

# BTT

## Touch-screen Label Printing Scale (AE 505 Indicator)

# USER MANUAL



Revision 2, 02/25 / Software version 2.1.2

<b>1</b>	<b>Introduction .....</b>	<b>3</b>
<b>2</b>	<b>Specification .....</b>	<b>4</b>
<b>3</b>	<b>Main Parameters .....</b>	<b>4</b>
<b>4</b>	<b>Assembly .....</b>	<b>5</b>
<b>5</b>	<b>Ports .....</b>	<b>5</b>
<b>6</b>	<b>Getting Started .....</b>	<b>7</b>
<b>7</b>	<b>Charging .....</b>	<b>8</b>
<b>8</b>	<b>Display .....</b>	<b>8</b>
<b>9</b>	<b>Screen keypad .....</b>	<b>10</b>
<b>10</b>	<b>Function buttons .....</b>	<b>12</b>
<b>11</b>	<b>Other interfaces .....</b>	<b>13</b>
<b>12</b>	<b>Subtotal .....</b>	<b>19</b>
<b>13</b>	<b>Add up .....</b>	<b>20</b>
<b>14</b>	<b>Stock manage function .....</b>	<b>22</b>
<b>15</b>	<b>Show barcode .....</b>	<b>24</b>
<b>16</b>	<b>Connect with the scan gun .....</b>	<b>26</b>
<b>17</b>	<b>User defined function .....</b>	<b>27</b>
<b>18</b>	<b>Power on zero .....</b>	<b>28</b>
<b>19</b>	<b>zero .....</b>	<b>29</b>
<b>20</b>	<b>Tare .....</b>	<b>30</b>
<b>21</b>	<b>Choose units .....</b>	<b>32</b>
<b>22</b>	<b>Counting function (Option) .....</b>	<b>33</b>
<b>23</b>	<b>Select and edit goods .....</b>	<b>35</b>
<b>24</b>	<b>Print .....</b>	<b>40</b>
<b>25</b>	<b>Check the record .....</b>	<b>40</b>
<b>26</b>	<b>Parameter setting .....</b>	<b>49</b>
<b>27</b>	<b>Communication .....</b>	<b>57</b>
<b>28</b>	<b>Time setting .....</b>	<b>79</b>
<b>29</b>	<b>Agent setting .....</b>	<b>80</b>
<b>30</b>	<b>update .....</b>	<b>80</b>

31 close ..... 81

32 User management (option) ..... 81


33 Use PC for data management..... 86

34 Communication ..... 88

35 Units conversion..... 89

36 Error information ..... 90

37 Common Usage Scenarios ..... 90

<p><b>WARNING:</b></p> 	<p><b>Please read carefully following instructions for installation and use before starting your work with a new balance.</b></p> <p><b>Failure to use the balance in accordance with the advice in the user manual could mean that the product gives incorrect readings.</b></p>
--	---

## **1 Introduction**

- 1.1 Charge the indicator fully prior to first use.  
When the low power sign shows, please use the original adapter to charge. During charging the charging light is red. Once fully charged the light will turn green. Full charge time is about 5-7 hours.
- 1.2 Always use the charging adaptor provided.
- 1.3 Ensure the scale is on a stable and flat surface.
- 1.4 The AE 505 indicator is not IP rated. Please avoid using it in wet environments.
- 1.5 Rechargeable batteries degrade over time. After two years of regular use, you may find the AE 505's battery will hold less charge and will need recharging more frequently. Adam Equipment provide replacement rechargeable batteries should you need to replace the battery in your unit.
- 1.6 Turn off the scale if it is not likely to be used for a long period of time. If not in use, charge machine every three months to prolong battery life. Ensure the battery has a full charge before next use.
- 1.7 Your Adam Equipment scale is a precision instrument. Please use and handle with care, and place items on its weighing pan carefully.
- 1.8 Do not exceed the maximum capacity of the scale.
- 1.9 Warm up the scale by switching it on 15 minutes before use.

## **2 Specification**

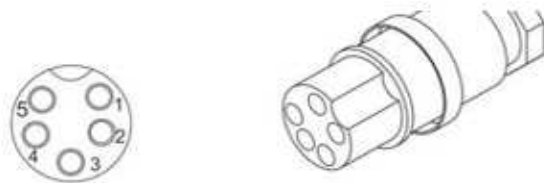
- 2.1 8-inch TFT touch-screen colour display.
- 2.2 Adjustable backlight brightness.
- 2.3 Solid frame design to ensure stable weighing.
- 2.4 Internal memory for storing up to 10 custom label designs.
- 2.5 Checkweighing alarm and colour display.
- 2.6 Weighing modes: Weighing, checkweighing, parts counting, check counting, accumulation, averaging, percentage weighing, net total weighing.

## **3 Main Parameters**

- 3.1 Available accuracy: 1/30000
- 3.2 Power adapter: 12VDC 3A adapter.
- 3.3 Working current: 300mA
- 3.4 Display: 8 inch TFT
- 3.5 Sensor sensitivity range: 1-3mV/V
- 3.6 Power: DC6V/4-10.0AH (low power sign appears when voltage lower than 5.6V)
- 3.7 Work temperature: 0-40°C, lower than 90% RH
- 3.8 Storage temperature: -25~55°C

4    **Assembly**

4.1    Load cell connection



Pin	Definition	Note
1	E+	
2	E-	
3	S+	
4	S-	
5	Ground	Connect to the shielded wire (Option)

4.2    To assemble your BTT, feed the load cell cable through the pillar, then insert the pillar into the base, and fasten the fixed screw. Position the cable through the holder, and insert the holder into the bracket of the indicator. Fix the load cell connector. Adjust the holder to the correct position and then fasten the plastic screw on the display.

5    **Ports**

You can find the scale’s main ports on the back of the AE 505 indicator:



Serial port 1# in the right side of the back of the indicator. Serial port 2#

is on the bottom of the indicator.

- 5.1 If you need to reset the AE 505, press down the left button.
- 5.2 When the charging light is red, the indicator is charging. When the charging light is green, indicator charging has finished.
- 5.3 USB1 can connect to U-disk and barcode scanner.
- 5.4 USB2 is optional; AE 505 indicators are supplied as standard without this port.
- 5.5 RS232 1# can connect to PC.
- 5.6 RS232 2# can connect to an external printer.

## 6 Getting Started

### 6.1 Power on

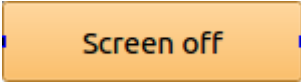
In power off mode, press the On/Off button on the back of the indicator. When the display shows a zero reading, you're ready to start weighing.

### 6.2 Power off

With the scale switched on, press the On/Off button. The screen will display the shut down dialogue:



Choose  to turn off,

Choose  to close the screen but not power off. Press On/off again; the screen will show again.

Choose  to return to working mode.



## 7 Charging

Connect the adapter provided to the AE 505, and connect to a suitable power source. When charging begins, the charging light will glow red. This light will turn green when charging is finished (the charging length should be 5-7h).

Warning: Avoid over-charging as this could cause damage to the rechargeable battery. Likewise, please avoid completely depleting the battery's power. When the low battery indicator appears, charge as soon as possible. If the scale is not used for a long period of time, recharge every 40 days.

After charging, remove the adapter.

Do not use other adapters as this may cause damage to the rechargeable battery.

## 8 Display

### 8.1 Weighing window

In Weighing mode, the screen shows net weight, tare weight and gross weight.



In Counting mode, the screen shows net weight, unit weight and quantity.



8.1.1 Each window's content is indicated by the title shown in the top left corner. For example, weight, Hi., Lo., unit weight, quantity.

8.1.2 **->0<-** means weight is zero.

8.1.3 **Tare** shows to denote tare weight.

8.1.4 **Stable** - means the weight value has stabilised and a reading can be taken.


## 8.2 Status bar



8.2.1 **Admin** User login

8.2.2 **Max=15 kg d=0.0005 kg** Capacity and Division

8.2.3  Barcode scanner

8.2.4  External printer connection

8.2.5  USB drive

8.2.6  WIFI

8.2.7  Battery charge status

8.2.8 **2021-06-17 09:37:13** Date and time

9 Screen keypad

9.1 English mode



9.2 Symbol and number mode



9.3 The second page of symbol



Close the keypad



Backspace



Enter



Shift, Caps Lock



Space,

English or Chinese input.



Symbol/number keypad switch



Switch to English or Chinese input mode




Symbol mode switch





Toggle between English or Chinese keypad


## 10 Function buttons

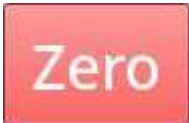


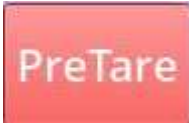
10.1  Print and store the recent weight and goods data.

10.2  Pop-up the setting menu. Includes settings and Help information.

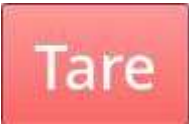
10.3  Check the stored print record.

10.4  Toggle between weighing units.

10.5  Return the displayed weight value back to zero.  
If pressing this key does not return the scale to zero, please check if the weight value exceeds the allowed zero range. User can set manual zero range in user setting.

10.6  After pressing this key, the input box will pop-up.

Input the tare weight manually. The scale will use the input tare weight.



- 10.7 Add the tare weight to the scale, and press this key to tare off the value from the display. Please note, users cannot tare when weight value is negative.

11 Other interfaces

11.1 Checkweighing (Hi-Lo limit) mode

11.1.1 Weighing mode

Lo 1.000 kg	OK	Hi 3.000 kg
3	0	0
0.560	0.000	0.000

The top row is the Hi-Lo status and Hi-Lo value.  
The second row is stored or printed content; including the number of times a weight reading has been lower than the low limit, within limits (OK) and higher than the high limit.  
The third row shows the same as the second row, but showing as the weight value.

11.1.2 Check Counting mode

Lo 0PCS	OK	Hi 0PCS
0 0PCS	0 0PCS	0 0PCS

This display is the same as weighing mode, but Hi-Lo values show is pcs, as do the number of times, and total count quantity, display in PCS.

#### 11.1.3 Status display

When the weight or quantity value is less than 0, the scale as default shows no Hi-Lo output.

Additionally, the Lo-qualified-Hi box colours are light yellow, light green and light red respectively.

If users need output <0 or =0 value, this can be set in the user parameter setting.

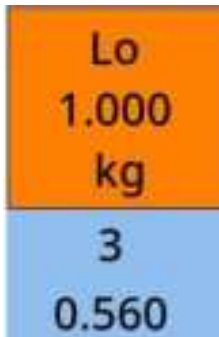
When the weight or quantity is less than Lo value, the Lo box is an orange/yellow colour.



When the weight or quantity value is more than the Lo value, but less than Hi VALUE, the OK box glows green.

When the weight or quantity value is more than the Hi value, the Hi box is red.

When the color of Hi-Lo box changes, press print key at this time, the bottom of the box will show the count and the weight value will show below X times.



#### 11.1.4 Set Hi-Lo value

##### 11.1.4.1 Set Hi-Lo in goods data

When adding or editing the goods data, you can set the Hi-Lo value in the data box.

