Instruction Manual

FA/JF series
Digital Analytical Balance Scale

Digitally signed by Jighili Tatiana
Date: 2022.06.09 18:20:48 EEST
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1. Outline

Thank you for purchasing a FA series electronic balance scale.

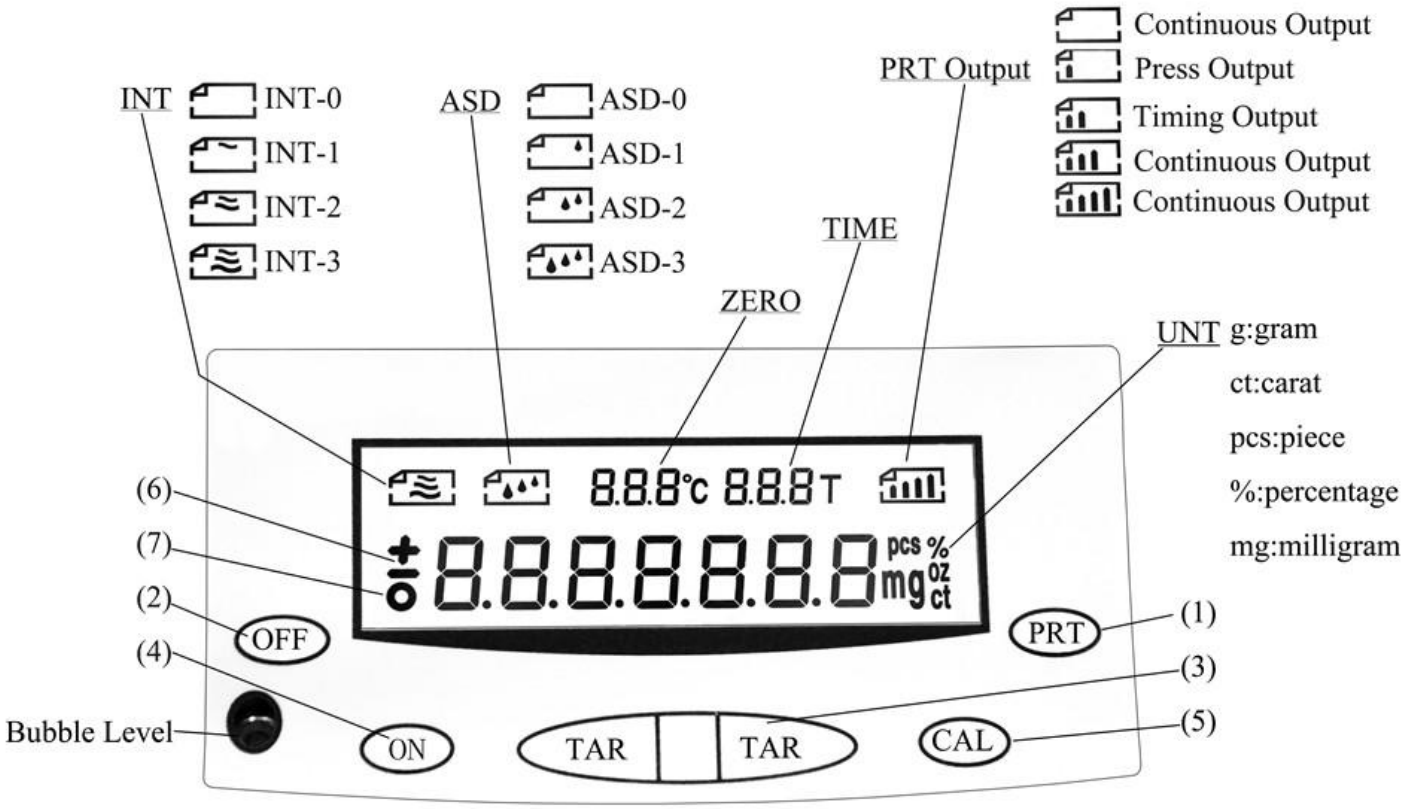
The FA models are high performance electronic balance scales. While the models are of course capable of fast and accurate weighing, the FA models all use a high precision electromagnetic force balance sensor, improving the reliability of the balances even further.

