



PRECISION BALANCE **JT**

User Manual



v.201811

Value Each Gram

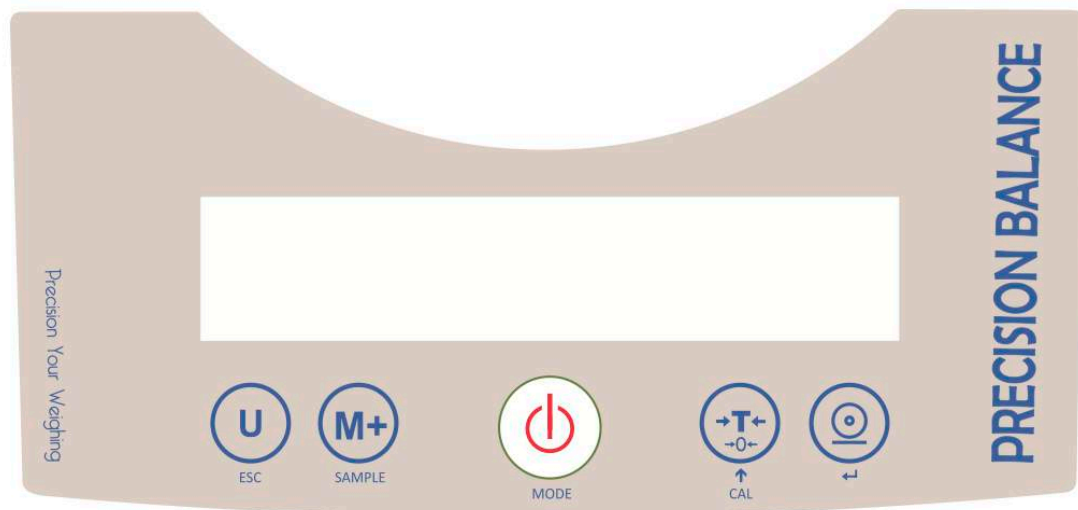
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1. Technical Description

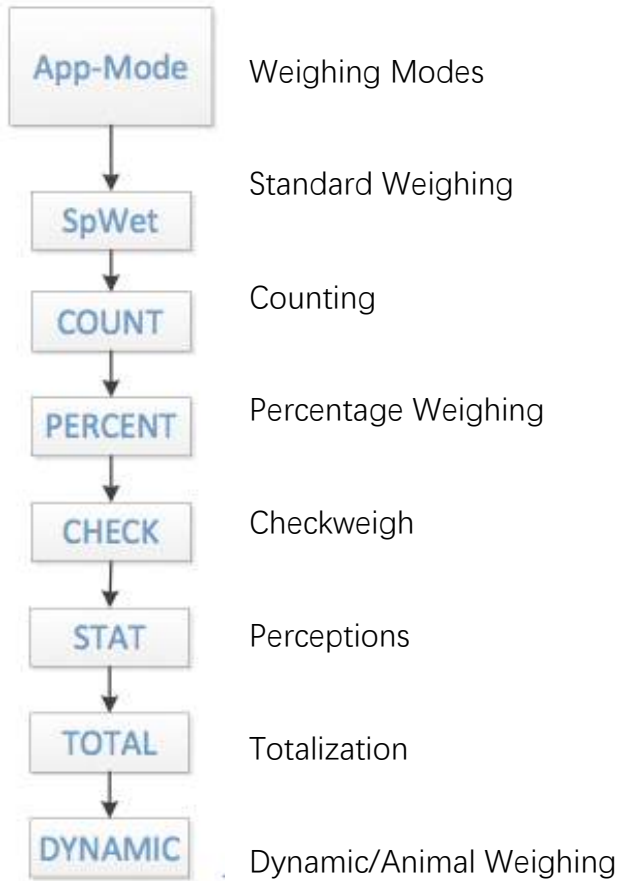
- ◆ Fully isolated design – power, load cell, serial interface, optional accessory all isolated by each other.
- ◆ Bright FSTN LCD display with backlight
- ◆ Display resolution up to 200,000.
- ◆ Multi-functions with multi-units' exchange, checkweigher, animal weighing, etc.
- ◆ Optional RS232 or Bluetooth output.
- ◆ 9V500mA AC/DC adaptor or 9V dry-cell battery.
- ◆ Capacity from 150g to 6000g and division from 0.1g to 0.001g
- ◆ RS232-1: Optional USB, Bluetooth or Wi-Fi
- ◆ RS232-2: Optional remote display

