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High Precision Balances

iBALANCE[®] 211[™]

(LCD Display)

Operation Manual

1. Attention Notes

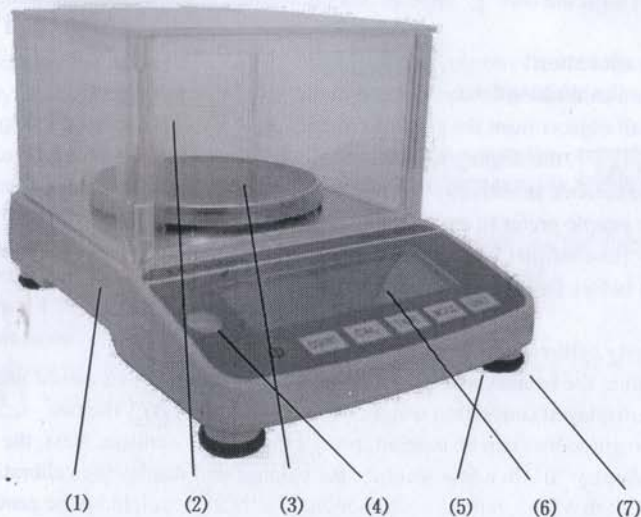
To enable you to use this balance precisely, we urge you to read these instructions carefully before using the scale.

- Do not get the scale wet. If it gets wet, please wipe it with a dry cloth.
- Do not drop or shock the scale and do not drop any item onto the scale or tray. This could cause permanent damage. Only operate the scale gently and place items on the tray gently. Overloading the balance will damage the weighing sensor.
- Extreme temperature/humidity fluctuations, shocks and vibrations should be avoided at all times.
- If the balance will not be used for a long time, please remove or unplug the batteries, clean the scale and store in a non-static polybag. A desiccant is suggested to be included.

2. Precautions Before Using the Balance

- Operate the balance on a stable, vibration free surface.
- Please use an independent power outlet to avoid interference by other electrical appliances.
- Don't put any object on balance before powering on.
- When possible please allow the scale to warm up for several minutes before operation.
- Items should always be placed on the center of the platform when being weighed.
- Operating temperature range : $10^{\circ}\text{C} \sim 40^{\circ}\text{C}$.
- For optimum accuracy, recalibrate before each use.

3. Construction and installation



- | | | |
|-----------------|-----------------|-----------------------|
| (1) Body | (2) Wind Cover | (3) Weighing Platform |
| (4) Level | (5) Adjust Foot | (6) Display Window |
| (7) Push Button | | |


4. Packing list

- | | | | |
|---|--------|----------------|-------|
| (1) Electronic balance | 1 pc. | (2) AC adapter | 1 pc. |
| (3) Operation Instruction | 1 copy | | |
| (4) Balance (Its division is 0.01g or higher) with one weight and a wind cover. | | | |

5. Operation

5.1 Turn on


Put the round plug of AC adapter into the square hole at the back of the balance, then put AC adapter into an alternating outlet with two holes. Or install 6 alkaline batteries **AA SIZE** in the battery holder at the bottom of the balance (pay attention to the Plus(+) and minus(-) ends).

With no load on the platform, press . All the segments of the display will be shown, then the software version is displayed. When "0" is displayed, weighing can be done.

5.2 Turn off



To turn off the balance, press  while the balance is at work.

5.3 Weighing method

Press  to set the display to zero. Put the object to be weighted on the platform. Wait until the unit "g" appears and the reading is stable, then the weight can be read.

5.4 Balance calibration



When precision calibration is required, calibrate the balance as follows:

First remove all objects from the platform, then press  to set the display to zero. Press , the display will show "SCALE" or "LINE". "SCALE" means calibrating the balance sensitivity; "LINE" means calibrating the balance linearity.

NOTE: Most people prefer to use LINE (Linear) calibration.

Press  to confirm (You can press  to toggle between the two types of calibration before you press TARE to confirm)

5.4.1 Sensitivity calibration

When calibrating the balance sensitivity, two different weight values can be used. Based on the displayed calibration weight value, press , the two calibration weight values can be toggled, press  to confirm. Next, the balance will display "0". In a few seconds, the balance will display the calibration weight value. At this time, put the corresponding calibration weight on the center of the platform according to the shown weight value. In a few seconds, the display

will stop, and the calibration weight value will be displayed. This indicates that calibration is complete.

