

Smart balance user manual

(Button keypad version)

EC40011

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Notice

- 1.1 Please charging before first use.
When low power sign shows, please use the original adapter to charging. Red Charging light means scale is in charging mode. When charging light turn to green, it means charging finished. The charging time is about 5-7 hours.
- 1.2 Put and balance the scale on the stable and flat table with four adjustable feet. Please notice the air bubble should be kept in the center of circle.
- 1.3 Please avoid the water.
- 1.4 Please use in suitable temperature work place.
- 1.5 If mobile or wireless machines are in use nearby when turning on the scale, the display will flash once, and then become normal. If it doesn't work, please power on again.
- 1.6 The original adaptor should be used when charging.
- 1.7 After a long-time use (more than one year), the rechargeable battery can't keep using for long after more than 5-hours charging, which means new one should be replaced. If you have no idea how to replace, please ask a nearby agent to give you a helping hand.
- 1.8 Please turn off the scale when it won't be used for a long time. Please pack up the scale if do not use for a long time, charging every three month. Charging to full before start to use.
- 1.9 Avoid the knocking, please do not throw the weight on the scale.
- 1.10 Please do not exceed the Maximum Capacity.

2 Specification

- 1.1 5 inch TFT color display, easy to read.
- 1.2 Adjustable brightness of back light, fit to all time use.
- 1.3 Solid frame design to insure the stable weighing.
- 1.4 With data memory, can store many weighting date.
- 1.5 Fast reading, stable, accurate, easy using.

1.6 Low power alarm, charging light show.

1.7 Counting, Hi/Lo, target value, ...

3 Main parameter

3.1 Available accuracy: 1/30000

3.2 Power adapter: built –in or outer AC 12V/3000mA adapter.

3.3 Work current: 200mA

3.4 Display: 5 inch TFT

3.5 Sensor sensitivity range: 1 - 3mV/V

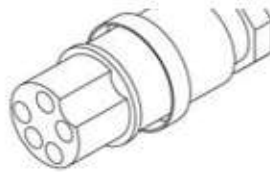
3.6 Power: DC6V/10.0AH(Low power sign appears when voltage lower than 5.6V)

3.7 Work temperature: 0-40 °C, lower than 90%RH

3.8 Storage temperature: -25~55°C

4 How to fix (Indicator)

4.1 Load cell connection



Pin	Define	Note
1	E+	
2	E-	
3	S+	
4	S-	
5	Ground	Connect to the shielded wire

1.1 Fix

Put the load cell cable through the pillar, then insert the pillar into base, fasten the fixed screw. After put the cable through the holder. Insert the holder into the bracket of the indicator. Fix the load cell connector.

Adjust the holder to right position, and then fasten the plastic screw on the display.

5 Port



- 5.1 When indicator crashed, please press the reset button which on the left of back housing to reset.
- 5.2 When the charging light is red, it means the indicator is charging. When the charging light is green, it means the indicator charging finished.
- 5.3 USB1 can connect to U-disk and scanning gun.
- 5.4 USB2 is option.
- 5.5 RS232 1# can connect to PC, download the print format and so on.
- 5.6 RS232 2# can connect to the outer printer.

6 Keypad

- 6.1 Common weighing version




- 6.2 Counting version




6.3 Function instruction

6.3.1 Number key + letter key, use to input number, letter.




6.3.2  Blank key, use to input blank, choose and cancel choose.




6.3.3  Delete key, use to delete content. In goods showing and record showing window, use to delete the chose item.



6.3.4  Input key, use to change the input method..




6.3.5  Use to get the stored PLU value. E.g. input number 12, then press [PLU], the No.12 stored PLU values will show. (Include unit weight, SKU id...) Press this key and hold 3s, user can enter to the goods choosing interface.




6.3.6  Get sample's unit weight by enter weights quantity.




6.3.7  Enter the unit weight value. Use number to input the unit weight, then press this key to set unit weight.



6.3.8  Use to change the setting item.



6.3.9  In weighing mode, use this key to change the units.

In setting and input mode, use this key to leftward move.



- 6.3.10 In weighing mode, use this key to check the print records. In setting and input mode, use this key to upward movement or change the option's parameter.



- 6.3.11 In weighing mode, use this key to tare. In setting and input mode, use this key to downward movement or change the option's parameter.



- 6.3.12 In weighing mode, use this key to turn back to zero. In setting and input mode, use this key to rightward move.



