# User Manual

——YP series

Electronic Scale

**YP** scale is an intelligent scale made with highly-stable sensor and single-chip microcomputer. It features multi-units conversion, counting, percentage, RS232, tare removal, self-calibration, and memorizing. It is precise, fast and stable, easy to operate, and multi-functional, and can apply to the fast weight and quantity measurement in manufacturing, agriculture, commerce, school, etc. This product conforms to GB/T 26497-2022 (electronic scale) industry standard.

**Technical parameters**

| Model | 1002~30002 | 1001~60001 | 1000~300000 | 40000~500000 |
|---|---|---|---|---|
| Measurement range | 100g~3000g | 100g~6kg | 1.0kg~300kg | 40kg~500kg |
| D | 10mg | 100mg | 1g | 10g |
| E | 100mg | 1g | 10g | 100g |
| Power supply | AC 220V 50Hz ， DC 6V~9V | | | |
| Power capacity | 1W | | | |
| Grade | II-III | | | |

## 1.Preparation

1.Put scale on a stable and even place. Avoid vibration, direct sunray, airstream or strong electromagnetic wave disturbance.
2.Working environment:
temperature limits: 5°C ～35°C temperature fluctuation: ≤5°C/h
relative humidity: 50%～85%

## 2.Start

1.Plug one side of adapter or power cord to scale power inlet, the other side to AC mains.
2.Turn on power switch. Display in order “8.8.8.8.8.8.”、“max measurement value”、“-------”. When stable, it displays “0” or “0.0” or “0.00” to enter weighing status.

## 3.Calibration

1. Preparations before calibration:
1) turn on scale and warm up over 15minutes.
2) leave scale tray empty without any objects.



2. Single-point calibration：

## 12.Components

1）. Electronic scale 1unit

2）. Manual 1pc

3）. Approval card/packing slip 1pc

4）. Scale tray 1pc

Notes: weighing 100g-800g round tray(square tray optional)

weighing 1000g-2000g square tray 130*130

weighing 3000g-8000g big square tray 175*165

5）. Power adapter (or power cord) 1pc

6）. Standard weight （weight over 3000g optional） 1pc

**Attention: some content of the manual may change without prior notice due to product updates. If it is different with product in kind, product in kind prevails.**

**6. Zero point display range setup**

Push “Count”button and choose “zero 1”. Then push “Unit”and choose between 0-4d.

**7. Back to zero setup**

Push” Count” button and choose “bz 4”. Then push “Unit” and choose between 0-5d. O indicates 1/3d; 1：indicates 2/3d; 2：indicates 1d; 3：indicates 4/3d; 4：indicates 5/3d; 5 indicates 2d.

**8. Zero point tracking setup**

Push “Count” button and choose “ ┣ ┏A0 2”. Then push “Unit” and choose between 0-5.

**When parameters setup done or during setup, hold “Count” button until it displays “stored” to save parameters set up and return weighing status. If push “Tare” button then parameters will not be saved but back to weighing status.**

## 10.Error messages:

| | |
|---|---|
| Err_1: | Weighing module broken. Need to return to factory for repair. |
| Err_2: | Weighing data lost. Need to do multi-point calibrations again. |
| Err_3: | Counting setup error. Object unit weight for counting setup too light.Need to add more objects and take them as one collectively for re-setup. |
| Err_4: | Percentage setup error. Need to increase the weight of object for setup. |
| Err_5: | Percentage calculated value exceeds display range. Need to increase the weight of object for setup or decrease the weight of object to be calculated. |

Blinking with upper line: indicates accumulated weight of objects to weigh exceeds range. Should take objects away immediately or do multi-point calibration again.

Blinking with bottom line: indicates weight of object to weigh is too light. Need to do multi-point calibration again; or indicates broken sensor.

**11.Application notice:**

1. Plug in and warm up as per instructions before use.
2. Tare weight and weights add up can not exceed weighing range.
3. If weighing is not accurate, should do calibration by using standard weights.
4. If round tray needs to be taken down fom scale, take down after turning the tray clockwise. Don’t pull up the tray by force to avoid damage to sensor.



1）Push “CAL”button and then let go, it displays “CAL” and then blinks with weight value. Push”CAL” and choose the weight value to be added. Add corresponding weight and it displays “-----” . After it is stable, it displays calibrated value.Take weight down it displays “-----” . After scale is stable, it displays 0. Calibration done and enter weighing status.

2）During calibration, can push “Tare” button to stop calibration returning to weighing status.

3.Multi-points calibration

1）Push and hold“CAL”until it displays “CAL-L”. Let button go and then it blinks with weight value to be added. Add corresponding weight on it displays “------ ” . When scale is stable and displays the corresponding value, take weight down, and it displays “------ ” .When scale is stable, it automatically blinks with the weight value to be added for the next point. Repeat above operation until all points calibrations are done. Return to weighing status.

2）During calibration, can push “Tare” button to stop calibration returning weighing status.

## 4.Weighing

1.After warm up or calibration, put the object on scale tray. When the black point on the bottom left of screen disappears, the weight of the object can be read.

