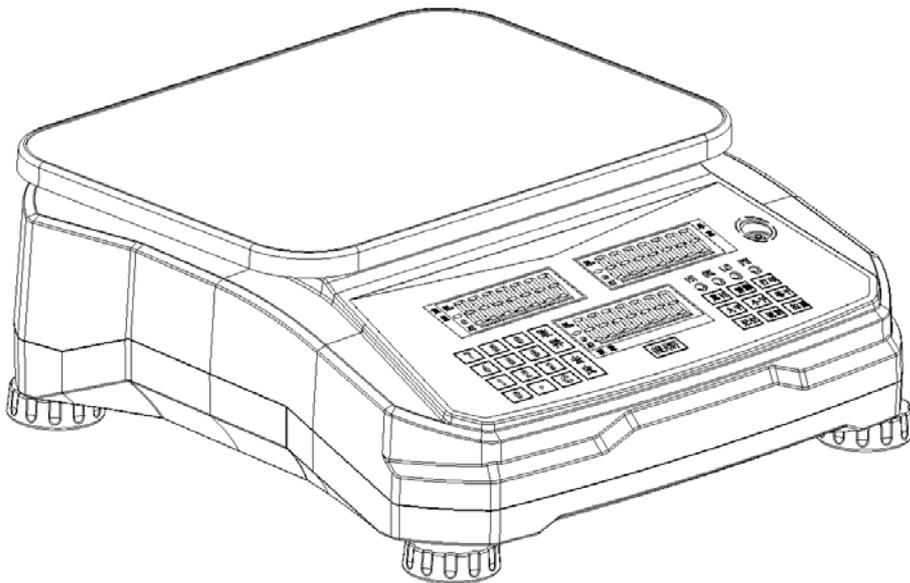


Army Aviation SCT Series Electronic Counting Scale Manual



Contents

【1】	ATTENTION.....	3
1.1	CONVENTIONAL ATTENTION	
1.2	ATTENTION BEFORE USING	
【2】	INSTALLATION.....	4
2.1	BODY INSTALLATION	
2.2	BATTERY REPLACEMENT	
【3】	INSTRUCTION.....	5
3.1	PARAMETERS	
3.2	POWER SUPPLY	
【4】	DISPLAY.....	6
4.1	PANEL DESCRIPTION	
4.2	KEY DESCRIPTION	
4.3	DISPLAY DESCRIPTION	
【5】	OPERATION.....	9
【6】	FUNCTION SETTING.....	20
【7】	RS232 OUTPUT FORMAT.....	25
【8】	ERROR MESSAGES	27
【9】	SPECIFICATIONS.....	28
【10】	WARRANTY.....	28

First of all, thank you for purchasing the Army Aviation SCT series electronic counting scale of our company. The high quality and reliability of the product will make you satisfied. By means of the product, you will be able to fully realize the high quality and reliability of our scale, and believe that our product can fully meet your requirements. There are specific methods of installation, operation and maintenance in this manual. In order to apply the scale well , you must read the manual carefully before using.

【1】 ATTENTION

1.1 CONVENTIONAL ATTENTION

- The object is forbidden to fall down on the pan.
- Don't locate the scale in poor working condition.
- Locate the scale in stipulated condition to apply.
- Don't take scale out or move around by pan.
- Keep the scale clean if the product will not be used for a long time and recharge the battery once every three months. When applying the product again a long time later, you must recharge the battery at first.
- The maintenance must be done by specialist.

1.2 ATTENTION BEFORE USING

- 1. Locate the scale on a clean, firm working table with flat surface to keep away from vibration, heat sources, or rapidly changed temperature. Adjust the 4 leveling feet so that the bubble is centered in the circle and be sure the scale is level each time after its location is changed.**
- 2. Connect the AC adapter to the independent power supply for avoiding interference from other equipments.**
- 3. Be sure no loads on the pan when turn scale on.**
- 4. Electrify to preheat the scale for 3-5 minutes before using.**
- 5. For weighing accuracy, the center of gravity of object should be placed in the central area of and beyond the edge of pan.**

【2】 INSTALLATION

2.1 BODY INSTALLATION

1. Contents in Carton

No.	Name	Unit	Qty.
1	Body	pc	1
2	Pan	pc	1
3	Manual	pc	1
4	Qualification	pc	1

5	Inner Packing	pc	1
6	AC Adapter	pc	1

2. Locate the scale's body on a firm and horizontal working table with the flat surface , adjust the feet to keep the scale stable and level as when the bubble is centered in the circle.