- 6.3.13 In weighing mode, use this key to enter the user defined parameter setting. In setting and input mode, this key use to confirm the select or shift the input box. The version which without menu key, long press this key to enter the setting menu.



- 6.3.14 In weighing mode, use this key to add up the current weight value and quantity. When showing goods and weight records, this key use to shift to the previous page.



- 6.3.15 In weighing mode, use this key to show the details of accumulative weight value and quantity. When showing goods and weight records, this key use to shift to

the next page.



- 6.3.16 In weighing mode, use this key to print out the current weight value and quantity. In MR mode, use this key to print out the accumulative weight value and quantity.



- 6.3.17 In weighing mode, long press this key to enter the setting menu.



- 6.3.18 In weighing mode, long press this key to enter Hi-Lo setting interface.

7 **ON/OFF**

Press ON/OFF key to power on and power off..

8 **charging**

Connect the scale with original adapter to charging. While charging, the charging light is red. It will turn green when charging finished (the charging length should be 5-7h).

Attention: Do not use up the battery, otherwise the battery will be broken. If user do not use the indicator for a long time, user should recharging every 40 days.

After charge, please take off the adapter, please do not always connect the indicator to power supply.

Please do not use other adapters, it may damage the inside battery.

9 **Display**

9.1 **Weighing window**

Counting mode



Weighting mode



9.1.1 The content name of the different area of the window shown on the top left corner of every area. Such as weight, Hi. Lo., unit weight, quantity...

9.1.2 ->0<- ---It means Weight is zero.

9.1.3 Tare---It means here has tare weight.

9.1.4 Stable---When this sign appears, it means the weight value is effective.

9.1.5 Low power---When voltage is lower than 5.5V, this sign will appear to remind user charging the indicator.

9.2 The status bar



9.2.1 **Admin** user login

9.2.2 **Max=6 kg d=0.002 kg** Capacity and Division

9.2.3  Paper out symbol

9.2.4  U disk symbol

9.2.5  WIFI symbol

9.2.6  Power symbol

9.2.7  Date and time

10 Other interface

10.1 Hi/Lo limit mode

testgoods1		
1.000 kg		3.000 kg
Lo	Ok	Hi
0	0	0
0.000	0.000	0.000

From up and down, the information are goods name, Hi/Lo limit value, the state of Hi/Lo limit, the number of times of Hi/Lo limit, the total weight of Hi/Lo limit.

For an example, when weight is less than the Lo limit, the



will turn to orange color. At this time, press



[Print], the number of times will show under the , and the total weight of Lo limit will show under the number of the times.

testgoods1		
1.000 kg		3.000 kg
Lo	Ok	Hi
1	0	0
0.510	0.000	0.000

10.2 Target mode

Target mode is similar as Hi/Lo limit mode. The example in counting mode as follow:

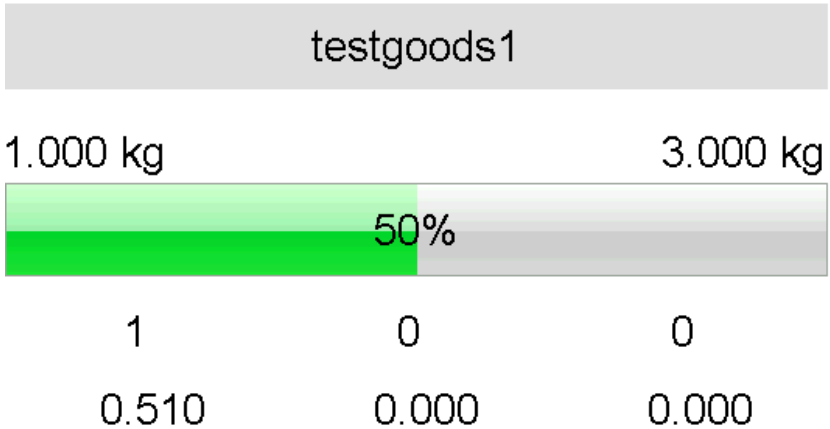
testgoods1		
1.000 kg		3.000 kg
0%		
0	0	0
0.000	0.000	0.000

From up and down, the information are goods name, Hi/Lo limit value, the status of Hi/Lo limit, the number of times of Hi/Lo limit, the total weight of Hi/Lo limit.

Target mode set the Lo limit value to target value. For an 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 the




, and the total weight of Lo limit will show under the number of the times.