The FA series balance scales also feature operation keys, improving operating convenience and making the balance scales easier to use.

These balance scales also feature a variety of other functions that make it more convenient for customers to use for their own applications, including the Window Direct communication function, enabling measuring results to be transferred to a PC without installing any software.

To ensure that you can make full use of the performance and function of your JF series balance scales, read this instruction manual carefully and use the balance scale correctly in accordance with the directions in the manual. When you have finished reading the manual, keep it in a safe place together with the balance so that you can refer to it at any time.

Screen Instruction



1. PRT key: for printing and menu.
2. OFF: Turn off key.
3. TAR: Tare key
4. ON: Turn on key.
5. CAL: Calibration key
6. “±” Symbol
7. Stability Symbol

Model:	FA1003N	FA2003N	FA3003N	FA4003N	FA5003N	FA6003N	FA10003N	
	JF1004	JF1204	JF1604	JF2004	JF2104	JF2204	JF3004	JF3204
Accuracy Class	I							
Max.Capacity	100g	200g	300g	400g	500g	600g	1000g	320g
Min.Capacity	10mg	10mg	10mg	10mg	10mg	10mg	10mg	10mg
Division:	0.001g							
Verificationscale value:	0.01g							
Repeatability:	±0.002g							
±0.5e	0≤m≤5000							
±1.0e	50000＜m≤20000							
±1.5e	20000＜m							
Settling time	≤8seconds							
Operating temperature	17.5℃~22.5℃,fluctuation range＜1℃/h							
Relative humidity(RH)	50%~75%							
Pan size	Φ80mm							
windshield(L*W*H)	225mm*220mm*265mm(L*W*H)							
Dimension(L*W*H)	340mm*215mm*350mm(L*W*H)							
Net weight	7.2kg							
Power supply	AC220V 50Hz DC9V-2.2A							

