

# Service Manual for ED-H weighing scale

## I . Phenomena of trouble

### 1) Trouble of part

The trouble phenomena are as following:

- a) Buzzer----buzzer doesn't make sound, or sometimes makes sound and sometimes doesn't make sound.
- b) LCD----The display is faultily.
- c) Backlight----The backlight doesn't lighten, or sometimes it lightens and sometimes doesn't lighten:
- d) Key ----The keys don't work.

### 2) Trouble of load cell

The trouble phenomena are as following:

- a) The display data is inaccurate and drifting.
- b) The display data doesn't change when put on a weight.
- c) The internal resolution value is not in the natural range.
- d) The initial resolution is drifting.
- e) The display shows "E1" or "E3" when turn on the scale.

### 3) Trouble of power supply

The phenomenon is as following:

The scale doesn't work or the "low voltage" symbol comes out after turning on.

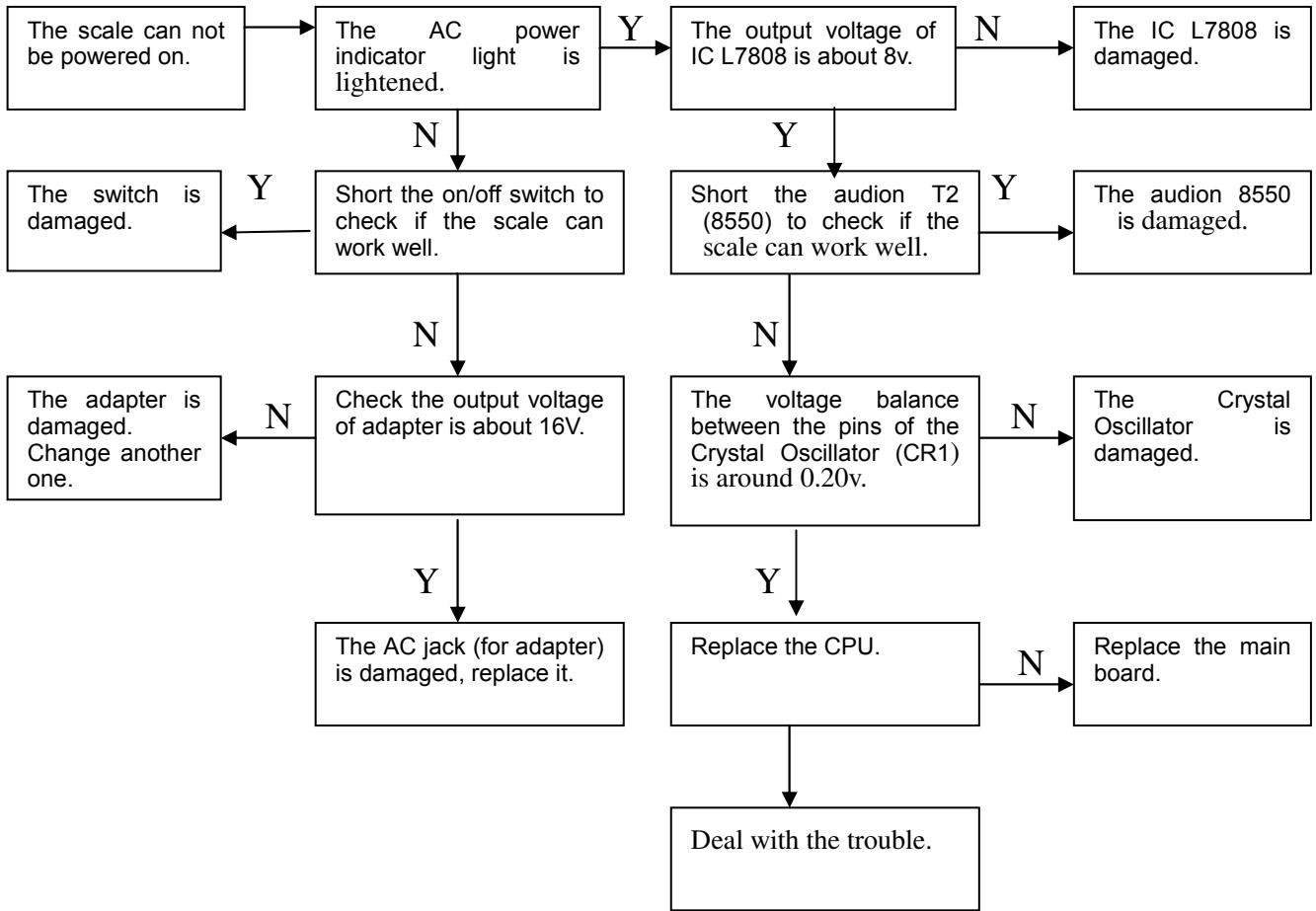
### 4) Trouble of the PCB

The phenomena are as following:

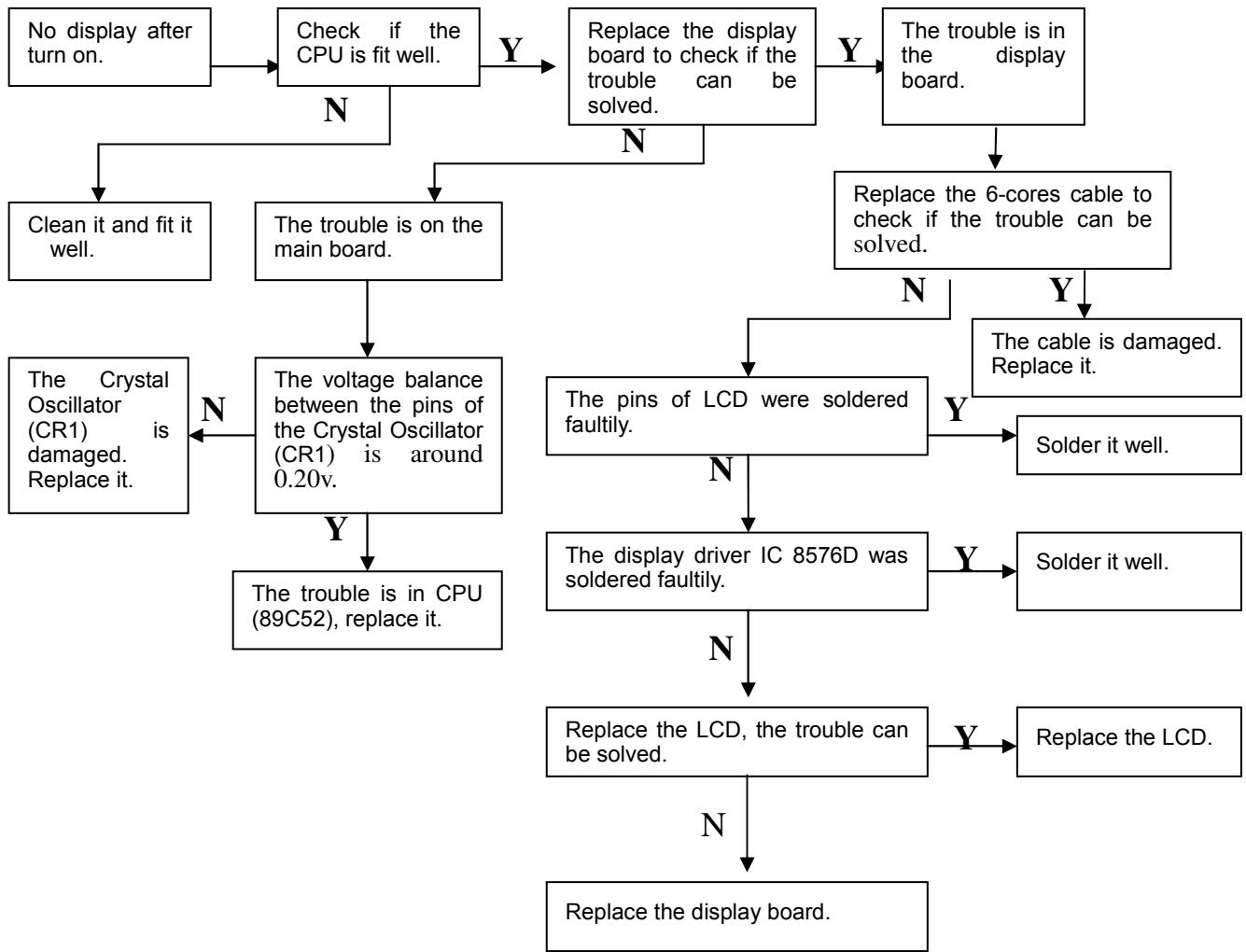
- a) Trouble of display board----the display is abnormal, or shows nothing.
- b) Trouble of main board
  - There is nothing in the display window when turn on the scale.
  - The scale can not be powered on.
  - The weighing is unstable.
  - The internal resolution is out of the normal range.
- c) Trouble of RS-232 board----The scale doesn't transmit any data.