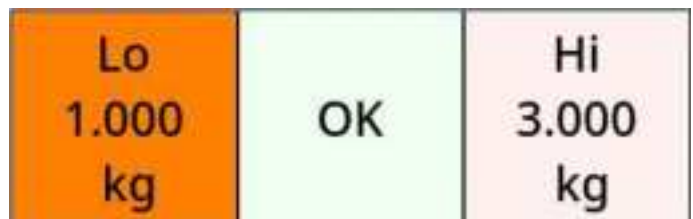


When selecting the product, the Hi-Lo value will set to this goods' Hi-Lo information.



##### 11.1.4.2 Modify the Hi-Lo value manually

To change Hi-Lo setting, press the Hi-Lo box. The Hi-Lo setting box will pop up.





Hi	3.000			kg
1	2	3	<-	
4	5	6		
7	8	9	OK	
.	0	Clear	Close	

Input the Hi value, press confirm key, then input the Lo value.

Lo	1.000			kg
----	-------	--	--	----

Press confirm again to go back to weighing mode.  
Now the Hi-Lo value has changed to input one.

## 11.2 Percentage weighing (Target (%)) mode

Percentage weighing mode is similar to Checkweighing (Hi/Lo limit) mode. The example in weighing mode is as follows:

18%

100%:1.000 kgHi3.000 kg

The information is goods name, Hi/Lo limit value, the status against the Hi/Lo limit, the number of weigh-ins against the Hi/Lo limit and the total weight in Hi/Lo limit.

Target mode sets the Lo limit value to target value. For example, when the weight value is half of the Lo limit, the percent state line will show 50%. At this time, press Print; the number of times will show under Lo, and the total weight under the Lo limit will show under the number of times.

### 11.3 Sorting mode

#### 11.3.1 Function instruction

Sorting mode is used for goods classification.

2. 0000 A 1. 0000 kg	3. 0000 B 2. 0000 kg	4. 0000 C 3. 0000 kg	5. 0000 D 4. 0000 kg	6. 0000 E 5. 0000 kg
0	0	0	0	0

From up and down, the information is sorting value, the condition of sorting, the number of times of sorting, the total weight of sorting.

For example, when the weight value is between 1.0kg-2.0kg, the



relevant window will show a green colour.

If the weight is lower than Lo or higher than Hi, the sorting box will not show this green colour. If A-E have one box that shows green, the printed and stored value will statistical to qualified subtotal value.

At this time, press Print, the number of times will show under the qualified box, and the total weight of sorting will show under the number of times.

### 11.3.2 Set sorting value

#### 11.3.2.1 Set Hi-Lo in goods data

When adding or editing the goods data, you can set sorting value in the data box.

Hi	0.000	kg	Lo	0.000	kg
A-B	0.000	B-C	0.000	C-D	0.000
				D-E	0.000

A-B means the boundary value of A and B class. It is the Hi of A and Low of B.

Goods' Lo is the same as A's Lo. Goods' Hi is the same as E's Hi.

When selecting a product, the sorting value will be set to this goods' sorting value.

#### 11.3.2.2 Modify the sorting value manually

When a user does not call goods or wants to change sorting setting, please press the sorting box, the sorting setting box will pop up.


2.0000	3.0000	4.0000	5.0000	6.0000
A	B	C	D	E
1.0000	2.0000	3.0000	4.0000	5.0000
kg	kg	kg	kg	kg

Lo	<input type="text" value="1.000"/>	A	<input type="text" value="2.000"/>	B	<input type="text" value="3.000"/>	C	<input type="text" value="4.000"/>
D	<input type="text" value="5.000"/>	E	<input type="text" value="6.000"/>	kg			
OK				Cancel			

The value of box between Lo and A is the Lo of A.

The value of box between A and B is the boundary of A and B. It is the Hi of A and the Lo of B.



Press  to go back to weighing mode, now the shorting value will change to input one.


## 12 Subtotal

Subtotal function: Add up the data quantity, total weight and total quantity of print and stored.

When subtotal has been opened in agent setting, the subtotal value and clean the subtotal value will show in the left bottom of the display.

Subtotal:1 Total:weight:0.062 kg	
M+ print	MC

A blue rectangular button with the text "M+ print" in white.

Press  to print out the add up printed number of times, weight and quantity after last cleared.

A blue rectangular button with the text "MC" in white.

This button can clear the subtotal.

Edit subtotal print format needs use total add up quantity and total add up weight.

### 13 Add up

#### 13.1 Function instruction

Add up function has no connection with common printing. Users can do add up and add up print individual.

When the Add up function is opened in agent setting, the lower left of the screen will show add up value and relevant keys.

A light blue rectangular display area showing the text "M+4 Total:weight:0.248 kg" in black.A blue rectangular button with the text "M+" in white.A blue rectangular button with the text "MR" in white.A blue rectangular button with the text "Print" in white.A blue rectangular button with the text "MC" in white.

#### 13.2 Keys

A blue rectangular button with the text "M+" in white.

This key can add up current weight or quantity.

A blue rectangular button with the text "MR" in white.

This key can show every time weight, quantity and add up total weight and quantity.

13.2.1 Reshow

Print		Print/clear	Delete	Delete all	Close
Goods name	Spec	Net weight	Tare	Gross	
1 Screw		0.062	0.000	0.062	
2 Screw		0.062	0.000	0.062	
3 Screw		0.062	0.000	0.062	
4 Screw		0.062	0.000	0.062	
5 Total		0.248	0.000	0.248	

In re-show condition, user can print out add up value.  
User can choose one of the items which need to be deleted, then press



to delete its data.



Users also can press to delete all add up value.



It means print add up value, and the delete all add up value after print.



This key is used to print add up value and delete all add up value after print.



This key can delete all add up value. After deleting,

add up value back to zero.

## 14 Stock manage function

### 14.1 Function instruction

Stock management function can store the weight stock and quantity stock for every item of the scale. It can do stock in and stock out of the warehouse and stock management.

When this function been opened in the agent setting, the lower left corner will show stock value and relevant keys.





The left is the stock value of the current item. The three keys which are on the right are stock in, stock out and Take stock.

### 14.2 keys operate

#### 14.2.1 Stock in

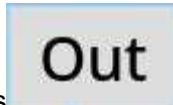
When weighting is for stock in, press , then this key will

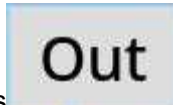
become green 

Now put on the weight item, and press , the current weight or quantity will add to the stock value of current item. At the same time, the stock value will show the latest stock value of the current item on the left.




### 14.2.2 Stock out

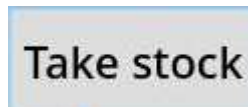


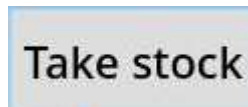
When press , this key will become to green, other two keys will become ash show.

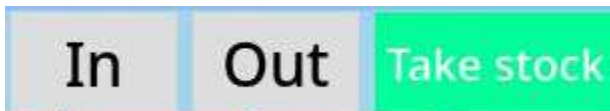



Now put on the weight item, and press , the stock value of current item will reduce the current weight value or quantity. And at the same time, the stock value of current item will show the latest stock value in the left.

### 14.2.3 Stock management



When press , this key will become green, and other two keys will become ash show.



Now put on the weight item, and press , the stock value will set to the current weight value or quantity. The stock value on the left will show the latest stock value.

### 14.3 Check the stock

When opening the stock management function, the stock value of every item will show in the choose goods interface. If users opened

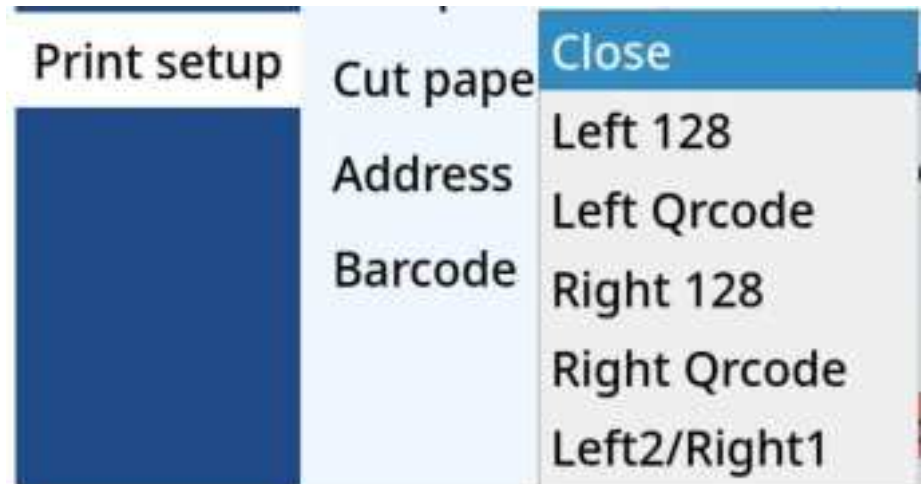


the counting mode, the stock quantity will show in here also.

Number	Name	Spec	Remark	UW	Stock
1 123456	Apple			0.000	0.000
2 2222	ပန်းသီး			0.000	0.000
3 1233	Screw	4x8		0.000	0.062

## 15 Show barcode

Users can set if open or close the barcode or QR code show in the interface.  
In the communication setting, users can choose the show way of the label.



It means do not show any barcode or QR code.



It means show the barcode in the lower left.



It means display the QR code in the

lower left.

## Right 128

It means display the barcode under the goods.

## Right Qrcode

It means display the QR code under the goods.

## Left2/Right1

It means show the QR code in the lower left and also show the barcode under the goods.

This function can show barcode and QR code at the same time, for users use different scan gun to scan.

Note: the content of barcode cannot be complex, it's weight value and unit normally.

After set code show way, users need to set the corresponding format and use HCTPubPrintEditor to edit and download format to corresponding serial number.

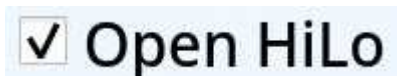
After the right set, the screen will show corresponding code after weighing stable. For example, QR code in right, and format is right, the QR code will show as follow after weighing stable.



Show QR code and barcode at the same time, the screen will show as follows:



When the code shows on the left, the Hi-Lo status show will not show. If this time a user wants to see the Hi-Lo status, user can select



. At this time, the code in the left will change color following the Hi-Lo status. For example, yellow means lower than Lo.

## 16 Connect with the scan gun

### 16.1 Scan the goods code

Users can open the scan goods function in agent setting.

Then connect the scale with scan gun, and scan the goods serial number code which is already stored in the scale, the scale will call out the corresponding item.

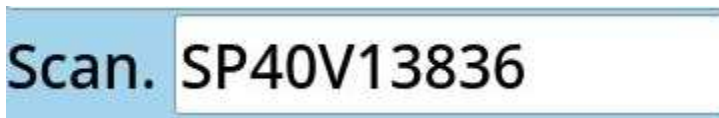
### 16.2 Scan the code and show out

Users can open the scan goods and input function in agent setting.