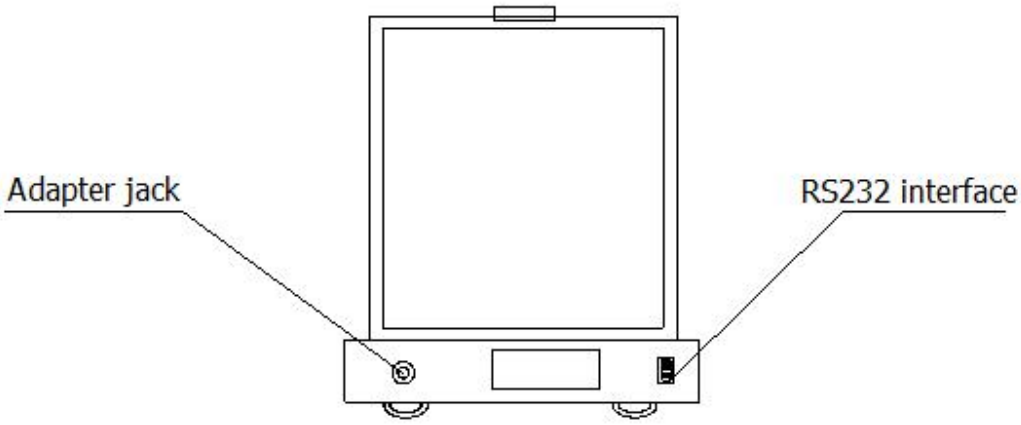
Setting

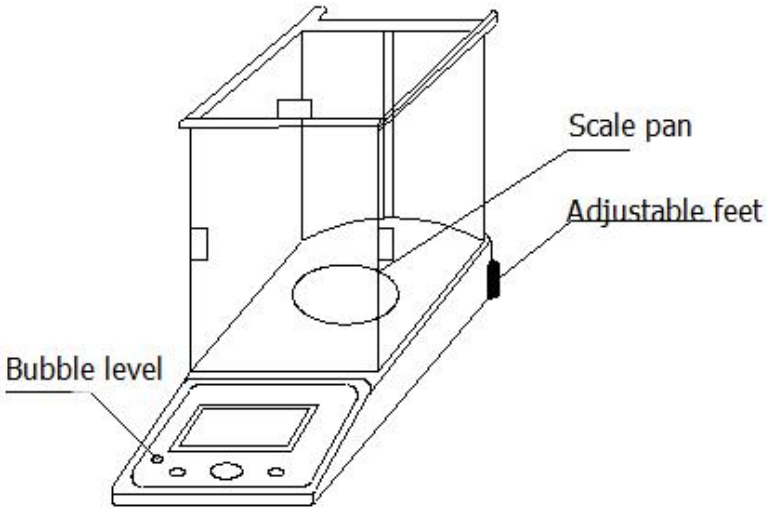
1. Assembling

Please open the packaging carefully and take out the balance scale and other articles delicately. Keep the packing material so as to reuse.

Contents of the box:

1) Balance Body
2) Stainless Steel Pan
3) Power Wire(AC adapter)
4) Product Manual
5) Weight
6) Textile Protection.





2. Working condition

When JF series multifunctional electronic balance scale is used under routine test lab or Industrial measuring room, the weighing speed will be much quicker and the result more accurate. If the condition does not suit,

the working condition should be chosen as bellow:

1) The working room should be clean and dry.
2) The balance scale should be placed on the steady, fixed table.
3) Better to place the table far away from the door and window in order to avoid the influence of airflow.
4) The table should be put at a place with less vibration such as the corners in the room.
5) The balance should be put far away from sunlight and radiation.
6) Put the balance far away from magnetism.
7) Don't use the balance in dangerous place of explosion.
8) Don't use the balance under the condition of high humidity and high dust for long.
9) When moved from a colder place to a warmer place, the accuracy and reliability of the scale will be influenced by the moisture condensation inside the balance. In order to eliminate this influence, it's best to put the scale in the working place without power supply for 2 hours.
10) Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents. 15℃~30℃ for the analytical with a fluctuation of temperature not greater than 5℃/h.

11) Keep the balance scale clean. Do not stack material on the balance scale when not in use. .

12). Working voltage: 220-240V, 50Hz or 110-127V, 60Hz.

Operating

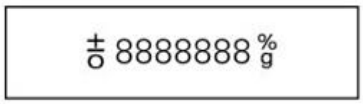
A. Adjustment

• Check the level meter before operation, if the bubble is not in the center, correct the adjustable feet to make the bubble in the center.

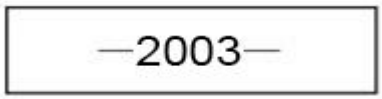
B. Start

• Select an appropriate line voltage and set the voltage switch to the corresponding position.

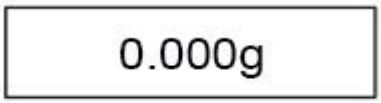
• For best performance, let the balance scale warm up for 30-60 min. and calibrate it before using.
• Press the key “ON”, the display will light up.



Check the function of the display, about 2 seconds later, the model of the balance will be displayed. For example:

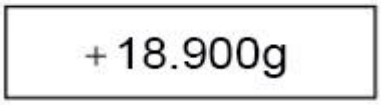


Then the weighing mode:

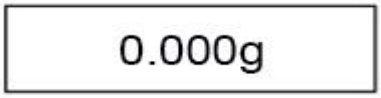


Press slightly the button “OFF”, the display will go out. If the balance will not be used for a long time, the power plug should be taken off.

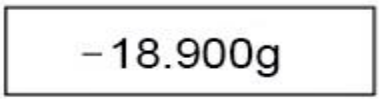
“TAR” Clear and Tare
Put the container on the pan, the weight of the container should be displayed.



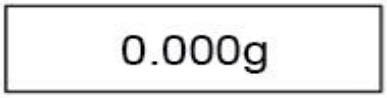
Press “TAR” button, the display will go out and the display will be all zeroes. Taring is completed:



When the container is removed, a negative value of the container weight will be displayed.



