

Operating Manual for TC-H Series Electronic Weighting Balances

(TC3KH、TC6KH、TC10KH、TC15KH、TC30KH、TC3KHA、TC6KHA、TC15KHA、TC30KHA、TC10KHB、 TC20KHB)

1. Overview

Manufactured and well-designed by G&G , adopting industrial-class high precision sensors, measurement circuit, dedicated MPU system, and controlling system, TC-H series electronic balances are high-quality electronic weighing apparatus. Advanced technology, well-selected, exquisite processing and strict testing make TC-H series of electronic balances be possession of following strong points:

- 1.1 High precision, hypersensitivity and fast reaction speed
- 1.2 High quality, strong anti-interference capability, long life, long-term using stability, adapting to the adverse environment and long hours continuous work
- 1.3 With auto calibration, counting, total weight with tare, unit change
- 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 remote controlled by computer
- 1.5 With large green LED display, easily legible.
- 1.6 The electronic weighting balances are targeted with data output function. Thus the balance can connect with printer to print the data out. Or connects with computer to collect and calculate data. Meanwhile computer can also remote control the balance, when it connects with balance.
- 1.7 Large-capacity rechargeable battery. One single charge can work for more than 36 hours. Balance can be used during charging battery, which will not affect the functions of balance.

2. Specifications and Performance indexes

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

Model	TC30K-H	TC20K-H	TC15K-H	TC10K-H	TC6K-H	TC3K-H
Capacity	30kg	20kg	15kg	10kg	6kg	3kg
Resolution Ratio	1g	1g	0.5g	1g	0.1g	0.1g
Calibration Graduation	10d	10d	10d	10d	10d	10d
Tare Scope	30kg	20kg	15kg	10kg	6kg	3kg
Calibrating Weight	20kg	20kg	10kg	10kg	5kg	2kg
Dimension of Platform	300*220mm					
Volume	320(W)*300(D)*110(H)					
Power Supply	AC 230V \pm 10% 50Hz \pm 1Hz 4W DC 6V/4Ah/20HR rechargeable battery					
Use Temperature	0--40℃					
Use Humidity	\leq 80%R. H					


Model	TC30K-HA	TC15K-HA	TC6K-HA	TC3K-HA	TC10KHB	TC20KHB
Capacity	30kg	15kg	6kg	3kg	10kg	20kg
Resolution Ratio	5g	1g	0.5g	0.5g	0.1g	0.1g
Calibration Graduation	10d	10d	10d	10d	10d	10d
Tare Scope	30kg	15kg	6kg	3kg	10kg	20kg
Calibrating Weight	20kg	10kg	5kg	2kg	10kg	20kg

Dimension of Platform	300*220mm
Volume	320(W)*300(D)*110(H)
Power Supply	AC 230V \pm 10% 50Hz \pm 1Hz 4W DC 6V/4Ah/20HR rechargeable battery
Use Temperature	0--40℃
Use Humidity	\leq 80 %R. H

3. Preparatory work and attentions

- 3.1 Using environment: indoor, max. Altitude: 2000m, temperature: 0-40℃, humidity \leq 80%, Power fluctuations less than \pm 10%.
- 3.2 The scale should avoid sharp temperature changing, intense air flowing and ground vibration. And keep the scale away from heat and humidity
- 3.3 Place the balance on the flat and solid table. Adjust the four legs to support the balance.
- 3.4 Use separate power outlet and avoid dynamic power.
- 3.5 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.
- 3.6 15min. preheating is needed.
- 3.7 When the indicator of battery lights, which means battery is near empty and needs to recharge. Using balance under this situation can result in an instability or major error. At the same time, the backlighting and calibration will automatically shut down.
- 3.8 Because of long-term not using, the scale must be placed in dry-ventilated place and recharge every three months. Charging is necessary before or during re-using.
- 3.9 Warning: If the equipment is used in a manner not specified by this instruction the profection provided by the equipment may be impaired
- 3.10 Gentle handling in daily using, with dry and clean cotton cloth cleaning.


4 Operational Method


1. “” open key :Please put the balance on stable plane ,then turn on the power and adjust level. Open the switch. The displaying windows displays from “Voltage、 range ”、 then displays“F----1”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. Shutdown key also click this button.

2. “TARE” zero key: With empty scale platform, the displaying deviates from zero, pressing “TARE” key, then the displaying will return to zero. For removal of the weight of packaging materials, first stage please place the packing containers on the pan, after stabilization press “TARE”, it shows 0. Then put the items into the container. At this point it shows the net weight of the items. Take off the container and items, it shows the minus value of the packing container. Press “TARE” again, it goes to 0.

3. “CAL” Calibration key: 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. For instance, “C---20” indicates to put 20 kg test 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 symbol “kg”; 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. “” compound key: The main function for conversion, counting and print. Default setting is the conversion.