The below of the goods bar of scale will show the scan input box.

A screenshot of a software interface showing a blue header with the word "Scan." in white. To the right of the header is a large, empty white rectangular input box with a thin blue border.

Connect with the scan gun, scan the code, the scan input box will show the code which has been scanned, then can print out and store into the scale.

A screenshot of the same software interface as before, but the white input box now contains the black text "SP40V13836".

This scan function does not need to click the scan input box, even if the input box is in item bar, the content of scan can show in the scan input box.

## 17 User defined function

Users can open multi manual input boxes in agent setting.

And can user define the name and type of the input box, include the text box and choose box.

As follows:

A screenshot of a software interface with a blue background. It features three rows of input fields. The first row is labeled "Client" and contains the text "Huawei". The second row is labeled "Order" and contains the text "li". The third row is labeled "Group" and contains the text "03". Each input field is white with a blue border and has a small blue downward-pointing arrow on its right side, indicating a drop-down menu.

In this example, customer, order number and batch number all are the user defined name.

Behind the input box is text input, users also can press the drop-down box

to choose the type of the value.

Group is also the use defined name.

The input box here all are choose boxes, user just can choose, cannot input, in order to avoid user input wrong value.

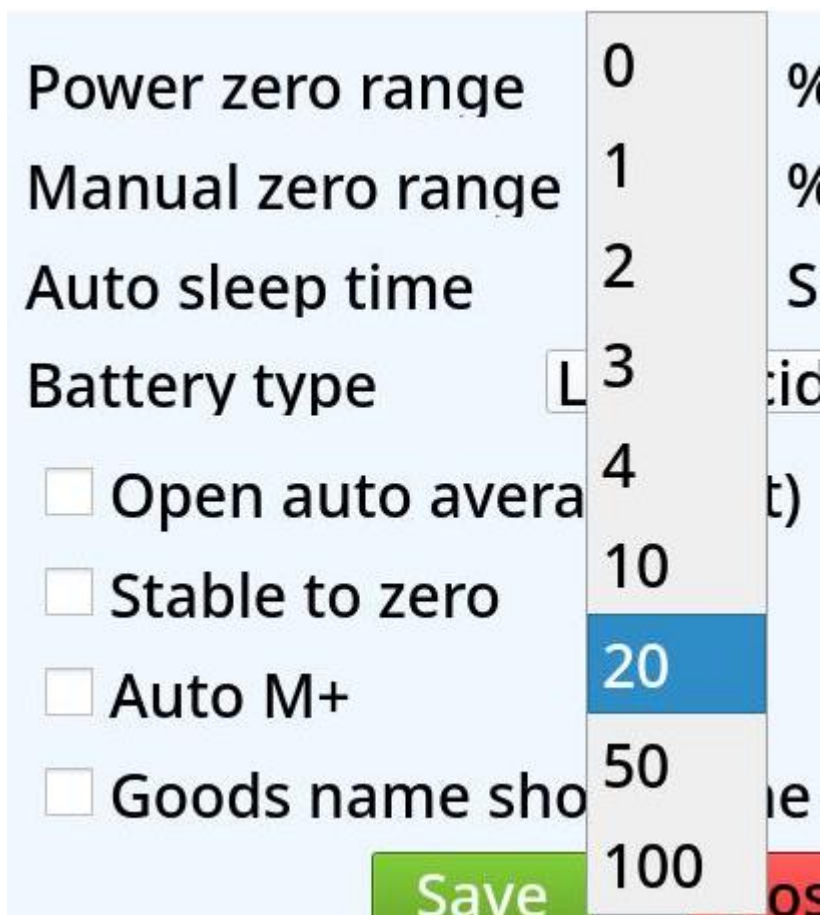
The value which users can chose is set in user setting.

## 18 Power on zero

Under the default settings, scale will back to zero automatically. The default zero range is  $\pm 20\%$  of last calibration zero. If the range is exceeded this range, the scale will not back to zero and use the last calibration zero value as current zero value.

If a user wants to show the last weight value when power is on, please set the power on zero range to 0 in user setting.

Power zero range  %



## 19 zero



When the pan is empty, press **Zero** key to let the display weight value back to zero. If the scale is broken or weights heavy than allowed zero range, this key is invalid. If the display has rest weight value when the pan is empty, please use this function. Zero range= Max. Cap. X4%.

Zero range can be set in user settings.

Manual zero range  %

And zero function is limited to



Stable to zero

setting which is in


parameter setting.

If user cannot find zero manually, please check the manual zero range in settings. And if opened the zero tare after scale weighing stable function, please check if the weighing is stable or not.

## 20 Tare

### 20.1 Tare weight is known




Press  key, Tare weight input window will pop-up, please input the tare weight. Then press [confirm], the scale will reduce that tare weight value automatically.

Tare	<input type="text"/>			kg
1	2	3	<-	
4	5	6		
7	8	9	OK	
.	0	Clear	Close	



## 20.2 Tare weight is unknown



Put the container on the pan, press  key, after stable, the weight window will show net weight and tare symbol.

When weight value is negative, user cannot tare.

And tare function is limited to




setting which is in parameter setting.

If user cannot find zero manually, please check the manual zero range in settings. And if opened the zero tare after scale weighing stable function, please check if the weighing is stable or not.

## 21 Choose units

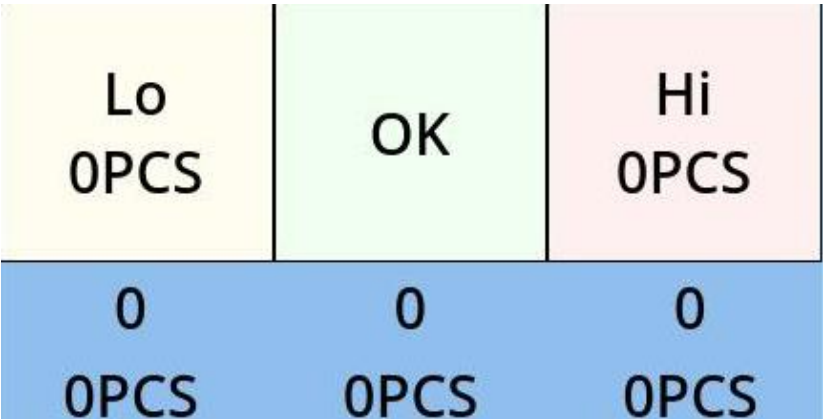


If the units are not the suitable one, press  key to choose the right units. The new units will be stored after the correct power is off.

The units which can be used are set in the user settings.

**22 Counting function (Option)**

22.1 Users need to open counting function is agent setting.  
The weighing interface will become counting mode after counting function been opened.



22.2 Unit weight of goods is known  
Set the unit weight in item edit step, Choose the unit weight by select goods.


22.3 Common counting function  
Press the unit weight bar, counting function window will pop-up.

Count

1	2	3	<-
4	5	6	PCS Set
7	8	9	UW Set
.	0	Clear	Close

### 22.3.1 Unit weight is known



Input the known weight of weights, press , the quantity display will show the counts. At this time, the scale enters into the counting mode automatically.

22.3.2 Unit weight is unknown

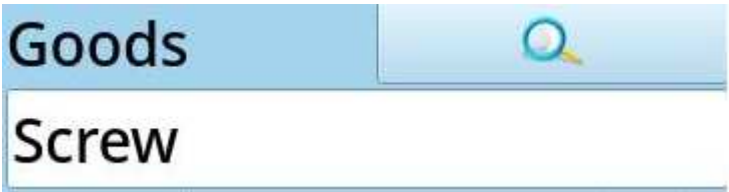
Put the sample weights on the pan, use the number keys to



input the counts of sample, press key. After the weight value is stable, the quantity window will show the counts of weight.

23 Select and edit goods

23.1 Show and select goods



23.1.1 Common goods select mode



Press will pop up item choose box, press the right goods, then



press key to back to weighing interface, the item will show in the item bar.

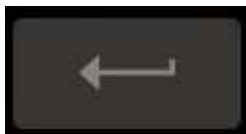
Add	Edit	Export	Delete	Delete all	Search	OK	Close
Number	Name	Spec	Remark	UW			
1 123456	Apple			0.000			
2 2222	уфас			0.000			
3 1233	Screw	4x8		0.000			

23.1.2 Quickly call out goods mode

Input the item serial number in weighing box directly, as follow:

A screenshot of a software interface with a light blue header. On the left, the word 'Goods' is displayed in a large, bold, black font. To its right is a white rectangular input field containing the number '123456'. Further to the right is a magnifying glass icon, indicating a search function.

Then press the backspace key 输入完成后点击键盘的回车键



, the item name will show in the item bar.

A screenshot of the same software interface. The word 'Goods' is on the left. The input field now contains the word 'Apple'. The magnifying glass icon remains on the right.

23.1.3 In item choose interface can edit item directly.

Add	Edit	Export	Delete	Delete all	Search	Ok	Close
Number	Name	Spec	Remark	UW			
1 123456	Apple			0.000			
2 2222	уага			0.000			
3 1233	Screw	4x8		0.000			

23.1.4Add

Can add goods.

The add new item window will pop up after press.

A screenshot of a window titled 'Add new Goods'. It contains several input fields for data entry. At the bottom are 'OK' and 'Cancel' buttons.

Num.	<input type="text"/>	Name	<input type="text"/>
Spec	<input type="text"/>	Remark	<input type="text"/>
UW	<input type="text"/> g	Tare	<input type="text"/> kg
Hi	<input type="text"/> PCS	Lo	<input type="text"/> PCS
Stock	<input type="text"/> kg	PCS stock	<input type="text"/> PCS
A-B	<input type="text"/>	B-C	<input type="text"/>
C-D	<input type="text"/>	D-E	<input type="text"/>

Number used to manage goods. If the scan goods function has been opened of scan gun, the code which been scanned is item number.

Name will show in the item window of weighing interface.

Unit weight is the known unit weight in counting mode. If the unit weight is unknown, it can stay blank or be set to 0.

Tare weight is the tare weight of packed item. If item does not have, can rest to blank or set to 0.

Hi limit is the allow high limit of goods when Hi-Lo function is opened. In counting mode, the unit is PCS, otherwise it will be the same unit as capacity and division unit which are set in Dealer setting.

Weight stock is the stock weight which already has goods.

quantity stock is the stock quantity which already have of goods.

Weight stock and quantity stock will be shown when user opened the stock manage function in agent setting.


A-B,B-C,C-D,D-E are select value, please get more information in 11.3.2.

The user can open 2 user defined variables function in agent setting, like color and so on.



After input all, press  will show new added goods in goods interface.

23.1.5edit

Choose the goods which need to be edited, press  can do item edit.

Item edit interface as follows:



Edit							
Num.	1233		Name	Screw			
Spec	4x8		Remark				
UW	0.000	g	Tare	0.000	kg		
HI	0.000	PCS	Lo	0.000	PCS		
Stock	0.062	kg	PCS stock 0	PCS			
A-B	0.000	B-C	0.000	C-D	0.000	D-E	0.000
				OK		Cancel	

Number cannot be edited, other functions are the same as add new item.