2. Keypad





| Key | Functions |
|---|--|
|  | <ol style="list-style-type: none"> 1. Press this key to switch on the balance. 2. Press this key for 2 seconds and the balance will show off and then turn off. 3. During the working mode, press this key to exchange the weighing modes – counting, percentage, weighing, animal weighing, etc. |
|  | <ol style="list-style-type: none"> 1. During the weighing mode, press this key to exchange the weight units (<i>more than two units selected, refer to 4.2</i>). 2. During configuration, it acts as ESC. |
|  | <ol style="list-style-type: none"> 1. During accumulation mode, it's used for accumulating. 2. During counting and percentage weighing modes, this key acts as sampling. 3. During configuration, it acts as Moving right. |
|  | <ol style="list-style-type: none"> 1. During gross weight display, when the weight <math>< 2\%F.S.</math>, it acts as ZERO function, and the balance will go to zero point; when the weight >math>> 2\%F.S.</math>, it acts as TARE function and the balance will display the net weight. 2. When the net weight displays, remove the container on the balance and press this key to clear the tare value, the balance will return to gross weighing mode. 3. During the weighing mode, keep pressing this key for 2 seconds or more, to enter configuration mode. 4. During the configuration, it acts as Increasing digit. |
|  | <ol style="list-style-type: none"> 1. During the weighing mode, it will send the data to the printer for printing receipt. 2. During counting or percentage weighing modes, it to save the samples value. |

3. Weighing Modes






During the standard weighing mode, press  to select the weighing modes,




press  to select the mode and press  to confirm and begin that mode

If the CHECK mode selected, after  pressed, the upper/lower value needs to input.

1. Counting

Press  key to start sampling, it will display [C 10], press  key again to shift between samples number, and put the right samples on the s.s pan of the balance, and then press  to save the number and back to counting display.

2. Percentage Weighing


Press  key to start sampling, it will display [P 10], press  key again to shift between samples value, and put the right samples on the s.s pan of the balance, and then press  to save the value and back to percentage display.



3. Checkweigh

According to the upper and lower limitation of the weight, it will recognize whether the load is within the acceptable range, and indicates by Hi/Ok/Lo.
(refer to configuration)

4. Perceptions (unavailable)

5. Totalization

Press  key to accumulate the load on the s.s pan and it will display the accumulation times (on the 2nd second) and display the total weight (on the 3rd second) and then back to weighing mode, next accumulation can be operated only after the balance back to zero point.