Press “TAR” again, the display will be all zeroes, i.e. the balance clears.



Calibration

1 Press “CAL”

The weight value will flash.

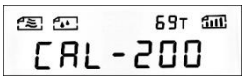
2. Place the calibration weight on the pan.

Open the glass door in the windshield, place the weight on the pan, and shut the glass door again. Wait until the flashing weight value display changes to “200.000g”.

3 Take the weight off the pan.

Open the glass door in the windshield, remove the weight from the pan and shut the glass door again.

“0.000g” will be displayed and the balance will return to the weighing mode.



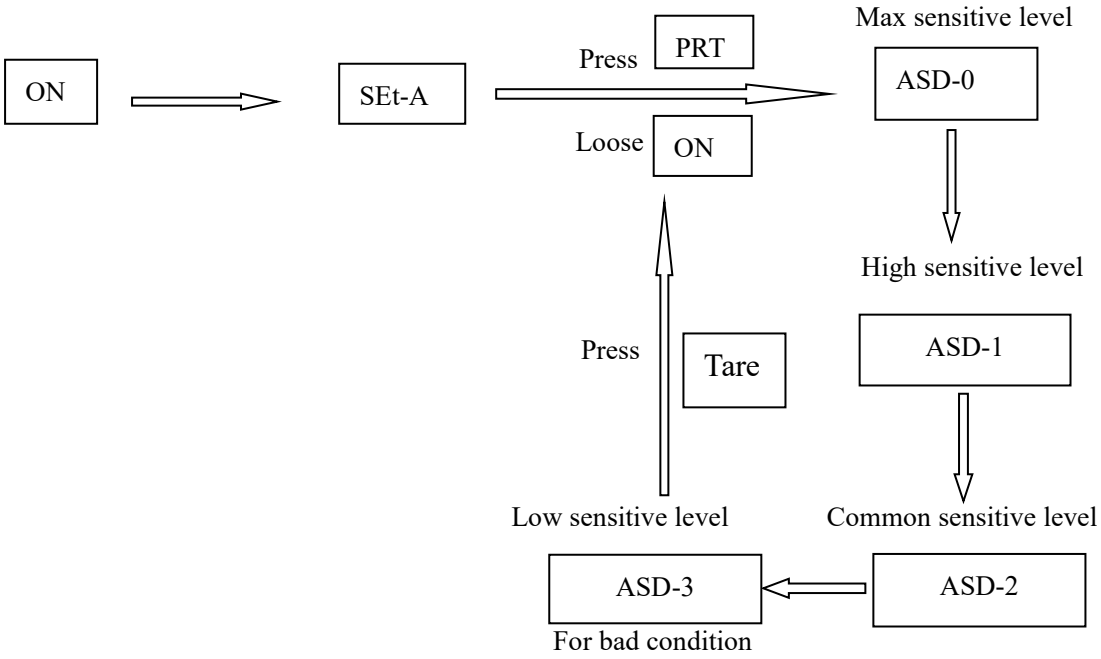
Standard Weight

Choose standard weight ad requirement according to different types.

