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INSTRUCTIONS

GARDCO DISTRIBUTED PRODUCTS





Weighing Technology

Operating Manual

Electronic Balance

Model PW



Thank you for Choosing our Electronic Balance

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1. Environment Conditions

1.1. Place the balance on a stable surface away from vibration, sunlight, airflow and strong electromagnetic interference. This balance is an instrument and must be treated with care at all times.

1.2. Operating temperature: 5°C ~35°C (41 °F- 95 °F)

Temperature Fluctuation: ≤5°C/h

Humidity : 50%~85% RH

2. Main Technical Specifications

Model	WT1003G		WT3003G
Capacity	0-100 g		0-300 g
Accuracy			
Tare Range	0-100 g		0-300 g
Repeatability	< = 0.002 g		< = 0.002 g
Linear	< = 0.002 g		< = 0.003 g
Stabilization time	<= 2 s		
Pan	80 mm dia.		
Dimensions	320×205×100 mm		
Interface	RS232C		
Net Weight	5.5 lb (2.5 kg)		
Power	110-240V/50-60HZ		
Cal Weight	100 g		200 g

3. Operation

3.1. Plug in the electronic balance and warm up for at least 30 minutes.

3.2. Turn-on the balance. It displays "8.8.8.8.8.", followed by "Maximum capacity", and "S-CAL" in turn. In weighing mode, it shows "0.000".

4. Calibration

4.1. Single-range calibration

CAL

Press **CAL** for 3 seconds → Display shows "CAL" then the weight to be applied in g Place the weight on the pan → the display says "please waiting", the balance will display the weight applied, remove the weight. The balance is now in weighing mode. Calibration may take several attempts.

5. Weighing

5.1. Read the value on the screen after the black circle at the bottom left of the display disappears. (This means the value is stable) Always press

TARE

before each weighing to make sure you are starting from zero.

5.2. Please take care not to overload the balance. Do not drop heavy weights on to the platform, this will damage the sensor and is not covered by warranty.

6. Tare

TARE

Press **TARE**, the balance pan can be tared if the blank circle disappears. The balance cannot be tared if the circle is still displayed..

7. Backlight

BL

Press **BL** to turn on/off the backlight.

8. Zero-Tracking and Auto Tare

8.1. Turn off the balance, with one finger press and hold **CAL** at the same time, on the balance again, "-Zero-" will show, then release the buttons

TARE

and press **TARE**. The display will show "Zero*d". Press **TARE** to adjust the value from 0 to 5, "Zero0d" means no Zero-tracking function (sensitivity is the highest), "Zero5d" means Zero-tracking is the highest value. "Zero5d" is factory-set.

8.2. Then press **CAL**, it will show "-tArE-", press **TARE**, "tArE*d" will be shown, press **TARE** can adjust the value from 0 to 9. "tArE0d" means no Auto Tare, "tArE9d" means Auto Tare Function is the highest value.

* "tArE9d" is factory-set.

8.3. Press **BL**, to complete the adjustment, after the display shows "0.000" the balance is ready for use.

These changed settings will be remembered when the balance is turned on again.

9. Other Functions

9.1. Units Conversion

Press **MODE** for about 3 seconds until "Unit" is flashing. Then press **TARE** to confirm. Press **MODE** to select units and press **TARE** to confirm.

9.2. Counting

Press **MODE** 3 seconds until "Unit" flashing. Press **MODE** to choose "Count". Then press **TARE** to confirm, display shows "pcs". Press **MODE**, "pcs" can be changed from "10pcs" to "500pcs". The larger number, the higher count accuracy. Put the correct number of pieces on the balance pan, then press **TARE** to confirm. The display will show "-----". Setting Counting is done.

When the unit weight to be counted is less than 2 divisions of the balance, the display will show "no-Cou". In this case, you should choose a larger sample number.

9.3. Percentage

Press **MODE** about 3 seconds until "Unit" flashes. Press **MODE** to choose "PER". Then press **TARE** to confirm, display shows "100%" unit. Put the goods on the pan and press **TARE**, the sample is set as a unit of "100%". Take away the sample and anything applied afterwards is expressed as a percentage of the original sample.

9.4. Print

- 1. Press **PRT** to print.
- 2. To choose the method of printing press **MODE** about 3 seconds until "Unit" flashing. Press **MODE** to choose "Prt". Then press **TARE** to confirm. Press **MODE** to choose either "hAnd" (press print to print once), "AUto"(to print when balance is stable) or "Contin" (for continuous printing). And press **TARE** to confirm.