3. Put the pan on the body and press **【ON/OFF】** key to turn on the scale in weighing interface.

2.2 BATTERY REPLACEMENT

1. Take down the pan, open the housing and disconnect the battery joints.

2. Put new battery in the position and connect poles correctly.

Warning: The positive and negative poles of lead-acid battery can not be in short circuit or electrode reverse, which otherwise make the battery damaged and burn.

Connection: Red wire to red pole and black wire to black pole.

3. Screwing the housing and put the pan on again, battery replacement is over.

【3】 INSTRUCTION

3.1 PARAMETERS

Accuracy: III

Precision: (3000-300000) d, (3000d,dual range) approved

Working Voltage: 5V

Sample Rate: 20 times/Sec.

Resolution: 1 million

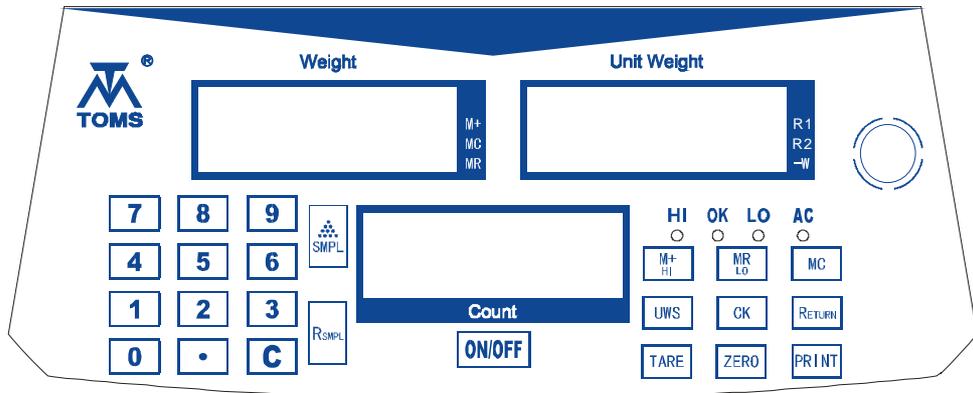
3.2 POWER SUPPLY

AC Adapter: Input 100V~240V, Output 12V/1A

Battery Specification: 6V4AH

【4】 DISPLAY

4.1 PANEL DESCRIPTION



SCT Panel

Description: HI (red light),OK (green light) and LO (yellow light) indicates when check weight function works.

4.2 KEY DESCRIPTION

【0~9】 : The input digit displays on screen

【 . 】 : Decimal Point

【 C 】 : Clear the displayed digit on screen

【SMPL】 : Calculate a new average unit weight

【R_{SMPL}】 : Recalculate a new average unit weight

【ON/OFF】 : Turn on when power off and turn off when power on

【TARE】 : Perform Tare Function

【ZERO】 : Perform Zero Setting Function

【PRINT】 : Perform Print Function

【UWS】 : Confirm the input unit weight

【CK】 : Cooperate with other keys to set the upper-lower limit

【R_{ETURN}】 : Return to weighing interface when setting

【M+/HI】 : 1. Perform accumulation function in weighing interface, then the symbol M+ is bright. 2. Cooperate with check weight key to input the upper limit.

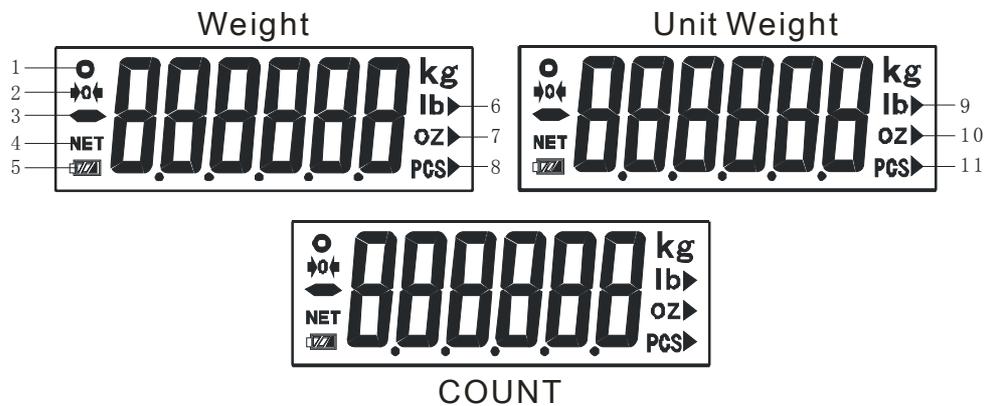
【MR/LO】 : 1. Perform to redisplay function in weighing interface, then the symbol MR is bright. 2.Cooperate with check weight key to input the lower limit.