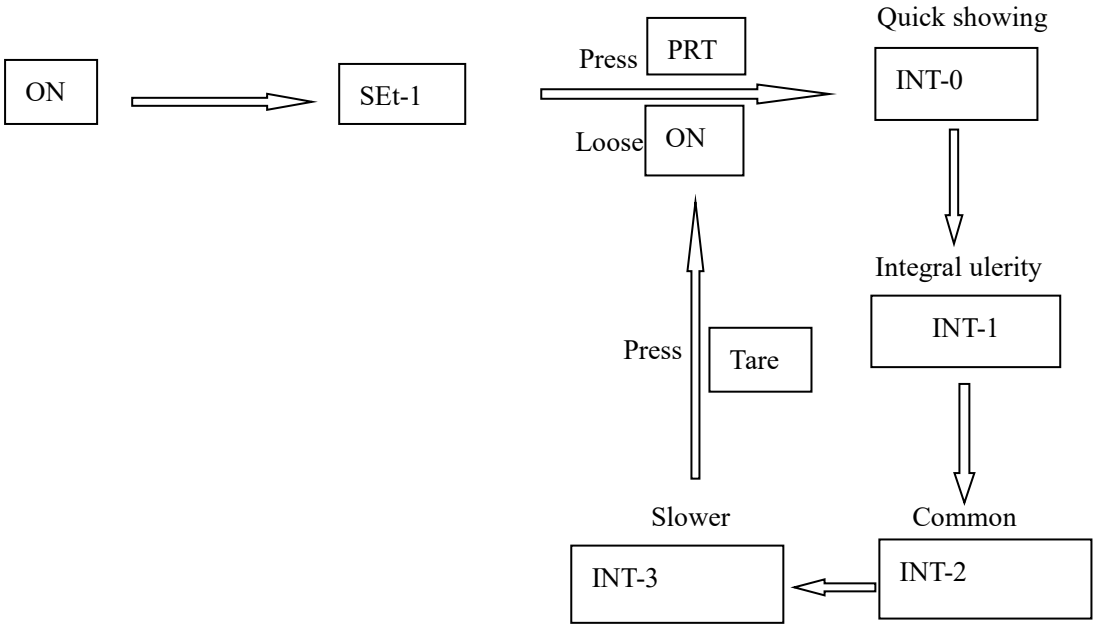
Model	Standard weight
FA1003	100g
FA2003	200g