11 Zero




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

12 Tare


12.1 Tare weight is known



Long 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.


12.2 Tare weight is unknown



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

13 Choose units



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

14 Counting (Option)

14.1 Unit weight of goods is known

Follow the article 15, set the unit weight in goods edit step.

Choose the unit weight by select goods.

14.2 Common counting function

14.2.1 Unit weight is known

Input the known weight of weights, press [UNIT W.T], the display will show the counts. At this time, the indicator enter into the counting mode automatically.

14.2.2 Unit weight is unknown

Put the sample weights on the pan, use the number keys to input the counts of sample, press [SMPL] key. After the weight value is stable, the quantity window will show the counts of weight.

15 Select and edit goods

15.1 Select goods

15.1.1 Setting by PLU

In weighing mode, input the PLU number, press PLU key. If this PLU number of goods exist, the goods information will load automatically. If not, the display will come out a box “PLU do not exist” .


15.1.2 Setting by goods select window



In the main interface, long press , goods select window will come out, as follow:

Choose goods							
Add	Edit	Delete	Delete all	Export	Search	OK	
Sr.No	number	Name	Specification	Remark	U.W. g	Hi. kg	Lo. kg
1	aaaa	testgoods1			0.000	3.000	1.000
2	bbbb	test2			2.800	2.500	1.100
3	cccc	test3			12.600	5.600	2.600



15.1.3 Press  and  to show previous page or next page.


15.1.4 Add goods

To add new goods

15.1.5 Edit

Select the goods which need to edit, press edit to edit goods information.




Also can select the goods which need to edit, press  key to edit.

15.1.6 Delete

Select the goods which need to delete, press [Delete] to delete the goods. After delete, this recode of goods cannot restored anymore..



Also can select the goods which need to edit, press  key to delete.

15.1.7 Delete all

Press [Delete] will delete all the goods information. This function


can use to emptying goods information, also can use in data error happened.

15.1.8 Export

Insert the U disk, user can export the current data into the U disk. This file can be opened by Excel.

15.1.9 Search

Input the key words, such as serial number, goods name,

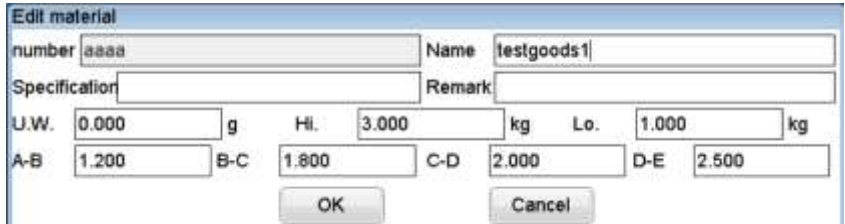
specification, remark, and so on. Then press  to search.

15.1.10 OK

Select the goods, press [OK], the interface will back to common mode. Then, user can edit the next goods information.

User can select goods, press  key to select goods.

15.2 Add and edit new goods



number	aaaa	Name	testgoods1					
Specification		Remark						
U.W.	0.000	g	Hi.	3.000	kg	Lo.	1.000	kg
A-B	1.200	B-C	1.800	C-D	2.000	D-E	2.500	
				OK	Cancel			

Number: Goods number. After add, this number cannot be edited again.

Name: goods name, user can edit again.

Specification: Specification of goods, user can edit again.

Remark: Remark of goods, user can edit again.

Unit weight: Unit weight of goods, use in counting mode.

Hi limit: In counting mode, the unit is PCS. Otherwise the unit is weight unit, please take attention on the right unit show area.

Low Limit: In counting mode, the unit is PCS. Otherwise the unit is weight unit, please take attention on the right unit show area.


A-B, B-C, C-D, D-E: Use to select mode, use to show the

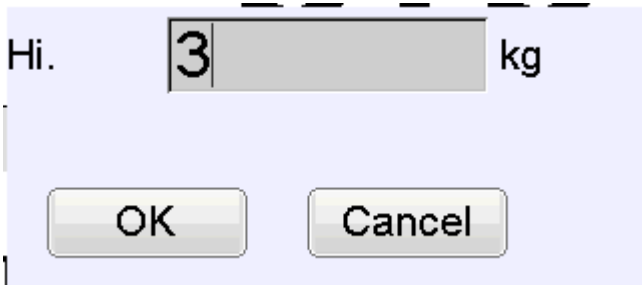
weight/quantity difference of A&B, B&C, C&D, D&E. Please take attention on the right unit show area.