【MC】 : Perform to clear accumulated value , then the symbol

MC is bright.

Notice: The interval time for pressing key is less than 1 second.

4.3 DISPLAY DESCRIPTION



No.	Description	No.	Description
1	Stable Symbol	7	MR Symbol
2	Zero Symbol	8	MC Symbol
3	- Symbol	9	R1 cap. Symbol
4	NET Symbol	10	R2 cap. Symbol
5	Battery Symbol	11	Samples Lack
6	M+ Symbol		Input Unit Weight Lack

【5】 OPERATION

5.1 TURN ON/OFF

ON: Press **【ON/OFF】** key to display the maximum capacity and software version number on screen, do self-inspection, then enter in weighing interface.

OFF: Press **【ON/OFF】** key to turn off scale directly.

5.2 COUNTING MODE

There are three display windows in SCT series scale, in which weight, unit weight and count are displayed respectively .

5.3 AVERAGE UNIT WEIGHT SETTING

If average unit weight was not set, “0” will be displayed in unit weight and count screens.

Sampling:

- 1. Put some samples on the pan.**
- 2. Input the number of samples by numeric keyboard, and the input number are displayed on unit weight screen .**
- 3. Press 【SMPL】 key to display the unit weight value on unit weight screen and the sampling value on count screen.**

4. The set average unit weight and number are displayed on the screens.

Sampling After Tare:

1. Put a container on the pan
2. Press **【TARE】** key to display “0” on weight screen.
and symbol NET is displayed.
3. Put samples inside the container
4. Input the number of samples by numeric keyboard and the number is displayed on unit weight screen.
5. Press **【SMPL】** key to display the unit weight value on unit weight screen and sampling value on count screen.

Input a known average unit weight:

1. A known unit weight is input, then press **【UWS】** key to display “ unit weight value” on unit weight screen.
2. Put entire objects on the pan
3. Count and get the result

5.4 ACCUMULATED MODE

Perform accumulation function by pressing **【M+/HI】** key, and accumulative operation can be performed at most 10 times as well as rechecking or print every time.

Notice: The accumulative operation can only be performed when the stable symbol appears, then M+ symbol will be displayed after performing accumulative operation.

1. Sampling and count according to the item 5.3
2. Press **【M+/HI】** key to display “ current accumulated times” for short time on unit weight screen, and one second later, automatically return in counting interface.
3. The multiple accumulative operation can be performed by the step 2

5.5 REDISPLAY FUNCTION

The redisplay function can be used to check accumulated results and to examine accumulated messages time by time. After performing redisplay operation, symbol MR will be displayed.

1. One or more times accumulative operation can be performed according to item 5.4

2. Press **【 MR/LO 】** key to display “weighing value of accumulative total” on the weight screen, “MR-ALL (times of accumulative total)” on the unit weight screen, “the number of accumulative total” on count screen. Press the print key to print the number of accumulative total.
3. Press continuously **【 ZERO 】** key to examine each message of 10 times accumulated results in descending order.
4. Press continuously **【 TARE 】** key to examine each message of 10 times accumulated results in ascending order.
5. Press **【 R_{ETURN} 】** key to return in counting interface.

5.6 CLEAR ACCUMULATION FUNCTION

Clear Accumulation Function can be used to clear the accumulated results and the accumulated value each time. symbol MC will be displayed after clearing accumulation.

1. One or more times accumulated operation can be performed according to item 5.4
2. Press **【 MC 】** key to display “weighing value of accumulative total” on weight screen, “MR-ALL(times of accumulative total)” on unit weight screen, “the number of accumulative total” on count screen. Press **【 MC 】** key

again to clear all the accumulated messages and cancel accumulation operation.

3. Press continuously **【ZERO】** key to examine each message of 10 times accumulated results in descending order and press **【MC】** key to clear the current accumulated message.
4. Press continuously **【TARE】** key to examine each message of 10 times accumulated results in ascending order and press **【MC】** key to clear the current accumulated results.
5. Press **【RETURN】** key to return in counting interface.

5.7 CHECK WEIGHT

Check Weight mode and check weight alarm range function can be set under function setting mode. The setting instruction are shown in the chapter of function setting.

Notice: the operation can only be performed when LO is less than HI and more than 9d.