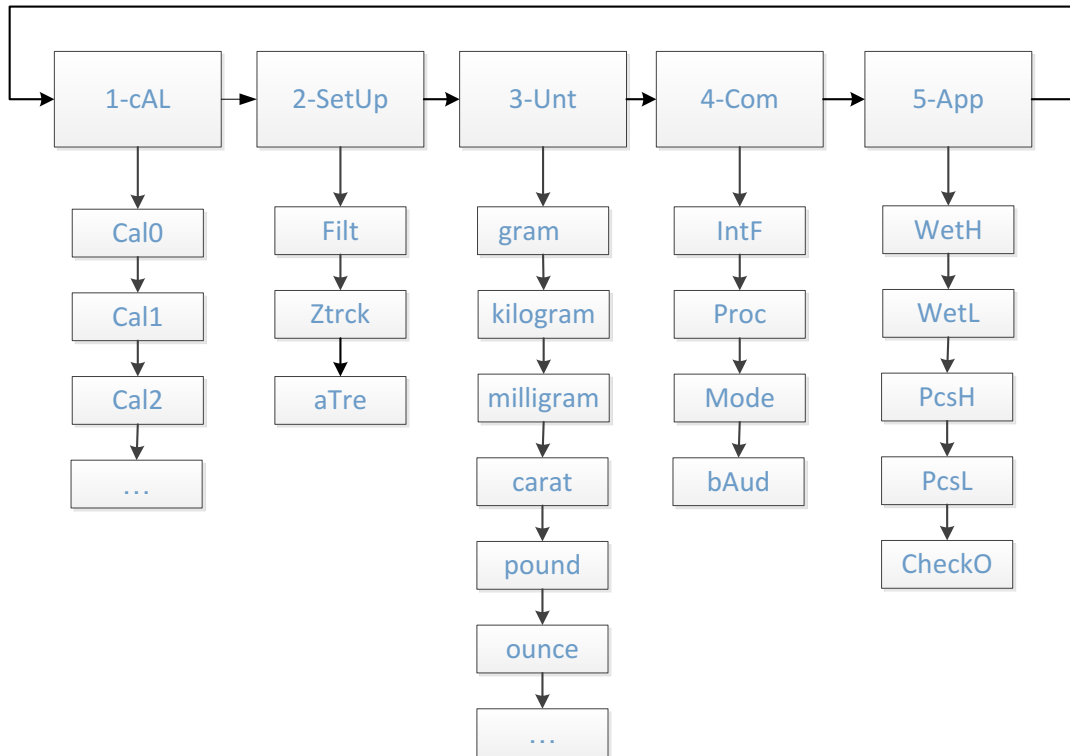
When it display 0 or on the standard weighing mode, press  to display the accumulating times and total weight; and when it displays the accumulated data, press  to clear the data.

6. Dynamic Weighing (animal weighing)







It will calculate the average weight and hold the weight during 5 seconds.

4. Parameters Configuration

4.1 Configuration Chart




4.2 Operation Details

On the standard weighing mode, keep pressing  for 2 seconds to enter configuration mode, and press  to enter each menu, then press  or  to change the parameter and press  to save, press  to return or cancel.

| Menu | Display | Value | Operation | Description |
|---------|---------|-------------------------------|------------------------------------|---|
| 1-cAL | Cal Z | | | Refer to below |
| 2-Setup | Filt | Filt-HI Filt-MD Filt-Lo | AD Filtering | Weighing Environment: HI – very good MD – good Lo – normal |
| | Ztrck | 0,0.5,1,3,5 | | Zero track |
| | aTre | On off | | Auto tare |
| 3-Unt | Kg | On off | | Activate or deactivate the weight units |
| | Lb | On off | | |
| | G | On off | | |
| | mg | On off | | |
| | | | | |
| 4-Com | IntF | RS232、USB、bt、 WiFi | | Output interface select |
| | Prco | Tr01 tr02 tr03 tr04 tr05 | | Protocol format |
| | Mode | Out-c OUT-s OUT-p | | Continuous, stable or manual |
| | bAud | 1200,2400,4800, 9600 | | Baud rate |
| 5-App | WetH | | | Upper limitation |
| | WetL | | No—No beeper | Lower limitation |
| | PcsH | | | Upper quantity limitation |
| | PcsL | | Ok---Ok range | Lower quantity limitation |
| | CheckO | No ok NG | beeps Ng---Hi/Lo range beeps | Indicating types |
| 6- ind | Aslp | 0001 | | Sleep time: seconds |
| | Aoff | 0000 | | Auto off time: seconds |
| | Timr | 00:00 | | Time set: m:s |

Calibration (example of 200g):

After the 1-cAL selected, it will display [CAL Z], press  to do zero calibration (make sure no load on the s.s pan), and after zero calibration ends, it will display the full scale [200.0], put the 200g weight on the s.s pan and after the read stable, it will return to the weighing mode.