23.1.6Delete

Select the goods which need to be edited, press [Edit] to edit the item information.

23.1.7Export

Insert the U disk, user can export the current data into the U disk. This file can be opened by Excel.  
After the press will come out follow window.  
USB disk choice will appear after U disk been inserted.

Export file

/mnt

Root directory.

Superior directory..

USB disk

File name

Goods

OK

Cancel

Press confirm will point out export success, after this step then can remove the U disk.

### 23.1.8Search

Input the keyword, such as number, goods name, specification, remark, then press search.

For example, input screw,

Screw

Search

The press **Search** , the item bar will show the content which include screw.

	Number	Name	Spec	Remark
1	1233	Screw	4x8	




### 23.1.9OK

Select one item, press , the interface will back to common mode and show this item.

## 24 Print

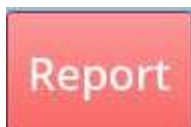


press  can print out the current data and store this data into the scale.

Note: print function is limited to print settings which are in communication settings. If the condition is suitable, the scale will inform store success. If the store is failed, please check the related settings.

## 25 Check the record



Press  can check the print record, see follow picture:

Report	Day	Month	statistics	Day	Month	Close
08-10-2021	-	08-10-2021	Reprint	Export	Delete	Delete all
Date	Time	Id	Goods	Weight kg	UW	Number
1	08-10-20...	09:46:10	19	Screw	0.186	0.000
2	08-10-20...	09:46:11	20	Screw	0.186	0.000
3	08-10-20...	09:46:12	21	Screw	0.186	0.000
4	08-10-20...	09:56:30	22	Screw	0.062	0.000
5	08-10-20...	10:01:11	22	Screw	0.062	0.000
6	08-10-20...	10:41:09	22	Apple	0.000	0.000
7	08-10-20...	10:41:13	23	Apple	0.064	0.000
8	08-10-20...	10:41:14	24	Apple	0.062	0.000
9	08-10-20...	11:01:57	22	Screw	0.000	0.000
10	08-10-20...	11:01:57	23	Screw	0.000	0.000

Report interface can choose standard report, daily report, monthly report, and standard statistics, daily statistics, monthly statistics and so on mode. Report mode is the original print record.

The statistics mode, the printed records are counted according to certain rules, not the original printed records.

## 25.1 Standard report



In standard report mode, users can choose date range, press

**08-10-2021**

will pop up the date selection window.



After selection, press OK to confirm.

After the start date and end date are selected, need to press



to refresh the data.

## 25.2 Daily report


Daily reports are different with standard reports, it just shows one day's data, the interface as follows:

Report	Day	Month	statistics	Day	Month	Close
08-10-2021	Today	Reprint	Export	Delete	Delete all	
Date	Time	Id	Goods	Weight kg	UW	Number
1 08-10-20...	09:46:10	19	Screw	0.186	0.000	3.0
2 08-10-20...	09:46:11	20	Screw	0.186	0.000	3.0
3 08-10-20...	09:46:12	21	Screw	0.186	0.000	3.0

In daily report interface, it just has one date choose box, data bar just shows one day's data which has been chosen. Press

**Today**

can back to today quickly.

After choosing the date, user needs to press  to refresh the data.

## 25.3 Monthly report


Monthly reports are different to standard reports, it just shows one month's data, the interface as follows:

Report	Day	Month	statistics	Day	Month	Close
2021-10 < his Mo >			Reprint	Export	Delete	Delete all
Date	Time	Id	Goods	Weight kg	UW	Number
1 08-10-20...	09:46:10	19	Screw	0.186	0.000	3.0
2 08-10-20...	09:46:11	20	Screw	0.186	0.000	3.0
3 08-10-20...	09:46:12	21	Screw	0.186	0.000	3.0

User can use   choose the month, press

**this Mo**

can back to current month quickly.

After set the month, the user also need press  to refresh the

data.

#### 25.4 standard statistics

Standard statistics are the same as standard report, can choose the start date and stop date.

Report	Day	Month	Statistics	Day
08-10-2021	-	08-10-2021	Export	
<input checked="" type="checkbox"/> Goods	<input checked="" type="checkbox"/> HiLo	<input type="checkbox"/> Client	<input type="checkbox"/> Order	<input type="checkbox"/> Group <input type="checkbox"/> In/Out
Goods	Weight	Number	result	Count
1 Apple	0.128	0	NG	3
2 Screw	0.000	0	NG	2
3 Screw	0.560	0	LO	3
4 Screw	0.124	0	HI	2
T Total	0.812	0		10

Statistics interface do not have delete function, because it shows not original data, but according to certain rules of statistic data.

25.4.1 For example, statistics by item, user can choose item then

press  to refresh.

<input checked="" type="checkbox"/> Goods	<input type="checkbox"/> HiLo	<input type="checkbox"/> Client	<input type="checkbox"/> Order	<input type="checkbox"/> Group	<input type="checkbox"/> In/Out
---	-------------------------------	---------------------------------	--------------------------------	--------------------------------	---------------------------------

	Goods	Weight	Number	Count
1	Apple	0.128	0	3
2	Screw	0.682	0	7
T	Total	0.810	0	10

The data list will add up the same item's data to together, such as weight value, quantity, and so on.

At the same time, show the total data of all items.

#### 25.4.2 Statistics by Hi-Lo


<input checked="" type="checkbox"/> Goods	<input checked="" type="checkbox"/> HiLo	<input type="checkbox"/> Client	<input type="checkbox"/> Order	<input type="checkbox"/> Group
Goods	Weight	Number	result	Count
1 Apple	0.128	0	NG	3
2 Screw	0.000	0	NG	2
3 Screw	0.560	0	LO	3
4 Screw	0.124	0	HI	2
T Total	0.812	0		10

The data list will add up the same item's data and their Hi-Lo results together.

#### 25.4.3 If the user opened the user defined variable function, then can do statistics follow user defined variable.

<input checked="" type="checkbox"/> Goods	<input checked="" type="checkbox"/> HiLo	<input checked="" type="checkbox"/> Operator	<input type="checkbox"/> Client	<input type="checkbox"/> Order	<input checked="" type="checkbox"/> Group
Goods	Weight	Tare	result	Group	User Count
1 Apple	0.128	0.000	NG	03	Admin 3
2 Screw	0.000	0.000	NG	03	Admin 2
3 Screw	0.560	0.000	LO		Admin 3
4 Screw	0.124	0.000	HI		Admin 2
T Total	0.812	0.000			10

<input checked="" type="checkbox"/> Goods <input checked="" type="checkbox"/> HiLo <input type="checkbox"/> Client <input type="checkbox"/> Order <input checked="" type="checkbox"/> Group <input type="checkbox"/> In/Out						
Goods	Weight	Number	Result	Group	Count	
1 Apple	0.128	0	NG	03	3	
2 Screw	0.000	0	NG	03	2	
3 Screw	0.560	0	LO		3	
4 Screw	0.124	0	HI		2	
T Total	0.812	0			10	

25.4.4 After choose the statistical rule, users need to press  to refresh the data.

## 25.5 daily statistics


daily statistics are different to standard statistics, it just shows one day's date as follow:

Report	Day	Month	Statistics	Day	Month	Close
08-10-2021	Today	Export				
<input checked="" type="checkbox"/> Goods <input checked="" type="checkbox"/> HiLo <input type="checkbox"/> Client <input type="checkbox"/> Order <input type="checkbox"/> Group <input type="checkbox"/> In/Out						
Goods	Weight	Number	Result	Count		
1 Apple	0.128	0	NG	3		
2 Screw	0.000	0	NG	2		
3 Screw	0.560	0	LO	3		
4 Screw	0.124	0	HI	2		
T Total	0.812	0		10		

In daily statistics interface, it just has one date choose box, data bar just shows one day's data which has been chosen. Press

**Today**

can back to current date quickly.




After chose the date, user need to press  to refresh the data.


## 25.6 Monthly statistics

Monthly statistics are different from standard statistics, it just shows

one month's data, the interface as follows:

Report	Day	Month	Statistics	Day	Month
2021-10	<	this Mo	>	Export	
<input checked="" type="checkbox"/> Goods	<input checked="" type="checkbox"/> HiLo	<input type="checkbox"/> Client	<input type="checkbox"/> Order	<input type="checkbox"/> Group	<input type="checkbox"/> In/Out
Goods	Weight	Number	result	Count	
1 Apple	0.128	0	NG	3	
2 Screw	0.000	0	NG	2	
3 Screw	0.560	0	LO	3	
4 Screw	0.124	0	HI	2	
T Total	0.812	0		10	

User can use   choose the month, press  can back to current month quickly.

After set the month, the user also need press  to refresh the data.

## 25.7 Re print

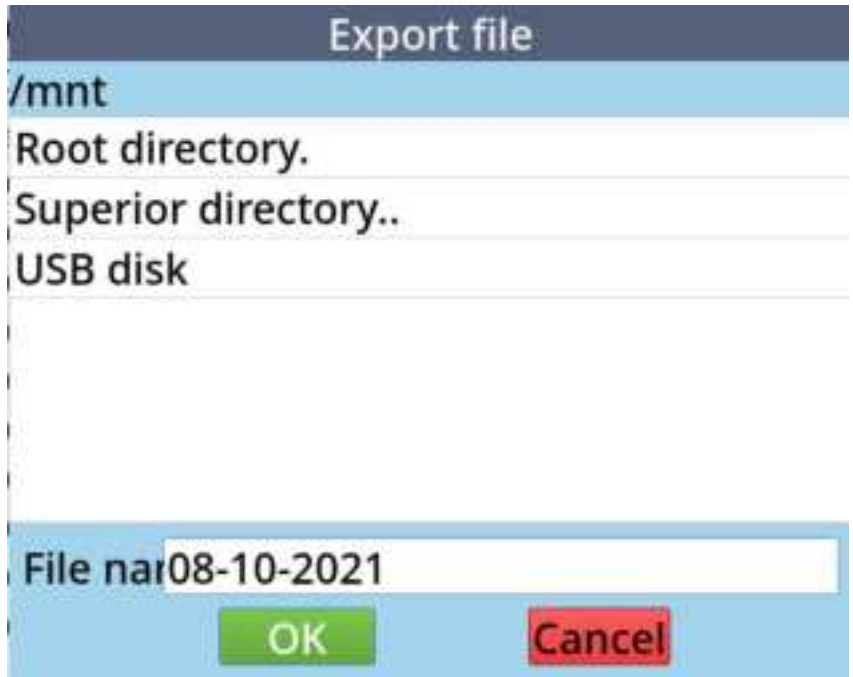
In report show mode, use can choose the date which need to re print,

then press  key can re print the stored data.

## 25.8 Export

Insert the U disk, user can report the current showing data to U disk, open by excel.

Report and statistics mode all can export data.