1. In counting interface, press **【CK】** key to display “check weight alarm range” on weight screen, “unit weight value” on unit weight screen, “LIMIT” on count screen.
2. Press **【MR/LO】** key to display “check weight alarm range” on weight screen, “lower limit weight” on unit

- weight screen, “LO” on count screen. Change the lower limit weight by numeric keyboard, press **【SMPL】** key to confirm the lower limit weight.
3. Press **【M+/HI】** key to display “check weight alarm range” on weight screen, “upper limit weight” on unit weight screen, “HI” on count screen. Change the upper-limit weight by numeric keyboard, press **【SMPL】** key to confirm the upper limit weight.
 4. Press **【RETURN】** key to return in counting interface.
 5. Press **【CK】** key and press **【R_{SMPL}】** key again to open check weight function.
 6. Press **【CK】** key and press **【RETURN】** key again to close check weight function.

5.8 CHECK COUNT

Check Count mode and check count alarm range mode can be set under function setting. The setting instruction is shown in the chapter of function settings.

Notice: the operation can only be performed when LO is less than HI, integer number and more than 9d

1. In counting interface, press **【CK】** key to display “check count alarm range” on weight screen, “ unit weight” on unit weight screen, “LIMIT” on count screen.
2. Press **【MR/LO】** key to display “check count alarm range” on weight screen, “lower-limit count” on unit weight screen, “LO” on count screen. Change the lower-limit count by numeric keyboard, press **【SMPL】** key to confirm the lower-limit count.
3. Press **【M+/HI】** key to display “check count alarm range” on weight screen, “upper-limit count” on unit weight screen, “HI” on count screen. Change the upper-limit count by numeric keyboard, press **【SMPL】** key to confirm upper-limit count.
4. Press **【R_{ETURN}】** key to return in counting interface.
5. Press **【CK】** key and press **【R_{SMPL}】** key again to open the check count function.
6. Press **【CK】** key and press **【R_{ETURN}】** key again to close the check count function.

5.9 SINGLE POINT CALIBRATION (unapproved)

Single Point Calibration can be used to calibrate the deviation of gravity when the scale is used at first or calibrate the scale when it is inaccuracy.

Notice: please calibrate the scale in working condition.

- 1. In the condition of power off, hold on 【SMPL】 key and press 【ON/OFF】 key to enter in function setting and display “set” on weight screen , “0” on unit weight screen.**
- 2. Input “1139” by pressing numeric keys and press 【SMPL】 key to display “CAL” on weight screen, “1Point” on unit weight screen, “C-Zero” on count screen.**
- 3. Confirm no load on the pan and press 【TARE】 key to perform single point calibration ,display “value of weight to load” on count screen.**
- 4. If“ value of weight to load” need be changed, respectively press 【TARE】 【ZERO】 keys to change the value of weight to load.**
- 5. Put required weight on the pan for 3-5 seconds and press 【SMPL】 key to display “pass”, then take down the weight, press 【SMPL】 key again to return in function setting interface.**

6. Press **【RETURN】** key to count backwards to return in weighing interface.

5.10 UNIT SETTING (unapproved)

In general, the units need not reset because they were already set before delivery. If setting need, the steps are shown as the followings, units –g,kg,1b,oz

Notice: The units kg and g are only allowed by rules to be legal measure unit.

1. In the condition of power off, hold on**【SMPL】**key and press **【ON/OFF】** key to enter in function setting, display “set” on weight screen and “0” on unit weight screen.
2. Input“1132” by numeric key, and press **【SMPL】** key to display “UNIT” on weight screen, “1132” on unit weight screen, “Unit” on count screen.
3. Press **【1】** key to change the units and select required unit, press **【SMPL】** key to return in function setting interface.
4. Press **【RETURN】** key to count backwards again to return in weighing interface.

5.11 MINIMUM ZERO DISPLAY SETTING

Minimum Zero Display need not be reset in general and was set before delivery, if need, the steps are shown as the followings:

Notice: Minimum Zero Display “0” is only allowed to be set on rules.

1. In the condition of power off, hold on **【SMPL】** key and press **【ON/OFF】** key to open function setting ,display “SET” on weight screen and “0” on unit weight screen.
2. Input“1136” by numeric keys and press **【SMPL】** key to display “Auto-Z” on weight screen, “1136” on unit weight screen, “Minimum Zero Display” on count screen.
3. Press **【1】** key to change the different minimum zero display (0-1-2-3), and select the required one, then press **【SMPL】** key to return in function setting interface.
4. Press **【RETURN】** key to count backwards, and return in weighing interface.