2.The maximum measurement weight is the maximum value +9d displayed when machine starts (d is the minimum display reading).If the weight exceeds maximum value, it displays upper line “------” showing it exceeds the range. Should take the object away immediately, otherwise will damage the mach**ine.**

## 5.Tare removal

Push “Tare” shortly it displays “-------” . When scale is stable it displays 0. The tare on the tray is removed.

## 6.Backlight

When machine starts it enters backlight-on status. If need to adjust brightness, push and hold “Tare” and in the mean time push “unit” button shortly, then the brightness can be adjusted in a loop. Let two buttons go after suitable brightness is found.

## 7.Modes

Scale modes can be switched according to needs. Push and hold “Count” button it displays “COU” “100%” “-END-“ in a loop.”COU” is counting mode, “100%” is percentage mode, “-END-“ is to quit “counting” or “percentage” mode and return to weighing status.

## 8.Other features

**1.Units conversion**

Push ”units” button shortly and choose the units in “scale parameters setup”. To choose certain unit, must ensure this unit has been opened. Refer to “units setup” in “scale parameters setup”

**2.Counting**

1）. Push and hold “Count” until it displays “COU”. It blinks with counting number. Push “count” and choose the number to be set up between 10.20.50.100.200.500, then add corresponding qty of objects on the tray. Push ”CAL” to confirm and it displays “------”. When scale is stable, counting setup is done. When the unit weight of object for counting is less than 2d, it displays “Err-3” and counting setup can not be carried out.

Need to take more objects as one collectively for re-setup. Push “Tare” to return to weighing status.

2）. During “counting” setup, can push “Tare” button to stop setup and return to weighing status.

3）. After “counting” setup is done, push ”Count” button to switch between counting and weighing status.

**3.Percentage**

1）. Hold “Count” button until it displays “100%”. Let the button go and it blinks with “100”. Put on the object to be setup as 100% and push “CAL” to confirm Scale displays “------“. When it is stable, it displays “100%”. Take the object down and put on other object and it displays the percentage of this object to the object setup. When the object set up is less than 20d, it displays “Err-4” meaning the setup object is too small and need to increase the weight of the setup object. Push “Tare” button to return to weighing status.

2）. During percentage setup, can push “Tare” to return to weighing status.

3）. After setup is done, push “count” button to switch between percentage and weighing status.

**4.Printing**

1）. One time printing: Set up as manual printing mode in “scale parameters setup”. Push “Print” button once for one time data output.

2). Continuous printing: Set up as continuous output in “scale parameters setup”. Scale outputs data continuously.

3）. Timing output: Set up as timing output in “scale parameters setup”. Scale outputs data at the time setup.

4）Printing mode setup refers to “printing mode setup” in “scale parameters setup”

**5.Baud rate**

Scale has 4 baud rates to choose: 1200.2400.4800.9600. Refer to “Baud rate setup” in “scale parameters setup”

**6.RS232 communication**

Scale uses RS232 UART communication. Data format is 10 digits:

One digit as start position, 8 digits as data and one digit stop position. No verification.

**Data frame format:**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

K, */space, +/-, data, data, data, data, decimal point, data, data, data, unit, unit, unit, OD, OA

1. K: start code



2. */space: * indicates data unstable; space indicates data stable

3. +/-：+ indicates positive data，- indicates negative data

4.4-11： weighing data output by scale. Position of decimal point changes for different scale models.

5.12-14: Unit of data output. For example, unit g output as :space+space+g.

6.15-16: Data end mark

## 9.Parameters setup

Push and hold “Count” to start machine. Let button go when it displays “UNIT”. Push “Count” again shortly and it displays as follows in a loop:

UNIT---buzz---A.OFF---b.9600---P.0---zero 1---bz 3---┼ ⌐A02

**1.Unit setup**

Push “Count” button and choose “UNt”. Push “Unit” button and choose units between g-kg-ct-lb-oz-ozt in a loop. Push “CAL”button to close or open the unit chosen.

**2.Buzzer setup**

Push “Count” button and choose “buzz1”. Push “Unit” button and choose ON or Off. 1 indicates ON and 0 indicates off.

**3.Timing shutdown setup**

Push “Count” button and choose A.OFF.Then push “Unit” and choose:

OFF:indicates no shutdown

30:indicates automatic shutdown if no button pushing and no weighing for 30seconds.

2：indicates automatic shutdown if no button pushing and no weighing for 2miniutes.

5：indicates automatic shutdown if no button pushing and no weighing for 5miniutes.

10：indicates automatic shutdown if no button pushing and no weighing for 10miniutes.

**4.Baud rate setup**

Push “Count” button and choose “b.9600”. Then push “Unit” and choose baud rates between “9600-1200-2400-4800”.

**5.Printing mode setup**

Push “Count” button and choose “P.0”. Then push “Unit” and choose between “0-1-2-3-4”:

0：indicates manual print out.

1：indicates print one time every 30seconds

2：indicates print one time every 60seconds

3：indicates print one time every 120seconds

4：indicates continuous output.