Press ok will inform export succeed, then can remove the U disk.

## 25.9 delete

Choose the item, press **Delete**, user can delete the corresponding item. This deleted data cannot be recovered.  
In statistics mode, users cannot do delete.

## 25.10 Delete all

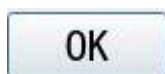
Press **Delete all** about 3 seconds, the delete all data

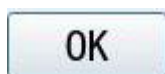




window

will pop up.

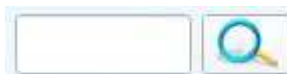


Press  will delete all data, include all stored data, not current showing data, please use with caution.


## 25.11 searching

In every report interface, include statistics interface, users can input

the key words into



which want to search

by. Then press  to search for the item which includes the key words input.

At the same time, users can choose the date range too.

For example, input wire, the showing as follows:

Report	Day	Month	Statistics	Day	Month	Close	
08-10-2021	-	08-10-2021	Reprint	Export	Delete	Delete all	Screw
Date	Time	Id	Goods	Weight kg	Tare	Gross	Hi
1 08-10-20...	09:46:10	19	Screw	0.186	0.000	0.186	3.000
2 08-10-20...	09:46:11	20	Screw	0.186	0.000	0.186	3.000
3 08-10-20...	09:46:12	21	Screw	0.186	0.000	0.186	3.000
4 08-10-20...	09:56:30	22	Screw	0.062	0.000	0.062	0.000
5 08-10-20...	10:01:11	22	Screw	0.062	0.000	0.062	0.000
6 08-10-20...	11:01:57	22	Screw	0.000	0.000	0.000	0.000
7 08-10-20...	11:01:57	23	Screw	0.000	0.000	0.000	0.000

26 Parameter setting



In weighing interface press will pop up setting menu.



Press can enter into parameter setting. The window is as follows:

The column on the left is setting classification. It includes unit setting, function setting, Hi-Lo setting, variable edit, backup restore.

## 26.1 Unit setting

### Unit set

Press **Unit set** in the left, the unit-setting interface will show out, as follow:

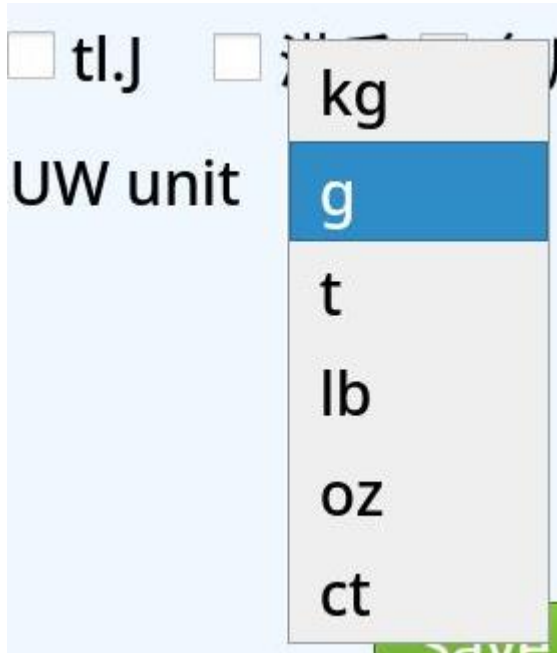
Above is unit switch setting. Tick the unit which needs to use. Remove the tick for the unit which does not need to be used. For example, users need to use kg, tick it. Users do not need to use g, remove the tick in front of it.

Unit

Just the unit which ticked can be chose by

key.

Unit weight unit is the unit which unit weight use, default unit is g, user can it change when needed.



## 26.2 Function setting

Function

Press the function setting interface will show out, as follow:

The image shows a settings interface with the following elements:

- Power zero range**: 20 %
- Manual zero range**: 4 %
- Auto sleep time**: OFF S
- Battery type**: Lead-acid
- Brightness**: A vertical slider on the right side of the screen.
- ☐ **Open auto average (cnt)**
- ☐ **Stable to zero**
- ☐ **Auto M+**
- ☐ **Goods name show alone**
- Save** (green button)
- Close** (red button)

### 26.2.1 brightness

Slide the slider to set the brightness of the back light. The brightness of backlight can change.

### 26.2.2 Automatic sleep time

This function is used to set the length of time to control the back light turns dark. For example, this parameter is set to 12, it means the back light turns dark after 12s. But it needs the indicator do not operate and the weight value does not change. If the indicator operated or the weight value changed, the back light will recover. If it set to OFF, it means the back light will keep the set brightness and never become dark.

The setting details are as follows:

Power zero range	OFF
Manual zero range	6
Auto sleep time	12
Battery type	18
<input type="checkbox"/> Open auto average	24
<input type="checkbox"/> Stable to zero	30
<input type="checkbox"/> Auto M+	36
<input type="checkbox"/> Goods name show	42
	48

Save

#### 26.2.3 power on zero range

It is the difference between power on zero and calibration zero range, that scale can allow to zero. The default difference is 20%.

More details please refer to point 18.

#### 26.2.4 Manual zero range

It is the difference between manual zero and power on zero, that scale can allow to zero. In this range, manual zero is

effective. The default difference is 4%.

More details please refer to point 19.

#### 26.2.5 Automatic averaging

### ☐ Open auto average (cnt)

This function means in counting mode, sample by quantity, if the add weight in follow range: in 10%-200% of last weight value. For example, the last quantity in pan is 100 pieces, add 10-200 pieces. Scale will count by new quantity and weight, at this time, the scale will beep once, and the unit weight will change.

This function will rise by counting accuracy when unit weight is unknown. But please note, every added quantity must be between 10%-200% of last weighing.

#### 26.2.6 Tare and zero after stable

### ☐ Stable to zero

It means user can tare and zero after weighing is stable, the stable sign need appear.

#### 26.2.7 Automatic add up

### ☐ Auto M+


Open is function, after weighing is stable, scale will add up current weight and quantity.

Note: next add up require the weight value back to zero, it means user need remove former weights from the pan, after scale stable, then put on new weights, scale stable, then add up automatically.

Users can open automatic add up function in agent setting.

## 26.3 Hi-Lo function

# HiLo

Press  will show Hi-Lo setting interface as follows:

- ☐ Open HiLo
- ☐ Alarm needs stability
- ☐ Zero alarm
- ☐ Negative alarm

## 26.3.1.1 Open Hi-Lo alarm

This function controls the alarm open and close. The showing of Hi-Lo status and the replay status will not be affected.

## 26.3.1.2 Alarm when weighing value is negative 允许负数报警

Tick, it means scale will alarm when weighing value is negative.

## 26.3.1.3 Alarm when weighing value is zero

Tick, it means scale will alarm when weighing value is zero.

## 26.3.1.4 Alarm when weighing value is stable

Tick, it means scale will alarm when weighing value is stable. If scale is not stable, the alarm will not work. Hi-Lo status, beep, replay all been closed, rework after scale is stable.

## 26.4 Variable edit

If the user opened the user defined variable function (point 17user



# Variable

defined input function), press **will**  
show variable edit interface as follows:


Client		Order		Group	
Add	Delete	Add	Delete	Add	Delete
Xiaomi		li		03	
Huawei		002		02	
		003		01	
		001			

**Add**

Input the content into the variable box, press **Add**, the  
added content will show under the box.

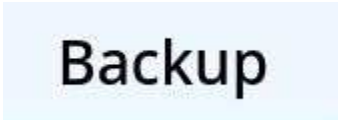
Client	
Xiaomi	
Add	Delete
Xiaomi	
Huawei	

After add all, the input box will include the content which added,

press  will show as follows:



## 26.5 Restore and back up

Press  will show restore and back up interface as follows:



### 26.5.1 restore

Restore data needs insert USB disk, then press restore will create restore directories and files in USB disk automatically. After restore succeed, the message “restore succeed” will pop up.



### 26.5.2 Back up

Insert the USB disk which has restore files, press back up, the data of scale will back up to the data which restored, include settings and stored data.

## 27 Communication

### 27.1 setting



Press  , then press  in the pop-up window can enter into communication setting as follow:

Comm1	Mode	Response
Comm2	Baud	9600
build print	Protocol	0
Print setup	Paper cut	Close
		Save Close

27.2 Serial port1, Serial port2, Serial port3

The settings for 3 serial ports are the same.  
With built-in printer model, serial port3 name is built-in printer, its setting is the same as common serial port.  
With blue-tooth model, serial port3 name is blue-tooth, its setting is different than common serial port.  
Interface as follows:

Mode	Response ▾
Baud	9600 ▾
Protocol	0 ▾
Paper cut	Close ▾

### 27.2.1 Mode

Include close, continues sending mode, stable sending mode, Response mode, key sending mode, print mode.

Mode	Close
Baud	Continuous
Protocol	Stable
Paper cut	Response
	Manually
	Print mode

#### 27.2.1.1.1 close

Close this serial port.

#### 27.2.1.1.2 continues sending mode

It means scale will sending weighing data continually, please check details in communication manual.

#### 27.2.1.1.3 Stable sending mode

It means scale will sending weighing data after weighing stable. The data format is the same as continues sending mode.

#### 27.2.1.1.4 response mode

It means scale will not send data except get order. Please check the details in communication manual.

#### 27.2.1.1.5 Manual sending mode

In weighing mode, scale will send one group of data after press print key. The data format is the same as continues sending mode.

#### 27.2.1.1.6 Print mode

It means the different mode of printer connection. The print format is the corresponding print format.

Print mode includes auto print after stable, manual print. Please check details in print settings.

### 27.2.1.2 Baud rate

Users can choose baud rate here, highest is 11520, and the default is 9600. This baud ray needs the same as PC or printer's baud rate, then can communicate normally.

Mode	1200
Baud	2400
	4800
Protocol	9600
Paper cut	19200
	38400
	56000
	57600
	115200

#### 27.2.2 Protocol

When communication format is set to print mode, this parameter is print format.

0-4 are built-in printer's print format. 5-10 are user defined print format. Use PC or cellphone download print format to the scale, the serial number 1 refers to here's protocol 5, and so on.

#### 27.2.3 Paper cut

It means when users use the printer which has cut paper function, can set if need paper cut here.



Set to close means no need to cut.

Set to normal means connected with common printer with cut paper function, need cut paper after print.

Set to GpXXXX means connected with Gprinter with cut paper function, need cut paper after print.

### 27.3 Bluetooth

Here's bluetooth is the blue-tooth of host mode, usually connect with blue-tooth printer.

## Bluetooth

Press the Bluetooth setting interface will show. As follows:

Open 58:63:56:5B:EB:97

Bluetooth host

Protocol 5

Paper cut Close

Connect bluetooth Disconnect

connection NULL

Save Close

The left upside is blue-tooth switch. It needs open and the right side already shown the scale's blue-tooth mac address, the blue-tooth function can be used.

Open or close blue-tooth need press save and restart the scale can be used.

#### 27.3.1 Data protocol

Communication is the print format which connects with blue-tooth printer. The details are the same as serial port setting.