A-B, B-C, C-D, D-E: Option function.


16 Input the Hi/Lo limit value directly

Not only call in Hi/Lo limit by select goods, also can use keypad to input Hi/Lo limit.

Long press  key, Hi/Lo limit input window will come out.




Press number keys to input high limit. Please take attention on the right unit show area. After input, press [OK], the Low limit window will pop-up. Use number keys to input low limit, then press [OK]. Note: The low limit value must lower than high limit value.

If need to cancel the input content, use  to switch, then press




17 Print

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

18 Check the record





Press  can check the print record, see follow picture:



The screenshot shows a window titled "Record" with several buttons: "Export", "Print again", "Details", "Delete", "Delete all", and "Close". Below the buttons are date and time filters: "2017", "May.", "4", "2017", "May.", "4", and a "Descending" sort order. There is also a "Only show" search field and a "Screening" button. The main content is a table with the following data:

Sr.No.	Date/time	Goods	Weight kg	Hi. kg	Lo. kg	Level
1	04/5/2017 15:28:49	testgoods1	0.786	3.000	1.000	Lo
2	04/5/2017 15:29:11	test2	0.784	2.500	1.100	Lo



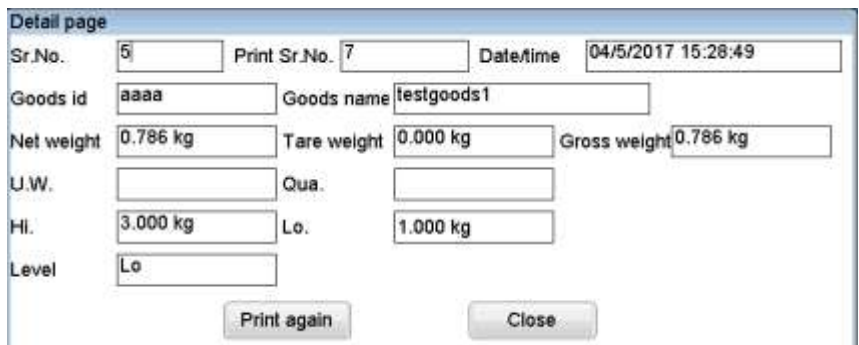
18.1 Press  and  can show the previous page and next page.

18.2 Export

Insert the U disk, user can export the current data into the U disk. This file can be opened by Excel.

18.3 Details

Choose the option, press [Details], the indicator will show more details of this goods. As follow picture:



The screenshot shows a window titled "Detail page" with the following fields and buttons:

Sr.No.	5	Print Sr.No.	7	Date/time	04/5/2017 15:28:49
Goods id	aaaa	Goods name	testgoods1		
Net weight	0.786 kg	Tare weight	0.000 kg	Gross weight	0.786 kg
U.W.		Qua.			
Hi.	3.000 kg	Lo.	1.000 kg		
Level	Lo				

Buttons: "Print again", "Close"


There also have [print again] key in this window.

18.4 Delete

Choose the goods, press [Delete], user can delete the corresponding

goods. This goods data cannot be recovered..



Press  can delete the chose item.

18.5 Delete all

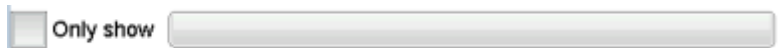
Press [Delete all], user can delete all data. This function can use for empty the data, or data error.


18.6 Screening

18.6.1 Choose the date range first

18.6.2 Choose if show data by descending order. If choose this option, the last printed data will show on the top, user can easy to search.

18.6.3 Choose if just show the data of one goods.



Press the  key to choose the goods, and then this



function will be ticked. press  key to cancel tick.



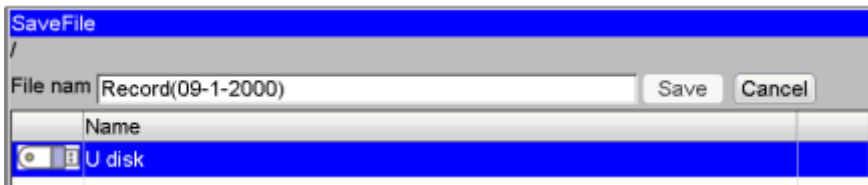
Press [Screening] to show the records which been chose.