RS232 Data Frame Format: Symbol (+/-) + Data + Unit + Last Frame

- 1. Data Symbol: 1 Byte ASCII: "+" or "-"
- 2. Data Field: 7 Bytes ASCII: One is Decimal Point ".", which has the same position with Display.
- 3. 3 Bytes ASCII: Units< 3 bits, Supplementary with Space
- 4. Last Frame: ENTER ASCII, 0DH, 0AH.

Units

LB: 6C 62	OZ: 6F 7A	GN: 47 4E	KG: 6B 67	+ : 2B	- : 2D
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Example

38.25g, Stable

+	0	0	3	8	.	2	5		g				
2B	30	30	33	38	2E	32	35	20	67	20	20	0D	0A

30.00ct, Unstable

+	0	0	0	0	3	0	.		c	t			
2B	30	30	30	30	33	30	2E	20	63	74	20	0D	0A

60 pcs Counting, Stable

+	0	0	0	0	6	0		p	c	s			
2B	30	30	30	30	36	30	20	70	63	73	0D	0A	

26% Percentage, Stable

+	0	0	0	0	2	6		%					
2B	30	30	30	30	32	36	20	25	20	20	0D	0A	

Serial Port

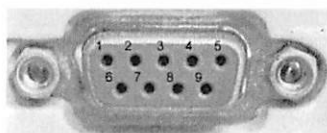
Computer (9 pins)

Balance (9 pins)

2 ----- **2**

5 ----- **5**

Baud Rate : 9600 bps



Pin 2: TXD; Pin 3: RXD; Pin 5: GND

9.5. Speed adjustment of weighing

Press **TARE** for 3 seconds, display will show "SPEED!", release the key, and enter weighing mode. Although the speed is slower, the accuracy is the at the highest setting. If you choose "SPEED2", the speed is faster, but less accurate. Each time you enter this parameter, the balance will change the speed selected.

9.6. Low voltage indication and Charge indication (If optional battery fitted)

1. When the display shows battery symbol in the upper left side, it is time to charge.
2. When charging battery, refer to the light on the left of the keyboard. If it turns green, charge battery is complete.

11. Maintenance

Failure	Cause	Remedy
No display	- Scale is not connected with power - Power switch is off - Adapter is faulty	- Plug in the power - Press ON/OFF - Change to new adapter
Upper "----" only	- over-load - load cell wire loose	- Decrease load - Re-connect the wire
S-CAL	- load cell wire loose - Disconnected load cell wire	To connect load cell wire

Value unstable	·Unstable air pattern, ·Working platform is unstable ·Large changes in room temperature. - Load sensor is damaged or is broken	Turn off air conditioning or close doors.
Value inaccuracy or large error	·No clear zero before weight ·Bad calibration result ·Wrong voltage ·Large error in four corners of load cell ·Load sensor is damaged	·Press TARE ·Re-calibrate ·Use correct voltage ·Check error of four corners ·Check load cell
Display shows wrong symbols	·Static interference	·Reboot or re-plug in power ·Reboot after 30 minutes
Show "." on the left of display repeatedly	·Bad operational environment (such as air movement, vibration, large change in room temperature etc.	·Control working environment
Show "No Cou"	·Reading not stable before counting ·Sample is too big or small	·Re-apply sample ·Change sample size
No data	·Interference from static	·Reboot or re-plug in power
No back to zero	·Wires loose	·Check all wires
No calibration	·Load cell is broken ·Wires loose	·Call scale dealer to check load sensor ·Check all wires
No Backlight	·Backlight is broken	·Fit new backlight

12. IR Sensors:

When you move your hand within ¼" (5 mm) of the Infrared induction window

CAL

for 3 seconds the balance will begin the calibration cycle. If you then move your hand over the window again it is possible to choose the different calibration points available. Please be careful not to access this section unless you have a full set of test weights. The Infrared Induction window for

TARE

will operate in the same way to tare the balance.

When the IR sensors are acting, they turn red.

Operation under a high intensity light environment may make the IR sensor cycle. At this time, you will see "  " on the upper right of LCD. Then please turn off the balance and adjust the position away from the high intensity light.

If you wish to turn off the IR sensor, please put fingers on the top of two IR Sensors at the same time. If you wish to turn on the IR sensor, please restart the balance.

13. Accessories:

Scale Pan.....	1unit
User's Manual.....	1unit
AC Adapter.....	1unit

OPTIONS:

Calibration Weight	1unit
Rechargeable Battery.....	1unit

Safety Note! Please do not use this unit in conditions that may cause the unit to short. This unit is powered by AC/DC adaptor, do not use in wet conditions. Use extreme care. There are no user serviceable parts inside the balance.

Protect the unit against moisture.

Please disconnect the unit from the main power supply before cleaning. Do not use any liquids or aerosol sprays to clean this unit. Use only a clean dampened cloth.