

User Manual

Waterproof Indicator

QWS/GWS

© Excell Precision Limited 2016. All rights reserved Worldwide.

The information contained herein is the property of Excell Precision Limited and is supplied without liability for errors or omissions. No part may be reproduced or used except as authorised by contract or other written permission. The copyright and the foregoing restriction on reproduction and use extend to all media in which the information may be embodied.



TABLE OF CONTENT

Function Table	2
Intructions for Use	5
Preparing to Use the Scale	5
Chapter 1 Introduction	7
1-1 Features	7
1-2 Specifications	7
1-3 Appearance	7
1-4 Display Description	9
1-5 Power Supply	9
1-6 Keypad Function	10
1-7 Error Messages	11
1-8 Available Units	11
1-9 Firmware Version.....	11
Chapter 2 General Function Setting.....	12
2-1 Backlight and Auto. Power Off Setting	12
2-2 Simple Counting Mode	12
2-3 Accumulation	13
2-4 Hold Mode (Animal)	14
2-5 Self-Test Mode	15
Chapter 3 Further Function Setting	16
3-1 Enter Function Setting	16
3-2 Function Setting	16
3-2-1 Hi / Lo / OK Setting (P0 ChK)	17
3-2-2 RS-232 Setting (P2 CoM).....	18
3-2-3 Transmit Mode Setting	19
3-2-4 Real Time Clock Setting	20
3-2-5 Continuous Transmit Rate (rPS)	20
3-3 Other Function Settings (P4 oth)	21
3-4 Weight Unit Setting (P5 unt)	22
3-5 External calibration (P6 ZCL)	23
3-6 Restore Default Setting (P7 rSt).....	23
Chapter 4 Wireless Connection Instruction	24
Appendix 1 Output Format.....	30
Appendix 2 ASC II Code Table	32
Appendix 3 7-Segment Display Characters	33
Appendix 4 Wiring Instructions.....	34



Function Table

For non-approval models

Main menu	Sub-menu	Available settings	Description	
P0 ChK (Hi/OK/Lo Setting) (3-2-1)	SEt h		High limit value (weighing)	
	SEt L		Low limit value (weighing)	
	PCS h		High limit value (counting)	
	PCS L		Low limit value (counting)	
	bEEP	no		No beep
		oK*		Beep within the high and lower limits value
nG			Beep beyond the high or lower limits value	
P1 rEF	Function Reserved			
Pr2 CoM (RS-232 Setting) (3-2-3)	ModE (3-2-4)	Auto	Auto accumulate transmit	
		CoMAnd	Command mode	
		Cont	Continuous transmit	
		St1*	Stable transmit (Single)	
		StC	Stable transmit (Continuous)	
		Pr1	Press  key to transmit	
	Pr2	Press  key to transmit		
	bAud		Baud rate setting: 600, 1200, 2400, 4800, 9600* , 19200	
	Pr		Communication setting: *n81, E71, o71	
	rPS		Continuous Transmit rate: 1, 2, 4, 8, 16 or MAX* (3-2-6)	
	PtyPE	PtUP*	Print type: Standard print	
	Lab		Output format: 0* , 1, 2, 3	
	Prt			
	LANg	ENG*	Language:English	
rtC		RTC setting (3-2-5)		
rtCFO		Time display: year_month_day or day_month_year		
rS485		RS-485 ID entering		
P3 CAL	Function Reserved			
P4 oth (Other setting) (3-4)	AnM		Animal mode: on, oFF*	
	AVErG		Auto average unit weight: on, oFF*	
	r tAr		Tare range	
	St		Continuous tare: on* , oFF	
	Ft FnC		Foot switch: ZErO* , tArE, rint	
P5 unt (weight unit setting) (3-5)	G		Use gram: on, oFF	
	Lb		Use pound: on, oFF	
	oZ		Use pound ounce: on, oFF	
	tJ		Use Taiwan Tael: on, oFF	
	hJ		Use H.K. Tael: on, oFF	
	ViSS		Use viss: on, oFF	
P6 ZCL			External calibration	
P7 rSt			Restore default setting	