Sr.No.	Date/time	Goods	Weight kg	Hl. kg	Lo. kg	Level
1	04/5/2017 15:28:49	testgoods1	0.786	3.000	1.000	Lo

19 Export file to U disk

In the export option of goods select and check the record, user can choose export the file to U disk. The interface as follow:



Press [U disk], choose the suitable folder, input the name of the file, then press [Save]. After “store succeed” shown, user can pull out the U disk.

20 Parameter setting



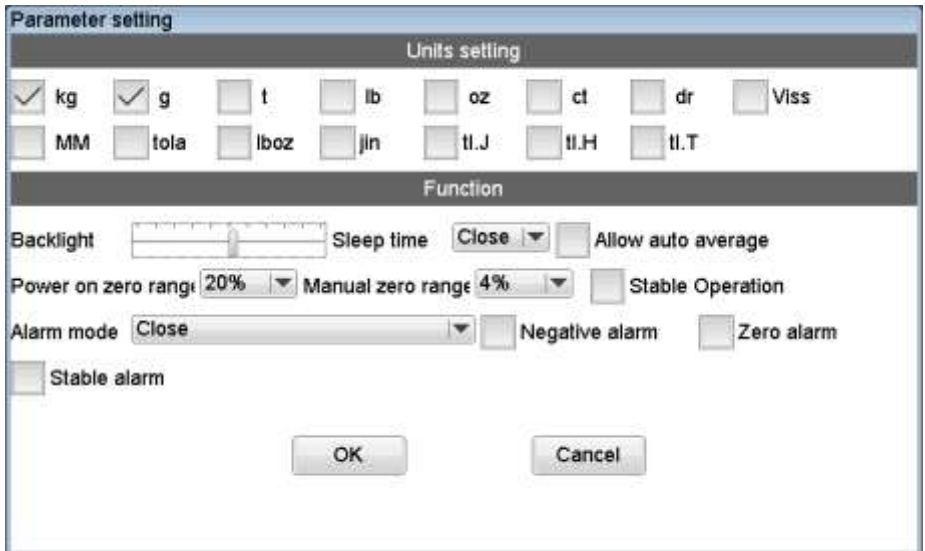
In weighing mode, long press  key or  key, then pop-up the parameter setting window:

1 Parameter	2 Communication	3 Date setting
4 Dealer setting	5 Help	6 Close
7 User managemen	8 Modify pwd	9 Exit

The press the number key to enter the setting. For an example, press




then enter to parameter setting.



20.1 Units setting





Tick the unit which need to use. Remove the tick  for the unit which do not need to use. For an example, user need to use kg, tick it. User do not need to use g, remove the tick in front of it.

20.2 Function setting

20.2.1 Backlight brightness



Use  and  to sliding the slider to set the brightness of the back light. The brightness of backlight can timely changed.

20.2.2 Sleep time

This function use to set the length of duration to control the backlight turns dark. For an example, this parameter set to 12, it means the backlight turn to dark after 12s. But need the indicator

without operate and the weight value do not change. If the indicator operated or the weight value changed, the backlight will recover.

20.2.3 Power on zero range

It means the allowed difference of power on zero and calibration value. The default difference is 20%.

20.2.4 Manual zero rang

It means the allowed difference of manual zero and power on zero. In this range, manual zero is effective. The default difference is 4%.

20.2.5 Stable Operation

It means if zero and tare operate effective after scale stabled.



Use  key to tick or not.

20.2.6 Alarm mode

User can use this function to choose the alarm mode, also can close alarm function.

20.2.7 Alarm in negative or zero weight value

Choose negative alarm, the alarm function effective when the weight is negative value.

Choose zero alarm, the alarm function effective when the weight is zero.



Use  key to tick or not.

20.2.8 Alarm after stable



Choose this function, the alarm function effective after scale stabled.