FA series balance should be warmed up for 0.5 - 1 hour

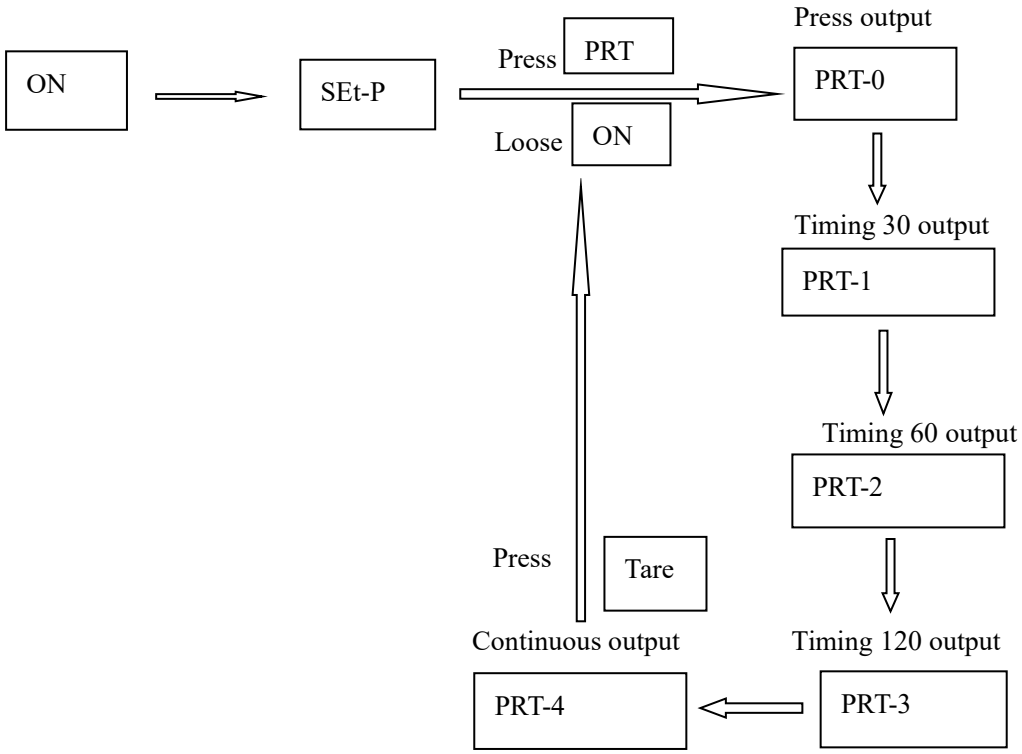
Sensitive Setting



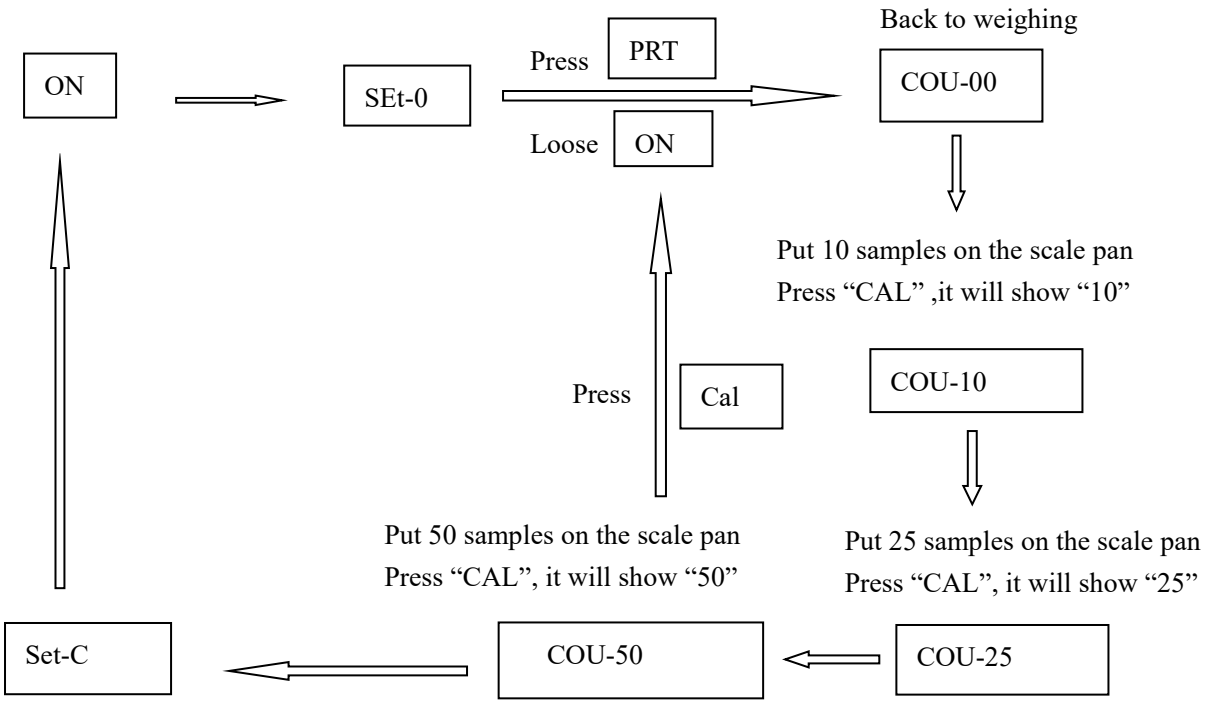
Speed Setting



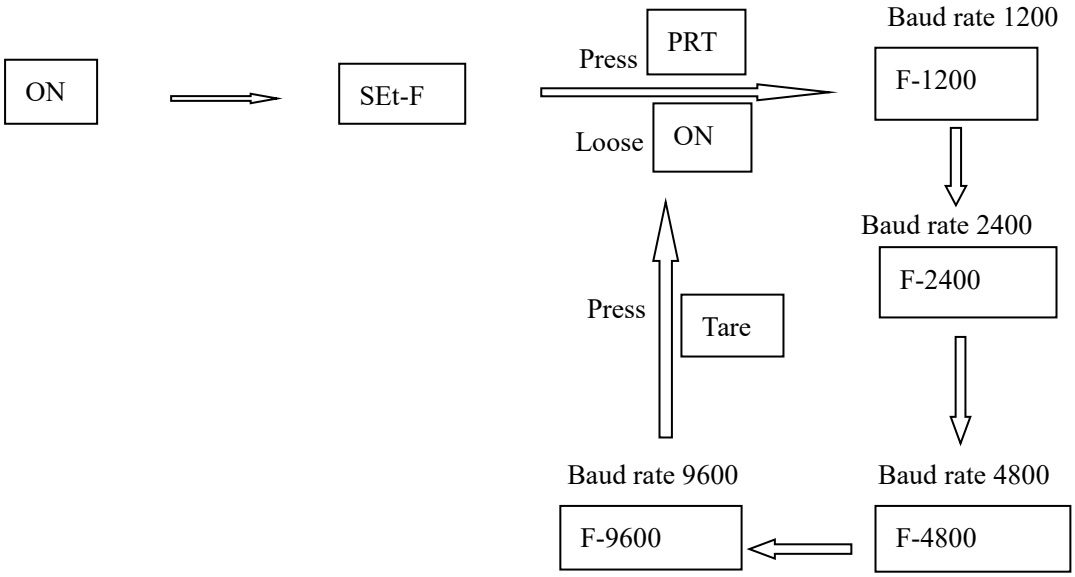
Output setting



Counting



Output interface



A). To meet the needs of the customers, RS-232C interface is installed on to the scale.

Ways of connection:

Electronic scale's connection orifice as below.

Scale (nine cores) Microkit (nine cores)

RXD (Input) 2…… 3

TXD (Output) 3……2

GND (Earth) 5……5

B). (1) Default Band rate of connection orifice is 1200bps.

(2) Data format, 10 bits, 0 as start bit, 1 as stop bit, 8 digits (ASCII code)

(3) No odd and even numbers adjusting.

C). Data output: Default continuous output.

According to the manual, the output mode can be changed. PRT-0 is for "press output", PRT-1, PRT-2, PRT-3 is for "timing output", PRT-4 is for continuous output.

D). Output data format.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
type	Space	Space or *	±	data	data	data	data or dot	data or dot	data	data	data	Unit1	Unit2	end	return

Trouble shooting and solutions

Malfunction	Cause	Elimination
No display	No power supply; Something wrong with fuse; Power transformer is broken;	Plug in adapter; Change the fuse; Change the power transformer; If it is broken again, please send it to the maintenance department to repair’
Unstable display	Bad working condition; The windshield is open; Something between the scale pan and working table. The power exceeds its permissible value and is unstable; Unstable goods (moisture evaporation)	Improve the working condition, avoid vibration and airflow; Close the windshield; Take out eyewinker; Connect 220V AC power supply;