#### 27.3.2 Cut paper

It means when users use the printer which has cut paper function, can set if need cut paper here. The details are the same as serial port setting.

#### 27.3.3 Connect to blue-tooth equipment

Press connect to Bluetooth equipment can pop up the blue-tooth connection interface as follows:





#### 27.3.3.1 search

The scale will search Bluetooth devices around, and the blue-tooth Settings will be displayed below.

Users can search for blue-tooth 2.0 and Blue-tooth 4.0(BLE)

```
00-20-06-11-04-4C[SPP]
00:20:06:11:04:4C
0C-3C-D3-8B-5E-CB[SPP]
0C:3C:D3:8B:5E:CB
4F-A7-7A-14-D0-0A[BLE]
4F:A7:7A:14:D0:0A
6F-8B-1C-66-63-98[BLE]
6F:8B:1C:66:63:98
```

equipment.

Blue-tooth name followed with [SPP] is blue-tooth 2.0equipment.

Blue-tooth name followed with [BLE] is blue-tooth 4.0equipment.

Blue-tooth name followed with [paired] is blue-tooth 2.0equipment and paired already.

#### 27.3.3.2 Stop search

Press **Stop search** to stop searching for blue-tooth equipment.

#### 27.3.3.3 connect

Choose the equipment, which need to be connected, press

# Connection

can connect with the scale.

Please note the equipment needs to be the one which can be connected with. Here is refer to blue-tooth printer in normal.

If the equipment is blue-tooth 2.0, and has not been paired, pair window will pop up as follows:



Now input the PIN, normally, the PIN is 0000 or 1234 usually. Press OK after input, if the pairing is succeeded, it will show connected and run connection.

If the equipment is already paired or the equipment is blue-tooth 4.0[BLE], users no need to run pairing, press connect, the connection will run directly.

It will show the following picture after pairing succeed.

**Bluetooth device is connected!**

and the Mac address will show under the blue-tooth setting window.

**connection 98:D3:31:30:11:FD**

27.3.3.4 close

Close the serial port of blue-tooth equipment.

27.3.4 disconnect

After press the connected equipment will cut down connection.

If the blue-tooth equipment can connect with one host, it needs cut

down the connection first, then connect to another host.

## 27.4 Internet connection

If the scale has Wi-Fi module or Ethernet module,



will appear. Press it will pop up internet connection window.

27.4.1 Wi-Fi module's interface is as follows:



Press search, if there is a Wi-Fi hot-point around, the below list will show the related hot-point name and signal strength.




Input the password, press will start to connect.

If connect is succeed, here will show:



If connect failed, please press again.

And also can restart scale, if the sign of Wi-Fi change to  , it means the connect succeed.

If users need to set static IP, please tick

☐ Static IP

Enter the IP address, sub-net mask, and default gateway in the following text box. The sub-net mask and default gateway must be the same as the connected router, and the IP address and default gateway must be on the same network segment.

For example, if the sub-net mask is 255.255.255.0 and the default gateway is 192.168.0.1, the IP address can be 192.168.0.2-192.168.0.255. In addition, the IP address cannot conflict with other devices on the network.

27.4.2 Ethernet interface as follows:

☐ Static IP

IP

0 · 0 · 0 · 0

Mask

255 · 255 · 255 · 0

Gateway

192 · 168 · 0 · 1

Connect

Disconnect

Close

Ethernet module plugs in Internet, the network is automatically connected, usually an Ethernet interface on said it

had connection (generally for the green light or orange light), there is another light flash means data transmission (generally for yellow light).

Therefore, user can set only static IP address. The specific Settings are the same as those of the Wi-Fi version.

## 27.5 Network sever

The network server requires other devices such as computers to actively connect to the electronic scale.

# Server

Press  will show network server setting interface as follow:

Server mode	Close
Server protocol	5
This IP	192.168.0.122
Server port	55555

### 27.5.1 Sever mode

Include close, continues sending mode, stable sending mode, response mode, key sending mode, print mode.

Close mode, the scale does not create a network server. It can be closed when not in use, which can reduce CPU usage and improve the reaction speed of electronic balance.

Please check details refer to 27.2.

### 27.5.2 Server Protocols

Communication format. When set to print mode, this parameter is print format.

Please check details refer to 27.2.

### 27.5.3 Local IP

It is the IP address currently obtained by the scale. If the IP address is 127.0.0.1, it means that the network is disconnected and cannot be used.

### 27.5.4 Server port

Port used by the local machine created server.

The network server needs other equipment such as PC to actively connect the scale, and the IP address and port of the server need to be set during the active connection, which corresponds to the local IP address and server port here.

## 27.6 Network client

Network clients are the scale do actively connect to other servers, such as a computer create a network server, scale do actively connect to the computer to create the network server.

# Client

Press  will show network client interface as follows:

Client protocol Continuous ▾

Client 5 ▾

Connect IP  Port 55556

Heartbeat interval Close ▾ S

Close ▾ Times reconnect if not detected

#### 27.6.1 Client mode

Include close, continues sending mode, stable sending mode, response mode, key sending mode, print mode.

Close mode, the scale does not create a network server. It can be closed when not in use, which can reduce CPU usage and improve the reaction speed of electronic balance.

Please check details refer to 27.2.

#### 27.6.2 Client protocol

Communication format. When set to print mode, this parameter is print format.

Please check details refer to 27.2.

#### 27.6.3 Connection IP

It's the IP address of the network server to connect to, such as the local IP address of the computer that created the network server.

#### 27.6.4 Port

It's the port of the network server to connect to, such as the server port set when the computer created the network server.

#### 27.6.5 Heartbeat Packet Interval

For some network connections, such as Wi-Fi, the router will disconnect the connection when there is no communication for a period of time, but the scale and the network server cannot sense it immediately.

Or some servers will disconnect when they have not received data for a period of time. In this case, scales may not be able to sense it immediately

Or some server software shuts down by mistake, and the network connection is disconnected, but the scale does not immediately sense it.

In order to guarantee the stability of the connection, the network client mode can open the heart package, timing send a set of data to the server, in order to keep the connection, the data content generally for hexadecimal 02, hexadecimal 02 means the starting of data of the scale default communication protocol, but there is no substance in the packet, so the server client can ignore this data, also can send the package back to the scale.

Heartbeat packet interval Setting is used to set the interval to which scale sends heartbeat packets. The unit is second. You can set the interval as required.

If it is not required, it can be set to off. If it is required, it can be set to 30 seconds.

In the continuous sending mode, the heartbeat packet function is disabled because the continuous sending mode has been continuously sending data, and the heartbeat packet function is meaningless.

#### 27.6.6Active Re-connection



Close Times reconnect if not detected

In complex networks, the server can be required to send the received heartbeat packets back to the electronic scale. The




scale can determine whether the heartbeat packet is received. If the heartbeat packet is not received for several times, the network connection may be disconnected, and the electronic scale will reconnect to the configured server.

If user does not use it, user can close it. If user needs to start it, user can set the number of times according to the network situation. For example, if the value is set to 3, heartbeat packets are sent for three consecutive times, but the scale still does not receive heartbeat packet data from the server. In this case, the electronic scale considers that the network connection has been disconnected and reconnects to the server.

## 27.7 Print setting

# Print setup

Press  will show print setting interface as follows:

Print mode	Manual ▾	None ▾	Hilo print
Control	Unlimited ▾	<input type="checkbox"/> Tare after print	
USB protocol	5 ▾	Format manage	
Cut paper	Close ▾	USB Host(to device) ▾	
Address	0	Scale ID	123
Barcode	Close ▾	Format	6 ▾

### 27.7.1 Print mode



Print mode can be set to manual print or automatic print.

#### 27.7.1.1 Manual Print

Press print key will print once.

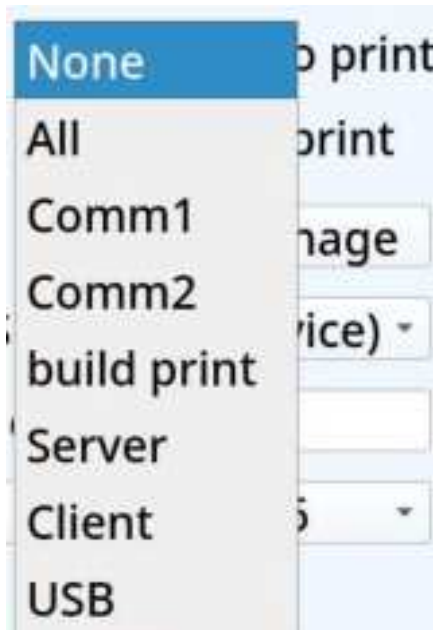
27.7.1.2 Automatically print means scale will print once after weighing stable. Next print needs remove the weight from then pan, and the weighing value back to zero, then put on weights, after stable it will print automatically.

27.7.1.3 Store weighing data been control by print mode too, it will store once when print once.

### 27.7.2 Qualified print

Qualified print means when user opened the Hi-Lo function, weight value or quantity is in qualified range, print will be

allowed. Manual print and automatically printer all been control by this setting.



User can set to:

- None means print and store do not control by Hi-Lo function.
- All means, all ports which are set to print mode need weight value or quantity is in qualified range, then can print, include store data.
- Other settings, such as serial port1, it means that port which is set to print mode need weight value or quantity is in qualified range, then can print. Other serial ports do not have affect, include store data.

#### 27.7.3 Print control

Control	Unlimited
USB prot	Back zero
Cut pape	Weight change

- Unlimited means whatever the weight value backed to zero or not, changed or not, scale can do print.
- Weight value back to zero means before next print needs remove all the weights, wait for the weight value back to zero, and put weights on the pan, then can print.
- Weight change means next print no need to wait for weight value back to zero, just weight value changed, then can print.
- In some cases of fast weighing, it is impossible to place a new item before the last weight value is returned to 0, so it cannot be set to weight value back to 0 then print but can only be set to weight value changed or set to unlimited.

#### 27.7.4 Tare after print

### ☐ Tare after print

This function means that tare is automatically after each printing. This function can be used for batching or incremental weighing functions. For example, put a container, press zero, and then add material to the container, and then print automatically or manually, and then automatically tare, and the net weight becomes 0, and then continue to add material to the container, and then print automatically or manually. At this time, the printed

net weight is the weight of the newly added material, and the gross weight is the weight of all materials in the container.

27.7.5USB printer protocol

USB protocol

5

It means the print protocol used when connected with the USB printer.

The details are the same as serial port setting.

27.7.6 Format manage

Press

Format manage

will pop up

the format manage interface. In this interface, user can delete or import format.

	Format	Single	Single	M+	M+
1	5	Delete	Import	Delete	Import
2	6	Delete	Import	Null	Import
3	7	Null	Import	Null	Import
4	8	Null	Import	Null	Import
5	9	Null	Import	Null	Import
6	10	Null	Import	Null	Import
7	11	Null	Import	Null	Import
8	12	Null	Import	Null	Import

Close

- The format column corresponds to the protocol of the serial port or printer Settings.
- The first single column can delete the format existing in the electronic scale. If user can do deletion, it means that the format of this number is in the scale. When setting the protocol of serial port or protocol, user should select the

format existing in the scale, that is, the format with the word "delete" appearing here.