## II. To solve the trouble

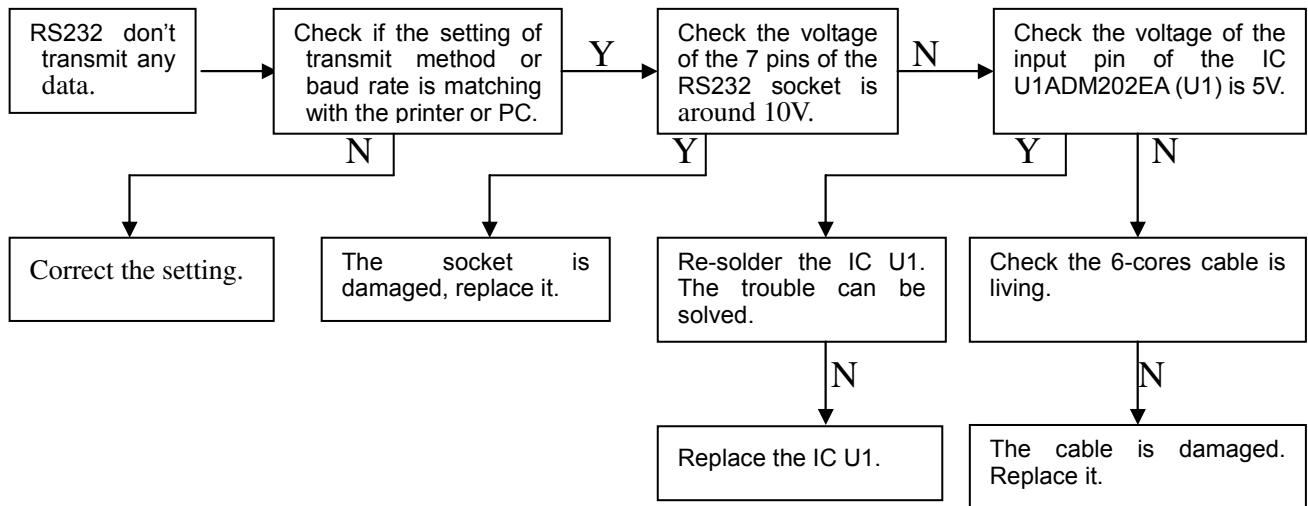
### 1. The scale can not be powered on



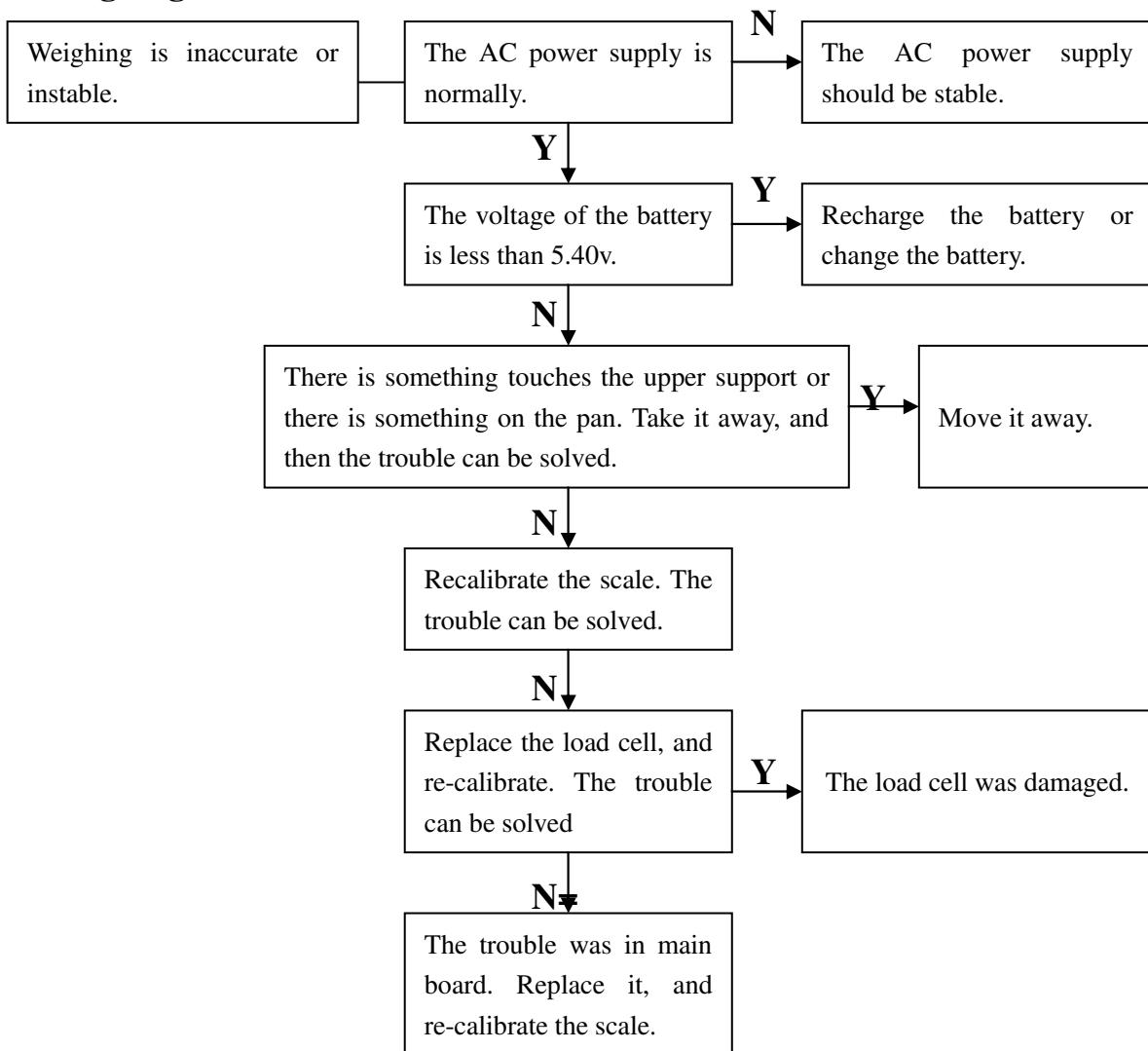
## 2. No display after turn on:



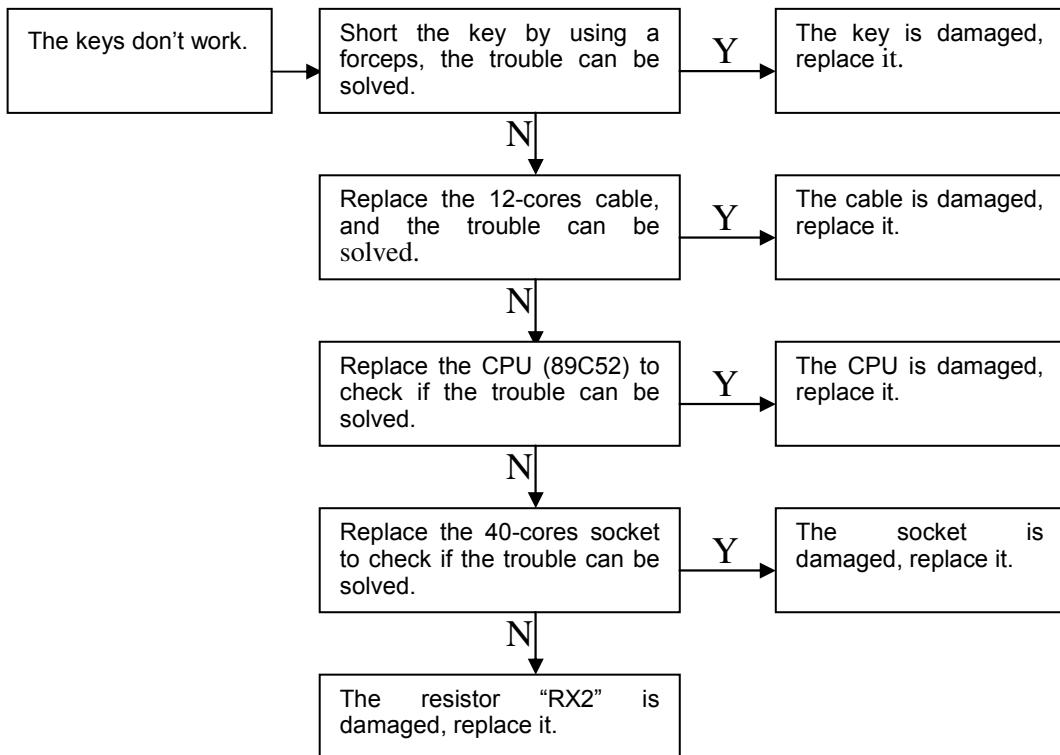
### 3. RS232 don't transmit any data