Difference between displayed value and actual value	The scale hasn’t been calibrated;	Calibration
	Not turn to zero; Not horizontal;	Tare; Adjust level;

Maintenance

JTA series multifunctional electronic balance scale is an exact intelligent measured instrument, it needs maintenance.

1) Press the keys with hands other than sharp objects (such as pencils and ball-point pen);

2) Don’t let the goods fall from high to the scale pan.

3) Don’t expose the scale under high humidity and high dust.

4) Cover the scale with hood after use.

5) Keep the scale clean and dry.

Attention:

Before cleaning, pull out the power supply;

Don’t use caustic cleanser (such as solvent).

Add some neutral detergent to a gentle cloth to clean the scale.

Don’t drop the water into the scale.

Dry the scale after cleaning.

Components

Serial No.	Content	No.
1	Main scale	1
2	Scale pan	1
3	Adapter	1
4	Product manual	1
5	Calibrated weight	1
6	Cleaning cloth	1

Appendix

The scale connecting to the computer:

1. Press “start"--- -Process----Attachment ----Communication----Super terminal
2 Input the name; choose the icon, then press confirmation.

3 Ignore the first two steps,, choose “N”: com 1”, press confirmation.

4 Choose:

(1) Baud rate: 1200 (or 2400 according to the manual);

(2) Data bit: 8

(3) Check out of odd and even: No

(4) Stop bit: 1

(5) Control of the data flow: hardware

Press confirmation and it will show the measuring value on the computer.