5.12 LINEAR CALIBRATION (unapproved)

There are three portions for linear calibration in the range of scale capacity. The incorrect linear calibration method will make errors so that the measured value will be influenced

each time. Therefore, the linear calibration done by user are not suggested. The linear calibration was done before delivery.

Notice: please calibrate the scale in working condition.

- 1. In the condition of power off, hold on **【TARE】** key and press **【ON/OFF】** key to enter in linear calibration interface, and display “CAL” on weight screen, “LinE” on unit weight screen, “C-Zero” on count screen.**
- 2. Confirm no load on the pan, press **【TARE】** key to set zero point calibration, display “1/3 maximum capacity” on count screen.**
- 3. Put the required weights on the pan for 3-5 seconds, press **【TARE】** key to enter in next portion linear calibration interface, display “2/3 maximum capacity” on count screen.**
- 4. Put the required weights on the pan for 3-5 seconds, press **【TARE】** key to enter in next linear calibration interface, display “3/3 maximum capacity” on count screen.**
- 5. Put the required weight on the pan for 3-5 seconds, press **【TARE】** key to display “PASS” on count screen.**
- 6. Press **【TARE】** key to count backwards to return in weighing interface.**

【6】 FUNCTION SETTING

In the condition of power off, hold on **【ZERO】** key and press **【ON/OFF】** key to enter in function setting interface and display “SCALE” on weight screen, “FunC” on unit weight screen, “SET” on count screen.

6.0 BACKLIGHT SETTING

Press **【0】** key to display “FunC0” on weight screen, “LiGh” on unit weight screen, “backlight type” on count screen. Press **【0】** key to change backlight type.

“OFF”: No Backlight

“ON”: Backlight is bright

“Auto”: Automatic Backlight (No load, no backlight, as load greater than 9d, backlight is bright)

6.1 ANTI-VIBRATION SETTING

3

Press **【1】** key to display “FunC1” on weight screen, “FiLt” on unit weight screen, “Anti-Vibration Strength Value” on count screen. Press **【1】** key to change (1-5) anti-vibration level. The bigger the number is, the more anti-vibration it is.

6.2 BAUD RATE SETTING

Press **【2】** key to display “FunC2” on weight screen, “bAud” on unit weight screen, “baud rate value” on count screen. Press **【2】** key to change the different baud rate (9600-19200-4800) .

6.3 CHECK WEIGHT BUZZER SETTING

Press **【3】** key to display “FunC3” on weight screen, “CK-bz” on unit weight screen, “ON or OFF” on count screen.

Press **【3】** key to change them.

6.4 CHECK WEIGHT ALARM RANGE SETTING

Press **【4】** key to display “FunC4” on weight screen, “Limit” on unit weight screen, “Range” on count screen.

Press **【4】** key to change them.

“in”: Regular range alarm (green light)

“un”: under lower-limit and over upper-limit alarm (yellow light, red light)

“Hi”: over upper-limit alarm (red light)

“Lo”: under lower-limit alarm (yellow light)

6.5 CHECK WEIGHT/COUNT SETTING

Press **【5】** key to display “FunC5” on weight screen, “CK-S” on unit weight screen, “WEiGH/PCS” on count screen.

Press **【5】** key to change them.

“WEiGH”: check weight mode

“PCS”: check count mode

6.6 PRINT SETTING

Press **【6】** key to display “FunC6” on weight screen, “Prt” on unit weight screen, “Print Pattern” on count screen.

Press **【6】** key to change them.

“PrtPr”: press **【PRINT】** key to print

“PrtCo”: continuous output to print

“PrtST”: stable output to print

“PrtMr”: accumulated output to print

6.7 EXTERNAL DEVICE SETTING

Press **【7】** key to display “FunC7” on weight screen, “Prt-d” on unit weight screen, “Device name” on count screen.

Press **【7】** key to change them.

“K.P205”: connect to K.P205 printer

“SCr”: connect to large screen display

“PC”: connect to computer

“dot-MA”: connect to micro printer

6.8 AUTOMATIC TARE SETTING

Press **【9】** key to display “FunC9” on weight screen, “AtarE” on unit weight screen, “YES (open)/no (close)” on count screen.

Press **【9】** key to change them.

6.9 COUNT ANALYSIS SETTING

Press **【.】** key to display “FunCA” on weight screen, “SMPL” on unit weight screen, “E/d” on count screen.