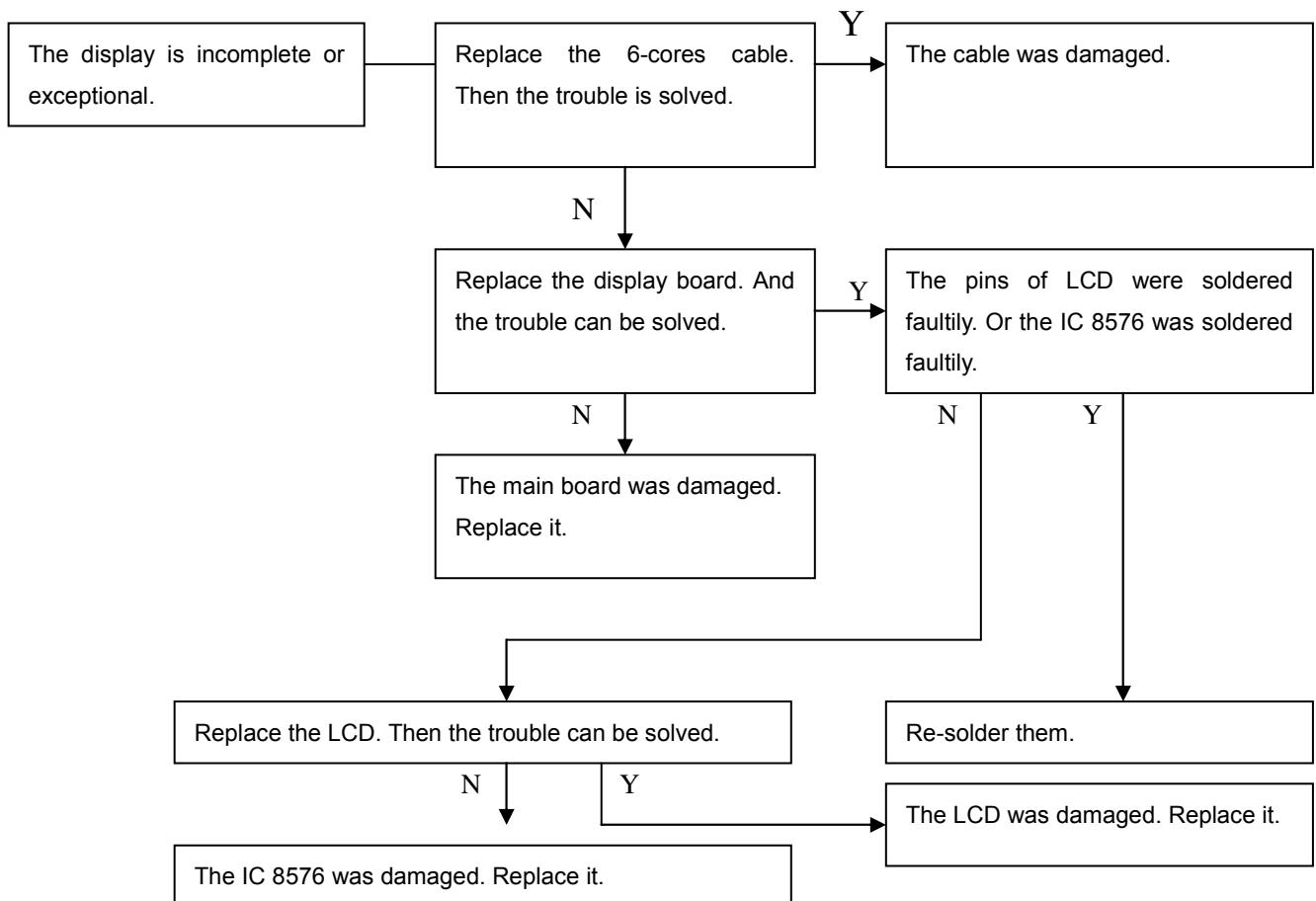
#### 4. Weighing is inaccurate or unstable:



## 5. The keys don't work



## 6. The display is incomplete or exceptional.



**Note:** Since this series of balance is with high precision, it is very easy to be affected by climate and temperature. Sometimes the scale has the following phenomena:

1) Weighing is inaccurate.

The problem can be solved by re-calibration.

2) After self-check, the display shows error messages.

**E1:** When the main board is replaced or EPROM data lost, the display window will show "**E1**". Re-calibrate the scale to solve it.

**E2:** When the zero of the load cell changes or the signal cannot be input, "**E2**" appears. Re-calibrate the scale or replace the load cell to deal with the trouble.

**E3:** When the internal resolution value is not in the natural range and the initial zero is drifting badly, the display will show "**E3**". The solution is to re-calibrate the scale.

**E4:** The sample weight is too small. Put on more weight.

**E5:** In alarm check setting, the high limit value is set lower than the low value. Reset the limit values by using numeric keys.

**E6:** When the subtraction value is larger than the total accumulated value, "**E6**" will appear. Correct the operation to solve this problem.

3) If either main board or load cell is changed, the scale must be recalibrated.

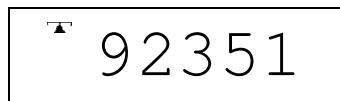
### III. Calibration procedure

- 1) Switch on; Press **CAL BUTTON**
- 2) Calibration mode during self-checking. .

The window shows as follow:



Press **"COUNT/▲"** key to show the internal resolution of the scale.



- 3) Change and choose the weight units, accuracy and capacity by using the **"COUNT/▲"**key and the **"TARE/Enter"** key. The steps are as below:

**Choose weight units:** (Scale of Korea model hasn't this setting. The default setting: g)

- a) After the scale enter into the Calibration mode, give a long press of the **"ZERO"** key to enter into selecting weight units setting, and the display shows:



- b) Press the **"COUNT/▲"** key to change the value (1-lb, 0-g).

- c) Press the **"TARE/Enter"** key to confirm and enter into next step (Choose accuracy value).

**Note:** If only the unit should be changed, then press the **"TARE/Enter"** key to confirm, and press **"M+/Exit"** key to exit calibration model.

**Choose accuracy value:**

- a) The display shows:



- b) Press the **"COUNT/▲"** key to change the value. There are five system-preset values (30000, 60000, 75000, 12000, 15000) can be chosen.

- c) Press the **"TARE/Enter"** key to confirm and enter into next step (Choose capacity).

**Choose capacity:**

- a) The display shows:



- b) Press the **"COUNT/▲"** key to select the capacity value.PL refer to the below list:

Capacity	The value should be chosen
1.5kg × 0.05g	1500.00
3kg × 0.1g	3000.0
6kg × 0.2g	6000.0
15kg × 0.5g	15000.0
30kg × 1g	30000
3kg × 0.05g	3000.00
6kg × 0.1g	6000.0
15kg × 0.2g	15000.0
30kg × 0.5g	30000.0

C) Press the “**TARE/Enter**” key to confirm, at the same time enter into Calibration Mode, the display shows as below:



**Calibration Mode:**

- Touch the pan by hand lightly, several seconds later, the display window shows the weight value (1/3 Max of full capacity) which should be put on for the first time. Put on the weight refer to the display.
- Several seconds later, the display window shows the weight value (2/3 Max. of full capacity) which should be put on for the second time. Put on the weight refer to the display.
- Several seconds later, the display window shows the weight value (3/3 Max. of full capacity) which should be put on for the third time. Put on the weight refer to the display.
- Several seconds later, the scale returns to counting mode. Then the calibration procedure is finished.
- Switch off, and take off all the weight, then switch on, the scale can be used.