5.4.2 Linear calibration

While in "LINE" calibration mode, press **TARE**, the balance will display "0". In a few seconds, the balance will display the first required calibration weight (eg 100g). Based on this displayed weight value, put that amount of weight on the center of the platform. In a few seconds, the balance will display the full capacity weight value (200g). Place this amount of weight on the center of the platform. In a few seconds, the display will stop, and then it will display 200.000. This indicates that calibration is complete. Normal weighing can now be done.

| | |
|-------------|----------------|
| Mode | iBALANCE® 211™ |
| Cal. Weight | 100g/200g |

NOTE: For Linear calibration two 100g weights will be required (or a 100g and a 200g)

5.5 Counting Function

The balance will count parts based on the weight of a reference sample: **5, 10, 20, 30, 40, or 50** parts. To get more accurate counting results, the weight of the parts should be equal, meaning the less the error of a single part, the better.

- (1) Press **COUNT**, the balance will display "pc CON".
- (2) Place a container on the platform, then press **TARE** the balance will display "pc ADD 5" which is the preset reference quantity. "5" shows the quantity of the reference sample.

- (3) To change the reference quantity, press **MODE** repeatedly until the desired quantity is displayed. Press **TARE** to confirm the quantity of the reference sample.

NOTE: If you want to restart parts counting, repeat the operation steps above. If "PC Err" is displayed, it means the sample is too light to provide accurate results within the error range set by the balance.

- (4) Add parts to the container as desired and read the quantity on the display. At this time, only "pc" counting icon is displayed ("g" is not displayed.).
- (5) Press **UNIT** to switch between parts counting and weight.

5.6 Unit Selection

This balance has the ability to display these units: **g, oz, ozt, dwt, lb, ct**. Press **UNIT** to switch between the units.

5.7 Percentage Setting Function

Place an item on the platform, when the reading is stable, press and hold **TARE** until the symbol % is displayed, then release it. The percentage is now set and all other items placed on the tray will read as a percentage of the first item.

5.8 Backlight Function

Press **MODE** to turn the backlight on or off.

5.9 RS232C Communication

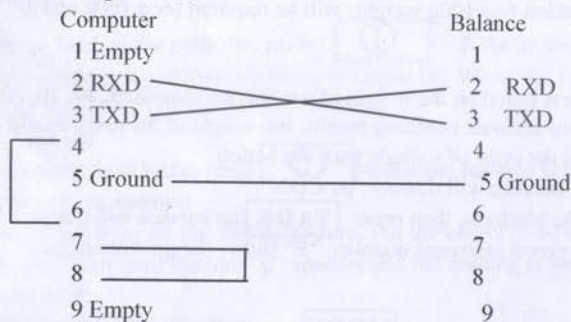
5.9.1 Baud rate = 9600

5.9.2 Data form output by iBALANCE® 211™ electronic balances

+ (-) XXX. XX UNIT<CR><LF>

All the segments above belong to ASC II. Of these, the unit can be set by iBALANCE® 211™ electronic balances.

5.9.3 Wiring method



Order Schedule

5.9.4 Demonstrating communication software (advanced users only)

(1)The super end under

WIN9X/NT/2000/XP

(2)Self-arranging communication software

5.9.5 Order input (as the order schedule at the right side)

| Order Button | Function | ASCII |
|--------------|----------|-------|
| O | Off | 4FH |
| M | Count | 4DH |
| C | Cal | 43H |
| T | Tare | 54H |
| F | Mode | 46H |
| U | Unit | 55H |
| P | Percent | 50H |

7. Troubleshooting

| SYMPTOM | PROBABLE CAUSE | REMEDY |
|-------------------------------------|--|--|
| No Display | Power Adapter not connected. Batteries are dead. | Connect power Adapter. Replace batteries |
| Low Battery Indicator | Batteries are weak | Replace batteries |
| Incorrect Weight Reading | Balance was not set to zero. Balance has not been correctly calibrated. | With no load on the platform, press "TARE". Then weighing can be done. Recalibrate the balance. |
| Calibration Procedure does not work | Incorrect weights being used | Use correct weights. |

8. Specifications

| | |
|---------------------------------------|---|
| MODEL | iBALANCE® 211™ |
| Weighing capacity and readability (g) | 210×0.001 |
| Standard deviation (d) | ±2 |
| Linearity (d) | ±2 |
| Corner deviation (d) | ±2 |
| Taring range | 0-210g |
| Overload capacity | Maximum capacity+9d |
| Time of stabilizing (s) | 3 |
| Applicable temperature rang | 10-35℃ |
| Power source | AC adapter(supplied with balance); or 6 AA Batteries (not included) |
| Pan size (mm) | φ 120 |
| Housing dimension (mm) | 251 (L) × 172 (W) × 58 (H) |
| Net weight | 2.15kg |