4.1 convert units: Press “”, the units will be changed between “g” and “lb”. The indicator will lighten.

4.2 Count

- i. 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.
- ii. 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 indicates that balance is now counting. And all the samples are one unit. Then press “kg/lb”, 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.

Note: For counting keys and convert the unit key, print for the same key buttons “”, so in the use of counting functions must first to balance setting, please refer to the setting method of section 6 5 points.

4.3 Print : put the balance connect printer, Press “”, the balance set A data, the printer print.

5. Displaying Information

5.1 Display window

F----1 data beyond scope

F----2 AC/DC conversions

F----3 buttons

F----5 sensor faults

F----L lower zero position of sensor signal

F----H overload

C----F calibration error, instability or not at zero point during calibrating

C----H calibration error, items on the pan or at higher zero point during calibrating
E----- Storage calibration data error, re-calibration is necessary

5.2 Indicator

kg(g) lightening with stable data, the weighting units is kg or

lb lightening with stable data, the weighting units is lbr

pcs lightening with stable data, and counting situation

Lower voltage lightening in lower voltage with warning. Charge is needed, otherwise can only last 1—2 hours. Balance is still working during charging.

Charge lightening during charging. One single charging needs 8 hours

Full charge slowly lightening at beginning of charging, and turning off after full charging

6. Settings

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.

6.1 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

6.2 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

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

6.4 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.

6.5 C5-----units change. 0 is for units changing ,1 for printing ,2 for count .Default setting is 0. Re-press “CAL” after setting. Then the balance is auto calibrated to 0.

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

7. Serial communication

Working way: 8 units data, 1 unit data, ending unit without calibration

Receiving data:

Signal+orders Print 70H (ACSII code p)
Calibration 71H (ACSII code q)
Accumulation 72H(ACSII code r)
Units change 73H (ACSII code s)
Tare 74H (ACSII code t)

Sending data

12345.6□kg↓← 14 units

e.g. VB communication process for C3---2 C4—27 (Default settings)

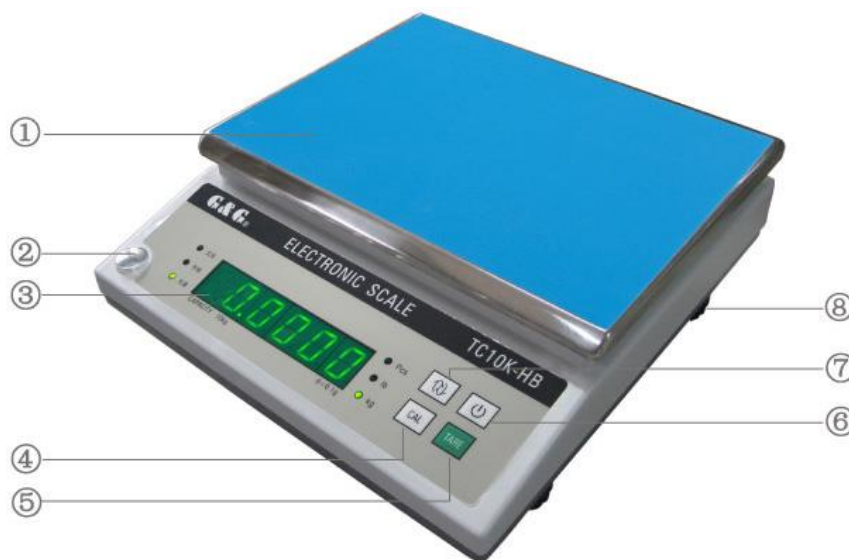
MSComm1.Settings = "600,n,8,1"

MSComm1.Output = Chr(&H1B) + Chr(&H70) ' sending print order

```
'MSComm1.Output = Chr(27) + Chr(112)
'MSComm1.Output =Chr(27) +"p"
```

```
Do
DoEvents
Loop Unti MSComm1.InBufferCount = 14
a = MSComm1.Input
Print a
```

8. Structure



- | | | | |
|-------------|------------------|-----------------------|----------------|
| 1、Scale pan | 2、Level indicate | 3、LED Display windows | 4、CAL Key |
| 5、TARE key | 6、Power Key | 7、Compound key | 8、Level adjust |

9. The Warranty

9.1 We provide warranty within the scope of the statutory regulations, however we are entitled to either repair or replace the defective product.

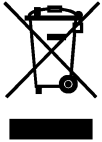
9.2 Within two years after purchase, the producer offers a free repair service to all G & G Product, which become defect under proper usage without human damage. The customers are kindly requested to mail the product as well as its original proof of purchase to the producer. Notification of defects and 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.

9.3 We have the right to try to replace the defective product at most 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.

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

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 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.

11. Contact

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