- The second single column can import format from a USB disk. Note if the format is 5, the name of the printed format in the USB flash drive should be 0. Bin, which is 6. The print format name should be 1.bin. And so on.

The print format file should be placed in the root directory of the USB drive, and this file can be generated by using the export function of the print format editor.

- The first M+ column can delete the format existing on the scale. If user can do deletion, it means that the format of this number is in the scale. When setting the protocol of serial port or protocol, user should select the format existing in the scale, that is, the format with the word "delete" appearing here.

This format is used for add up or subtotal printing. The add up print format does not conflict with the single print format. The same print number can have both the single print format and the add up print format.

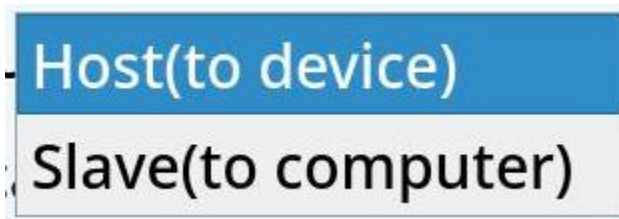
It will appear here only if it is set to the format for add up printing and downloaded successfully in the label editor.

- The second M+ column can import format from a USB disk. Note if the format is 5, the name of the printed format in the USB flash drive should be 10. Bin, which is 6. The print format name should be 11.bin. And so on.

#### 27.7.7 Cut paper

It is the cut paper function of USB printer.

#### 27.7.8 USB mode



User can set it to host or slave.

Scale includes small USB port (connected to the PC) and large USB port (connected to the equipment), but some models can only use one port at the same time, and you need to set which port to use here.

- Host (with equipment)

It means use the large USB port, with it, user can connect USB disk, scanning gun, mouse, keyboard, USB printer and other equipment.

The scale only has one large USB port by default, but it can be connected to a USB hub, which can then be used to connect multiple equipment at the same time.

The specific function settings of the scanning gun are in the agent settings, user can modify by contacting the dealer.

- Slave machine (with PC)

It means use small USB port, through the USB port can connect PC. After connecting to PC, the PC needs to install the corresponding drive, most of the PC will automatically install, It will generate a serial port after the installation is completed. The serial port is response mode, users can read and write data through the serial port and also can download and read the item data and weighing record and so on.

#### 27.7.9 Scale address

Set the address used for communication of scale. It is mainly used to distinguish scales in multi-machine communication. And

distinguish scales when submit data of network connections.

#### 27.7.10 Scale ID

The ID of the scale can be set. It is mainly used to distinguish the electronic scale when submitting data through network connection.

The address of the scale can only be a number, and the ID can be a string, which can be used to distinguish the electronic scale. The specific distinction can be selected according to the requirements of the server.

#### 27.7.11 barcode

Used to set whether bar code can show or not on the main interface. For details, please check point 15.

## 28 Time setting

Press , then press  in the pop-up window can enter into time setting as follow:



Modified date/time

Date

2021/10/08

Time

12:03:26

Save

Close

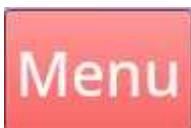

Save

Input the right date and time directly, press

Note: The time section is in 24-hour format. For example, 1pm should be set to 13:00.

## 29 Agent setting




Press , then press  in pup up window. Input the password then can enter into the agent setting.

Agent settings can only be modified by the dealer. To configure some optional functions, contact the dealer.

## 30 update



Press , then press  in pop up window. Then scale start checking the update file in USB disk.


This function requires placing the update file in the root directory of the U disk and inserting it into the scale.

If the U disk or update file is not identified, it will show that the update file does not exist. If the update file exists, it will show that update is ready. After the update is completed, the scale will automatically start the new program.

Do not power off the electronic scale forcibly during the update. Otherwise, the scale may fail to start.

### **31 close**



If user wants to close the menu, can press  to close. This key just uses to close the menu, it will not close the scale.

### **32 User management (option)**

When user management been opened in agent setting, user can press user manager in menu.

#### **32.1 Users manage**



Press , then press  in pop up window can enter into user edit as follows:

Add		Edit	Delete	Default		Clear	Close
Id	Name	User	Setting	Goods	Record	UW	
1	1	User	x	x	x	x	x

The name and permission of the added user are displayed in the list box. Admin exists by default, but does not appear in the list box, and has full and highest permissions, and cannot be edited or deleted.

#### 32.1.1 Add

Press it can pop up the add new user window:



The 'Add user' dialog box contains the following elements:

- Title:** Add user
- Fields:** Name (text input), Password (text input)
- Permissions (checkboxes):**
  - ☐ Allow users
  - ☐ Allow Settings
  - ☐ Allows Goods
  - ☐ Allows records
  - ☐ Allows UW
  - ☐ Allow HiLo
- Buttons:** OK (green), Cancel (red)

Here you can set user name and password, and the permissions of this user.

- Allows edit users  
It means whether this user has manage user permissions.
- allows set parameter settings  
It means whether the user has the permission to set user parameters, communication settings, and time settings.
- allows editing items  
It means whether the user has the permission to add, edit and delete items, but even without the permission to edit items, the user can still select items that already exist in the scale.
- allows editing records  
It means whether the user has permission to delete the records in the scale. Even if the user does not have

permission, the user can still view and export the records in the scale.


- allows setting unit weight

It means whether the user has the permission to modify the unit weight. The modified unit weight here refers to the unit weight setting and quantity sampling in the weighing interface.

- allows setting Hi and Lo

It means whether user can change the Hi and Li limits and sorting values, here the Hi and Lo limits and sorting values refer to the Hi and Lo limits and sorting values in the weighing interface.



press  can add this new user. The newly added user is displayed in the list box on the user management page.

#### 32.1.2edit

Select a user to be edited and click edit to enter the user editing mode. The content in the user editing mode is the same as that in the new user mode. For details, see the description of adding functions.

#### 32.1.3Delete the selected

Select the user which wants to delete, click delete to selected, then delete the corresponding user and cannot be restored after deletion, please careful operation.

#### 32.1.4Default Login

Select the user to log in by default. Click Default login to display the user in the text box on the right.

This function means that the user automatically logs in to the system after each startup. The operator is removed the step of



logging in.

#### 32.1.5 Clear

The default login user is cleared, that is, the default login function is disabled. After each startup, user needs to manually select the login user and its password to log in to the system.

#### 32.2 Modify password



Press , then press  in pop up window can enter into the password modify.



Note: This button cannot be clicked if the user management function is not enabled in agent Settings.

A dialog box titled "Change password" in white text on a dark blue header. The main area has a light blue background. It contains two labels: "Old pwd" and "New pwd", each followed by a white rectangular input field. At the bottom, there are two buttons: a green "OK" button and a red "Cancel" button.

Enter the old password and the new password, then click OK to complete the change.

#### 32.3 Exit



Press , then press  in the pop-up window can exit the current log in user. And the user lo in interface will pop up to re-enter.

Sometimes due to the access control need to switch the user can use this feature.

Or use this function to switch users when different employees operate.

Users who log in will be saved in the weighing record at the same time for query.

Users can also collect statistics based on login users.

#### 32.4 User Login

If the user management function is opened and the default login user is not set, the user login page is displayed after each startup as follow:

A screenshot of a "User login" interface. It has a dark blue header with the text "User login" in white. Below the header, there are two input fields: "User" and "Password". The "User" field has a dropdown menu open showing two options: "Admin" (highlighted in blue) and "User" (in white). Below the input fields is a green "OK" button.

User can press to select the existing user, enter the correct password, and then press



to login.

After successful login, the logged in user will be displayed in the

upper left corner of the weighing interface

User Max=6 kg d=0.002 kg

### 33 Use PC for data management

scale can be connected to the PC through the network or serial port. We have supporting software Smart helper, use this software can read and write material information, and variable information, can also read the weighing record.

Interface as follows:



- open file  
Can open the excel file and show in below.
- Download goods  
Download the goods information in the list to the scale (pay attention to the format, read the goods first, and then edit according to the format which read).
- Read goods  
Read and show the goods information of scale.
- Download variables  
Download the variable information to the scale.
- Read variables  
Read and show the variable information of the scale.
- Read data  
Read and show the weighing data of scale.
- delete  
The delete button here only deletes the data in the list of the software, not the data in the scale.
- export

User can export the data of list to excel file.

- The mode of the scale connecting to PC should be set to response mode. For example, when connecting through serial port 1, the mode of serial port 1 in the communication settings of the scale should be set to response mode.
- Due to the different content of each intelligent scale, the format of reading and writing goods is also different, so if user wants to download goods, please read goods first. Then edit or add goods according to the format.

Columns that are not used should not be left blank, user can fill in 0 or space when downloading goods.

- This software cannot delete goods and records, if user wants to delete, please operate by scale.
- When reading and writing variable values, all variable values are together. The variable number in the variable format corresponds to the serial number of the variable opened in agent settings. For example, the variable1's number here is 1.

Id	number	variables
1	1	Huawei
2	1	Xiaomi
3	2	001
4	2	003
5	2	002
6	2	li
7	3	01
8	3	02
9	3	03

- Weighing data just can read, cannot write and delete.
- If it is not convenient to edit on the software, users can read the material data and export it as an excel file, then edit it in excel and





press  to open the edited file.

## 34 Communication

### 34.1 Wire connection

Indicator with female connector (factory default)

Connect to Indicator (male connector)		Connect to PC port (female connector)	
Pin	Define	Pin	Define
2	TXD	2	RXD
3	RXD	3	TXD
5	GND	5	GND

Indicator with male connector

Connect to Indicator (female connector)		Connect to PC port (female connector)	
Pin	Define	Pin	Define
2	RXD	3	TXD
3	TXD	2	RXD
5	GND	5	GND

### 34.2 Default data protocol

#### 34.2.1 Scale sending data

S	T	,	N	T	,	1	2	3	4	.	5	6		k	g	CR	LF
Header1		Header2		8 bits of weight value data								Unit		0D	0A		

Header1		Header2	
ST,	Stable	NT,	Net weight
US,	Unstable	GS,	Gross weight
OV,	Overload	TR,	Tare weight

Weight value data is ASCII character, may have follows characters:

“0” ~ “9” number    “ ” blank    “.” Decimal point “-” negative

sign

If it is in response mode and the host computer has sent address information, XX is added before the data to be sent back. XX is the specific address. If address 2 is used, 02 is sent.

#### 34.2.2 Format of the command on the host

R	T	CR	LF
Header		13	10

Header(command)			hexadecimal
R	N	Read net weight (NET)	52 4E
	T	Read tare weight	52 54
	G	Read gross weight (GROSS)	52 47
	C	Read inner code	52 43
	U	Read unit weight (counting mode is opened)	52 55
	Q	Read quantity (counting mode is opened)	52 51
S	Z	zero	53 5A
	T	tare	53 54
	U	Change unit	53 55

If multiple equipment are connected, user can add the address @xx in the format of the command. Xx is the address information. For example, if user accesses a scale whose address is 02, add @02 to the command.