Press **【.】** key to change them.

“E”: count according to external weight.

“d”: count according to value of internal code.

6.10 RS232 OUTPUT ACCUMULATED MESSAGE SETTING

Press **【R_{SMPL}】** key to display “Pr-ALL” on weight screen, “ ” on unit weight screen, “SET-MP” on count screen.

Press **【M+/HI】** key to change them.

“Pr-ALL”: in counting interface, press **【M+/HI】** key to print and output every accumulated value, press **【MR/LO】** key to display

the total accumulated message and press **【PRINT】** key to print and output the total accumulated message.

“nP-ALL”: in counting interface, press **【M+/HI】** key not to print and output every accumulated value, but press **【MR/LO】** key to display the accumulated total, then press **【PRINT】** key to print and output the accumulated total.

6.11 RS232 OUTPUT MESSAGE SETTING

Press **【UWS】** key to display “Pr-Wt” on weight screen, “Pr-UWt ” on unit weight screen, “Pr-PCS” on count screen, at the moment, weight, unit weight and count can be printed and output.

1. Press **【M+/HI】** key to change the display “nP-Wt” on weight screen (Don't **output weight message**)
2. Press **【MR/LO】** key to change the display “nP-UWt” on weight screen (Don't **output unit weight message**)
3. Press **【MC】** key to change the display “nP-PCS” on weight screen (Don't **output count message**)

To set above function as requirement and press **【SMPL】** key to confirm the setting, then to count backwards to return in weighing interface.

【7】 RS232 OUTPUT FORMAT

7.1 RS232 CONNECTION

DB9 joint is for the connection with other communication equipments

Connect pins are assigned as the followings:

PIN2=TXD, PIN3=RXD, PIN5=GND

Setting Pattern:

Data bits 8, without odd-even check, stop bit 1, baud rate is adjustable

7.2 RS232 FORMAT

Three print formats-Continuous, pressing key and stable :

G/W: 92.6 g	G/W gross weight, T/W net weight
U/W: 0.92625 g	U/W unit weight
QTY: 100 PCS	QTY quantity

Accumulated Print Format:

No.01	The first accumulated total
G/W: 92.7 g	

U/W: 0.92658 g

QTY: 100 PCS

No.02 The second accumulated total

G/W: 92.7 g

U/W: 0.92658 g

QTY: 100 PCS

No.03 The third accumulated total

G/W: 92.7 g

U/W: 0.92658 g

QTY: 100 PCS

TOTAL03 Times of accumulated total

G/W: 278.1 g Weight of accumulated total

U/W: 0.92658 g

QTY: 300 PCS Count of accumulated total

【8】 ERROR MESSAGES

Symptom	Possible Reason	Solution
Unable to boot	No power or dead battery	Check power and battery connection
Can't be calibrated	Hostile working condition Unsuitable weight	Working condition Suitable weight
W-over	Exceed maximum capacity+9d	Lessen objects
LOW-BAT	Dead battery	Charge battery

Battery symbol	Battery is low	Charge battery
P2-Err	Exceed 20% max. capacity	Take down the load
AC-Err	The accumulated times exceed 10 .	Clear the accumulated times
Not Zeroing	Hostile working condition Touch the pan Load cell damaged or PCB problem	Working condition Eliminate objects Repair in factory
System halted	Can't power off, key no response, can't weigh, etc	Power and battery cut, reconnect them to turn on

【9】 SPECIFICATIONS

Common Specifications:

Capacity	3kg	6kg
Division	0.05/0.1/0.2/0.5/1g	0.1/0.2/0.5/1/2g
Capacity	15kg	30kg
Division	0.2/0.5/1/2/5g	0.5/1/2/5/10g

Precision Specifications (on demand):

Capacity	3kg	6kg
-----------------	------------	------------

Division	0.01g	0.05g
Capacity	15kg	30kg
Division	0.1g	0.1g

【10】 Warranty

Thank you for using our products. We shall supply good service after sales and solve your problem in time in the future.

During one year warranty period, repair or at it option, replace any component(s) that proves to be defective at no charge exclude the artificial damage, in the meantime you must show the invoice and valid warranty card of product to our service center.

In the following situation, you must pay for the item:

- 1.The artificial damage**
- 2.The damage by nature and man made disaster**
- 3.The user's own disassembly or the other unauthorized man's maintenance**
- 4.The battery is consumable to not be in the scope of warranty**

Version: VER-1.0

Subject to change without prior notice