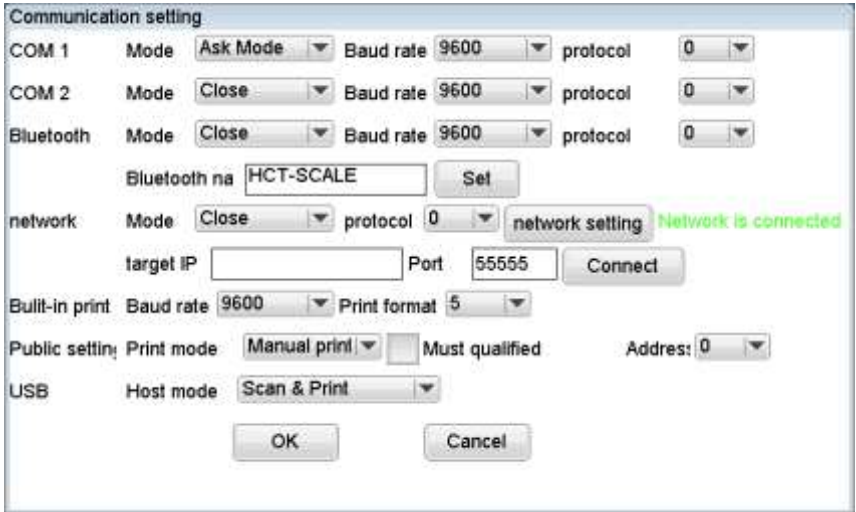


Use  key to tick or not.

21 Communication

21.1 Setting

Press  to select  in the pop-up window then enter communication setting. The window as follow:



The screenshot shows a 'Communication setting' dialog box with the following fields and controls:

- COM 1:** Mode (Ask Mode), Baud rate (9600), protocol (0)
- COM 2:** Mode (Close), Baud rate (9600), protocol (0)
- Bluetooth:** Mode (Close), Baud rate (9600), protocol (0), Bluetooth na (HCT-SCALE), Set button
- network:** Mode (Close), protocol (0), network setting (Network is connected), target IP, Port (55555), Connect button
- Built-in print:** Baud rate (9600), Print format (5)
- Public settings:** Print mode (Manual print), Must qualified checkbox, Address (0)
- USB:** Host mode (Scan & Print)

Buttons: OK, Cancel

21.1.1 Serial port COM1, serial port COM2, blue tooth

21.1.1.1 Mode

Include sending mode, stable sending mode, answer mode, key sending mode, print mode and close this port.

Print mode setting, please refer to common setting.

21.1.1.2 Baud rate

The highest baud rate setting is 115200, default setting is 9600.

21.1.1.3 Data protocol

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

21.1.1.4 Name of blue tooth

Input the blue tooth name of equipment. The name must set to English letters and number, total 12 characters. After input, click

[Set].

21.1.2 Network (Option)

21.1.2.1 Mode

Include sending mode, stable sending mode, answer mode, button sending mode, mode print mode and close this port.

Print mode setting, please refer to 21.1.3 common setting.

21.1.2.2 Data protocol

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

21.1.2.3 Target IP, port

Here use to input the server IP and port, it must be the TCP server.

After input, click [Connect].

21.1.2.4 Network setting

Press [Network] to set the network.

21.1.2.4.1 Wi-Fi version

Name	Signal
FYX_C583_2.4G	-70db
ChinaNet-cx56	-71db
boss	-90db

Press **Search network** to search the Wi-Fi signal.

All Wi-Fi name will come out in under window, choose and click the right Wi-Fi, input its password in right side sheet, click [connect].

21.1.2.4.2 Wire version

Static IP

IP address

Mask

Gateway

Connect

Module reset **Close**

Press [connect] to use this function directly. Or choose static IP and input the IP address, mask, gateway, and then click connect key to connect. If user do not know these parameter, please contact the webmaster.

If user suspect the module crashed, please click [module reset] to reset.

21.1.3 Public setting

21.1.3.1 Print mode

21.1.3.1.1 Manual print

Press [print] key to print out content once.

21.1.3.1.2 Auto print

Put on the weights, after the weight value stabled, the indicator will print out content once.

21.1.3.1.3 Qualified print

Put on the weights, after the weight value stabled, if the weight value is not in the no-alarm range, the indicator will print out content once.

21.1.3.2 Check hilo (In qualified range print)

Choose this function, the indicator will just print in manual mode when weight value in qualified range.

21.1.4 USB

When insert USB, scanner gun or keypad, user can define these equipment's function.

21.1.4.1.1 Analog keypad

Input letter and number will be shown in the input box.

21.1.4.1.2 Common scan

The scanned content shows in the scan item window which in the upper of the goods window. User can print out that content..

21.1.4.1.3 Scan and print

Based on the common print, print at the same time.

21.1.4.1.4 Scan goods

Input letter and number will not be shown in the input box. When software checks out the Enter, the scale will judge if there has goods serial number in the input content. If it has, the scale will call out the goods and print out the corresponding content.