5. Maintenance

5.1 Trouble Shooting

| Display | Description | Solution |
|------------|----------------------------------|---|
| Err 4 | Out of zero range | Decrease the load |
| Err H | Out of initialization zero range | Decrease the load, or press ON/OFF or PRINT key to confirm. |
| Err 02 | Unstable for calibration | Check the balance table Check the load cell |
| 255 | Calibration fails | Check the balance table Check the load cell |
| hhhhhh | Overloading (>100%F.S.+9d) | Remove the load or decrease the load |
| LLLLLL | Load < -20d | Zero the balance |
| No display | No response | Check the AC/DC adaptor Check the LCD display (if there is the beeper) |

5.2 Firmware Updating

Consulting the manufacturer

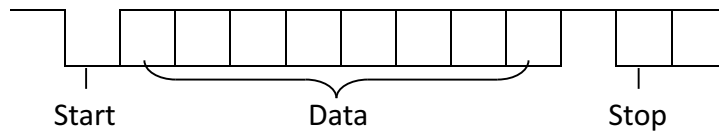
6. Appendix

6.1 Continuous output

UART signal of EIA-RS232 C

Format :

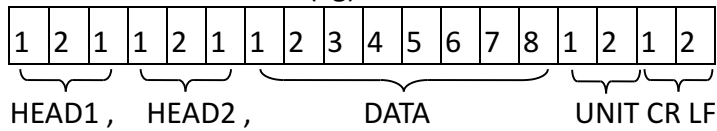
1. Baud rate : 1200 / 2400 / 4800 / 9600 / 19200 / 38400 BPS
2. Data bits : 8 BITS
3. Parity bit : None
4. Stop bit: 1 BIT



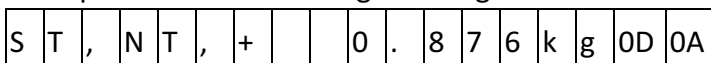
Format 1 (POS) :

| | |
|-------------------|-------------------|
| HEAD1 (2 BYTES) | HEAD2 (2 BYTES) |
| OL - Overload | |
| ST - Stable | NT - Net weight |
| US - Unstable | GS - Gross weight |

Fixed 18 BYTES ASCII (kg)



Example of stable +0.876 kg net weight:



6.2 Weight Unit

| Unit | | Conversion factor |
|-----------|----------------|----------------------------|
| g | gram | |
| kg | kilogram | 1 kg = 1000 g |
| mg | milligram | 1 mg = 0.001 g |
| ct | carat | 1 ct = 0.2 g |
| lb | pound | 1 lb = 453.59237 g |
| oz | ounce | 1 oz = 28.349523125 g |
| ozt | troy ounce | 1 ozt = 31.1034768 g |
| GN | grain | 1 GN = 0.06479891 g |
| dwt | pennyweight | 1 dwt = 1.55517384 g |
| mo | momme | 1 mom ≈ 3.75 g |
| m | Mesghal | 1 msg = 4.6083 g |
| H tl | Hong Kong tael | 1 tlh = 37.429 g |
| S tl | Singapore tael | 1 tls ≈ 37.7993641666667 g |
| t tl | Taiwan tael | 1 tlt = 37.5 g |
| cl | tical | 1 tical ≈ 16.3293 g |
| t o | tola | 1 tola = 11.6638038 g |
| b t | baht | 1 baht = 15.16 g |

OTH unit must work together with the round cutter, gsm = gram/square meter, gdm = gram/square decimeter, ozt=ounce/square yard.

$$1\text{g}/\text{m}^2 = 0.03527\text{oz}/1.19599\text{y}^2 = 0.02849\text{oz}/\text{y}^2$$



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