In continuous sending mode, the command to read data is not available, but the command to return to zero, tare and switch units is still available.

## 35 Units conversion

1	kg	=	1000g
1	lb	=	453.59237g
1	oz	=	28.349523125g

## 36 Error information

Display	Error	solution
ADO---	AD value overflow	Take off the weights or send to repair
ADL---	AD value overflow	Take off the weights or send to repair
OVR---	Overload	Check if the weight of weighs is +9e more that the Max. Cap.
Batter sign red	Low power	Charging
Low battery, please charging	Battery 'voltage is very low	Stop using and charging

## 37 Common Usage Scenarios

### 37.1 Test whether the goods are qualified

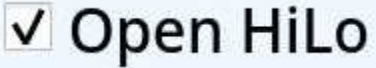
- Turn on the Hi-Lo function in agent Settings first.
- Set the Hi and Li limits of each goods in the goods setting, or manually set the Hi and Lo limits in the weighing interface, the scale will compare the current weight or quantity with the Hi and Lo limits, and show the results on the screen.
- If the buzzer sound is required in case of failure, user can enable Hi and Lo alarm output in user parameter setting. See 26.3 for details.
- In addition, users can choose the alarm lamp output, so that you can see the upper and lower limit results more intuitively.
- More details please check point 11.1

### 37.2 Sorting items by level

- Open the sorting in agent settings
- Set the upper and lower limits of each item and the sorting value in the item setting or manually set the sorting value in the weighing interface, the scale will compare the current weight or quantity with the sorting value and display the sorting result of the current item on the screen.
- If the buzzer sound is required in case of failure, user can enable upper and lower alarm output in user parameter setting. See 26.3 for details.
- More details please check point 11.3.

### 37.3 ERP system needs to input weight through the scanning gun

- Set the barcode or QR code can be shown in the main interface in communication setting.
- Use HCTPubPrintEditor to edit the format according to the data format scanned by the scanner gun, and the printer selects the data assistant. Content is generally automatic length of net weight; units can be selected according to demand.
- Download format to scale. Normally, download serial numbers should not conflict with other print formats. For example, download serial numbers can be used for 2.
- Set the format of code showing in communication setting. If user chooses download number 2 in the previous point, set protocol 6 here, and so on.
- After setting correctly, when the weight is stable, the corresponding bar code will be shown on the weighing interface. At this time, the scanning gun can scan the bar code to send and show the weight in the ERP system.
  - When the bar code is displayed on the left, the Hi and Lo limits will not show. If user wants to see the Hi and Lo limits,




select the Hi and Lo limits in user parameter settings. The color of the barcode or qrcode displayed on the left will change according to the Hi and Lo limits. For example, yellow is below the Lo limit.

- More details please check point 15.

#### 37.4 Total weight and quantity should be printed after one day weighing

- Open the subtotal function in an agent setting.
- Open the format editor to edit the corresponding format. Note that the total and total weight equivalent of the subtotal need to select the total weight and total of the accumulated part in the editor.
- The label editor needs to be set up for cumulative printing
- Download format to scale, the serial number is generally the same as a single print serial number.
- To print the total weight and quantity, press



M+ print

can print the total quantity and weight.



MC

- press to clear subtotals after printing.
- More details please check point 12.

#### 37.5 Many Warehouses do not have ERP software, using electronic scales for simple inventory management

- Open stock manage function in agent setting.
- Edit the current weight and quantity stock for each of the products in goods management.

- In the main interface, select the current operate is stock in, stock out and check stock.
- Put on goods
- Press print, now the stock of goods will do stock in, stock out and check stock.
- More details please check point 14.

### 37.6 Employees produce according to orders, and finally count the workload of employees

- Users can set a user for each employee by enabling the user function in dealer Settings and adding the name or number of each employee in user management. Exit the current user and select a new user to log in.  
More details please check point 32.
- Users can also select the name or number of the employee on the main interface directly. In this way, the corresponding variable setting should be enabled in the agent setting, and the variable type should be set as option, and the name or number of each employee should be added in the variable setting of user parameter setting.  
More details please check point 17.
- The user can add usernames or corresponding custom variable values in the print format.
- press "Print" after each time of weighing, user can print out the employee's name or number.
- In the report interface, users can see the specific weighing record of each employee. Users can also enter the employee number or name to search, so that only the weighing record of a certain employee can be shown.
- In the statistics page, users can choose to collect statistics by user or corresponding variable (employee) and export statistics.
- More details please check point 25.

### 37.7 Simple ingredients

- Open the Hi-Lo functions in agent setting first.
- Open the alarm output function in user parameter settings as required.
- Select relay output function as required.
- Open tare after print function in communications settings.

More details please check point 27.7.4.

### 37.8 Submit data through network or RS232 connection to the server or internal memory.

- If it is the simple exchange of weight, user just needs to set the corresponding port to the continuous sending mode or response mode. Under the continuous sending mode still can do zero, tare and switching unit.
- If user is submitting more complex data, it is recommended that user set the appropriate port to print mode, edit the desired data format by using format editor, and set the printer as a data assistant.
- Download the format to scale, pay attention to download serial number do not conflict with other used serial number, and the corresponding port protocol should be set to the corresponding value.





## **WARRANTY INFORMATION**

Adam Equipment offers Limited Warranty (Parts and Labour) for the components failed due to defects in materials or workmanship. Warranty starts from the date of delivery.

During the warranty period, should any repairs be necessary, the purchaser must inform its supplier or Adam Equipment Company. The company or its authorized Technician reserves the right to repair or replace the components at any of its workshops depending on the severity of the problems. However, any freight involved in sending the faulty units or parts to the service center should be borne by the purchaser.

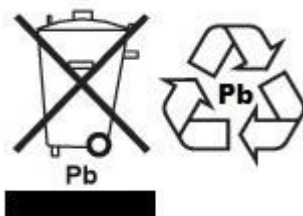
The warranty will cease to operate if the equipment is not returned in the original packaging and with correct documentation for a claim to be processed. All claims are at the sole discretion of Adam Equipment.

This warranty does not cover equipment where defects or poor performance is due to misuse, accidental damage, exposure to radioactive or corrosive materials, negligence, faulty installation, unauthorized modifications or attempted repair or failure to observe the requirements and recommendations as given in this User Manual. Additionally rechargeable batteries (where supplied) are not covered under warranty.

Repairs carried out under the warranty does not extend the warranty period. Components removed during the warranty repairs become the company property.

The statutory right of the purchaser is not affected by this warranty. The terms of this warranty is governed by the UK law. For complete details on Warranty Information, see the terms and conditions of sale available on our web-site.

## WEEE 2012/19/EU



This device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements. Disposal of batteries (if fitted) must conform to local laws and restrictions.

Cet appareil ne peut être éliminé avec les déchets ménagers. L'élimination de la batterie doit être effectuée conformément aux lois et restrictions locales.

Dieses Gerät nicht mit dem Hausmüll entsorgt.

Dispositivo no puede ser desechado junto con los residuos domésticos

Dispositivo non può essere smaltito nei rifiuti domestici.

### **FCC / IC CLASS A DIGITAL DEVICE EMC VERIFICATION STATEMENT**

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules and Canadian ICES-003/NMB-003 regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## CALIFORNIA PROPOSITION 65 - MANDATORY STATEMENT

WARNING: This product includes a sealed lead-acid battery which contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm



Adam Equipment products have been tested with and are always supplied with mains power adaptors which meet all legal requirements for the intended country or region of operation, including electrical safety, interference and energy efficiency. As we often update adaptor products to meet changing legislation it is not possible to refer to the exact model in this manual. Please contact us if you need specifications or safety information for your particular item. Do not attempt to connect or use an adaptor not supplied by us.

**ADAM EQUIPMENT** is an ISO 9001:2015 certified global company with more than 40 years' experience in the production and sale of electronic weighing equipment.

Adam products are predominantly designed for the Laboratory, Educational, Health and Fitness, Retail and Industrial Segments. The product range can be described as follows:

- Analytical and Precision Laboratory Balances
- Compact and Portable Balances
- High Capacity Balances
- Moisture analysers / balances
- Mechanical Scales
- Counting Scales
- Digital Weighing/Check-weighing Scales
- High performance Platform Scales
- Crane scales
- Mechanical and Digital Electronic Health and Fitness Scales
- Retail Scales for Price computing

For a complete listing of all Adam products visit our website at

[www.adamequipment.com](http://www.adamequipment.com)

<p><b>Adam Equipment Co. Ltd.</b>  Maidstone Road, Kingston  Milton Keynes  MK10 0BD  UK  Phone: +44 (0)1908 274545  e-mail:  <a href="mailto:sales@adamequipment.co.uk">sales@adamequipment.co.uk</a></p>	<p><b>Adam Equipment Inc.</b>  1, Fox Hollow Rd.  06478  USA  Phone: +1 203 790 4774  e-mail:  <a href="mailto:sales@adamequipment.com">sales@adamequipment.com</a></p>	<p><b>AE Adam GmbH.</b>  Instenkamp 4  D-24242 Felde  Germany  Phone +49 (0)4340 40300 0  e-mail:  <a href="mailto:vertrieb@aeadam.de">vertrieb@aeadam.de</a></p>
<p><b>Adam Equipment S.A. (Pty) Ltd.</b>  7 Megawatt Road,  Spartan EXT 22  Kempton Park,  Johannesburg,  Republic of South Africa  Phone +27 (0)11 974 9745  e-mail:  <a href="mailto:sales@adamequipment.co.za">sales@adamequipment.co.za</a></p>	<p><b>Adam Equipment (S.E. ASIA) PTY Ltd</b>  70 Miguel Road  Bibra Lake  Perth  WA 6163  Western Australia  Phone: +61 (0) 8 6461 6236  e-mail:  <a href="mailto:sales@adamequipment.com.au">sales@adamequipment.com.au</a></p>	<p><b>Adam Equipment (Wuhan) Co. Ltd.</b>  A Building East Jianhua  Private Industrial Park  ZhuanYang Avenue  Wuhan Economic &amp;  Technological Development Zone   430056 Wuhan  P.R.China  Phone: + 86 (27) 59420391  e-mail:  <a href="mailto:info@adamequipment.com.cn">info@adamequipment.com.cn</a></p>

© Copyright by Adam Equipment Co. All rights reserved. No part of this publication may be reprinted or translated in any form or by any means without the prior permission of Adam Equipment.

Adam Equipment reserves the right to make changes to the technology, features, specifications and design of the equipment without notice.

All information contained within this publication is to the best of our knowledge timely, complete and accurate when issued. However, we are not responsible for misinterpretations which may result from the reading of this material.

The latest version of this publication can be found on our website.

[www.adamequipment.com](http://www.adamequipment.com)