
| Verification Interval | 10d | 10d | 10d | 10d | 10d | 10d | 10d |
| Tare Scope | 10kg | 20kg | 3kg | 6kg | 10kg | 20kg | 30kg |
| Calibrating Weight | 10kg | 20kg | 2kg | 5kg | 10kg | 20kg | 20kg |
| Dimension of Platform | 340×215mm | | | | | | |
| Volume | 350(W)×325(D)×100(H)mm | | | | | | |
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| Use Temperature | 0-40° C | | | | | | |
| Use Humidity | ≤80%R.H | | | | | | |

3. Operational Method

- (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” appears; Then keep the scale on for 15 minutes. Instability of the displaying at every beginning is normal; after a certain time, the displaying will stabilize.
- (2) In case of empty scale platform, the displaying deviates from zero, pressing “TARE” key, then the displaying will return to zero.
- (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 “CXXX” and the balance will automatic calibrate (XXX should be the weight of standard weights). At the same time, only place calibrated weights on the scale platform. After stabilizing, the scale displays the weight of the calibrating weights; 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.
- (4) If weight of a weighed article exceeding the scale measuring range, the scale will warn “F----H”.
- (5) 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 “0”
- (6) The units can be changed between “kg”, “lb”. Press “” to change the units during weighing.
- (7) Count
First choose samples. To precisely count the articles, 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. 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 place the similar articles. The total amount of objects is showed. Press the “COUNT” again back to the normal situation.
- (8) Data Output
Balance is targeting data output interface RS232C and can be directly connected to the printer. 6 feet and 8 feet of RS232C can connect to an external print button or to computer. The following soft wares are needed,

when connects to computer:

<1> Transmission format: serial asynchronous

<2>Serial communication protocol: Baud rat:600, data units: 8 units, starting unit: 1 unit, ending unit: 1unit

<3> Data format: starting spaces data symbol ending enter
 2unit 7units 3unit 1 unit 1 unit

<4> Calibration: no calibration

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

<6> Computer can control balance though RS232. The orders to balance are:

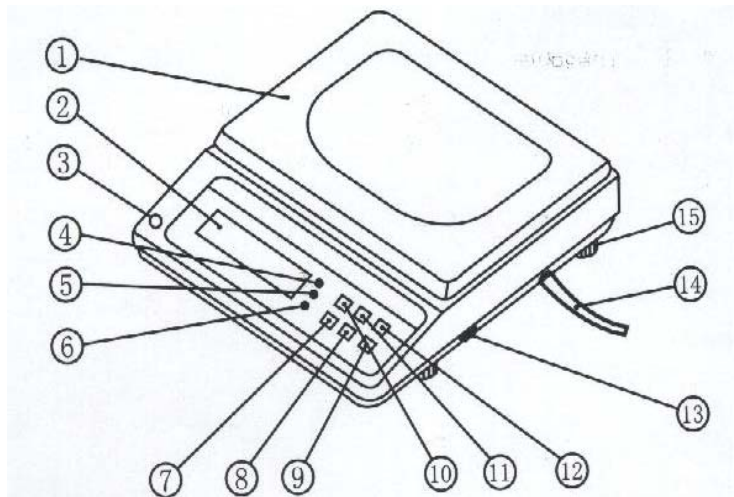
1BH+70H: sending data

1BH+71H: calibration (like "CAL")

1BH+73H: Units change

1BH+74H: Tare

4. Structure



- | | | | | |
|-----------------|--------------------|--------------------|-----------------------|----------|
| (1) Scale pan | (2) Display window | (3) Level indicate | (4) Counting indicate | |
| (5) lb indicate | (6) kg indicate | (7) CAL | (8) COUNT | (9) TARE |
| (10) PRINT | (11) UNIT | (12) ON/OFF switch | (13) Data output | |
| (14) Power line | (15) Level adjust | | | |

5. Cautions for operation

1. 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).
2. 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.
3. Ensure the warm-up time after power-on.

For more information and technical support please visit our website at:
<http://www.gandg.com.cn>

6. Warranty issues

1. CHANG SHU G&G MEASUREMENT PLANT produces the G&G balance, the product implements the three bags by our factory.
2. Products for sale since the date of one year, under the correct installation and use conditions, the non-human failure is the scope of warranty, please send the balance together with the original product packing to factory for free repair. Our factory responsible for the receipt of the date of repaired and sent within one week, or be replaced.
3. Beyond the Warranty time, the repair fee charged
Another: the use of company must provide the detailed address, zip code the recipient and the telephone, so that our factory could sent the balance in time after repairing.

G&G MEASUREMENT PLANT
ADD: Xushi Town, Changshu, Jiangsu
TEL: 0512-52671954
FAX: 0512-52671339
Zip code: 215535
Website: <http://www.gandg.com.cn>