21.1.4.1.5 Scan and print

Input letter and number will not be shown in the input box. When software checked out the Enter, the scale will print out the corresponding content.

21.2 Wire connection

Scale with DB9 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

scale with DB9 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

21.3 Default data protocol


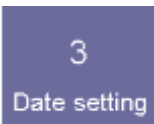
S	T	,	N	T	,		1	2	3	4	.	5	6		k	g	CR	LF
Header1			Header2			8 bits of weight value data						Unit		0D	0A			

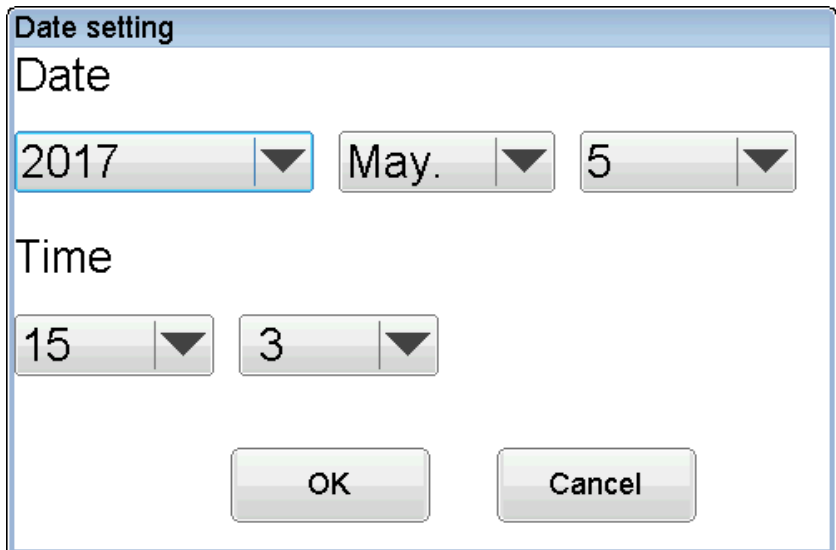
Header1		Header2	
ST,	Stable	NT,	Net weight
US,	Unstable	GS,	Gross weight
OV,	Over load	TR,	Tare weight

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

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

22 Time setting

Press  to select  in the pop-up window then enter time setting. The window as follow:



The image shows a 'Date setting' dialog box. It has a title bar 'Date setting' and a main area with the following elements:



- Date:** Three dropdown menus. The first is set to '2017', the second to 'May.', and the third to '5'.
- Time:** Two dropdown menus. The first is set to '15' and the second to '3'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

After choose the right date and time, click [ok].

Note: After click [ok], the second clock will be set to 0.

23 User management(Option)

23.1 Edit user information

Press  to select  in the pop-up window then enter user setting. The window as follow:

User management							
Edit							Close
User name	Open	User	Parameter	Goods	Edit record	U.W. setting	HiLo setting
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x
User	x	x	x	x	x	x	x

Choose the responding user, click [edit] to edit user information.

User edit		
User name	<input type="text"/>	pwd. <input type="text"/>
<input type="checkbox"/> Allow user management	<input type="checkbox"/> Allow set parameter	<input type="checkbox"/> Open
<input type="checkbox"/> Allow edit record	<input type="checkbox"/> Allor unit weight setting	<input type="checkbox"/> Allow edit material
		<input type="checkbox"/> Allow alarm setting
<input type="button" value="OK"/>		<input type="button" value="Cancel"/>



To start using one user, user must set the user name and password, and tick it.

Other permissions depend on the requirement of user.

Note: The default user name is Admin, all the permissions of it is opened.

Please change its password in time.



23.2 Password setting

Press  to select  in the pop-up window then enter password setting. The window as follow:





Input the old password, then input the new password twice, click [ok] to complete the setting.

23.3 Exit

Press  to select  in the pop-up window then enter password setting. The window as follows:



Use  or  to choose the user name, enter the right password, then press ok key. After login succeeds, the upper left corner will show the login user name.

24 Units conversion

$$1 \text{ kg} = 1000\text{g}$$

1 lb = 453.59237g
 1 oz = 28.349523125g

25 **Error information**

Display	Error	solution
ADO---	AD value over flow	Take off the weights or send to repair
ADL---	AD value over flow	Take off the weights or send to repair
OVR---	Over load	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

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