 Default settings are marked by *



For approval models

Main menu	Sub-menu	Available settings	Description	
P0 ChK (Hi/OK/Lo Setting) (3-2-1)	SEt h		High limit value (weighing)	
	SEt L		Low limit value (weighing)	
	PCS h		High limit value (counting)	
	PCS L		Low limit value (counting)	
	bEEP	no		No beep
		oK*		Beep within the high and lower limits value
nG			Beep beyond the high or lower limits value	
Pr2 CoM (RS-232 Setting) (3-2-3)	ModE (3-2-4)	Auto	Auto accumulate transmit	
		CoMAnd	Command mode	
		Cont	Continuous transmit	
		St1*	Stable transmit (Single)	
		StC	Stable transmit (Continuous)	
		Pr1	Press  key to transmit	
		Pr2	Press  key to transmit	
	bAud		Baud rate setting: 600, 1200, 2400, 4800, 9600* , 19200	
	Pr		Communication setting: *n81 , E71, o71	
	rPS		Continuous Transmit rate: 1, 2, 4, 8, 16 or MAX* (3-2-6)	
	PtyPE	PtUP*	Print type: Standard print	
	Lab		Output format: 0* , 1, 2, 3	
	Prt			
	LANg	ENG*	Language:English	
	rtC		RTC setting (3-2-5)	
rtCFO		Time display: year_month_day or day_month_year		
rS485		RS-485 ID entering		
P4 oth (Other setting) (3-4)	AnM		Animal mode: on, oFF*	
	AVErG		Auto average unit weight: on, oFF*	
	r tAr		Tare range	
	St		Continuous tare: on* , oFF	
	Ft FnC		Foot switch: ZErO* , tArE, rint	
P5 unt (weight unit setting) (3-5)	G		Use gram: on, oFF	
	Lb		Use pound: on, oFF	
	oZ		Use pound ounce: on, oFF	
	tJ		Use Taiwan Tael: on, oFF	
	hJ		Use H.K. Tael: on, oFF	
	ViSS		Use viss: on, oFF	

 Default settings are marked by *



SPECIAL NOTICE

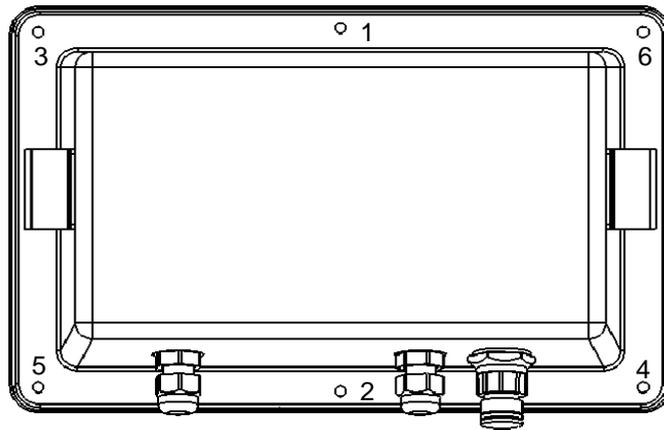
While installing the load cell, power cord hookup or replacing a new rechargeable battery, the indicator housing must be opened. It must be done by a technician assigned by your electronic indicator provider to avoid affecting the waterproof ability of this indicator. Before opening the housing, make sure the indicator is dry, if there is any liquid on it, please wipe it with a clean cloth.

HOW TO INSTALL THE HOUSING

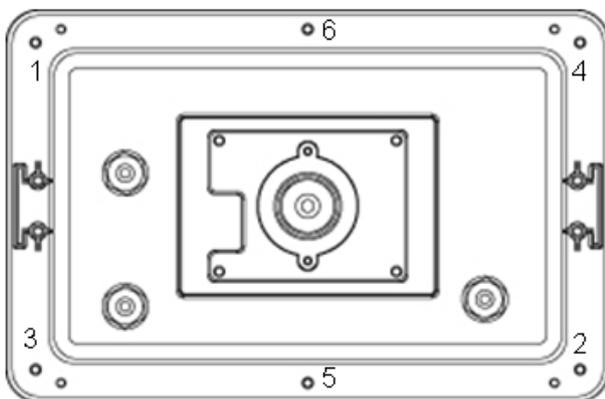
After installing the load cell, power cord hookup or replacing a new rechargeable battery, the housing must be screwed by the assigned order as shown below. Screw lightly first, then screw them tight using a 12 kgf-cm torsion.

P.s. Please use a torsion-adjustable screw driver.

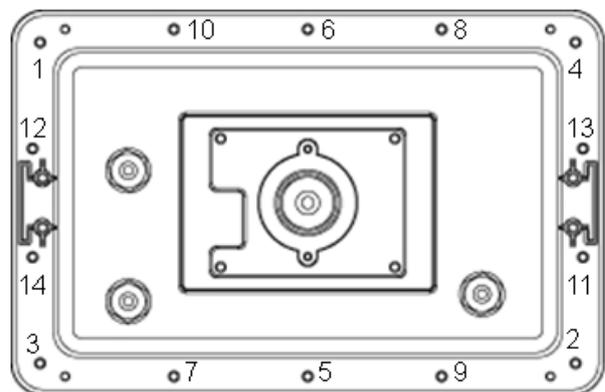
Screwing order:



▲ QWS



▲ GWS



▲ GWS



Thank you for purchasing EXCELL **Weighing Indicator**, to help use the product properly, operate smoothly, and extend its life cycle, please read this manual carefully.

Intructions for Use

1. The load placed on the weigh pan must NOT exceed the maximum weighing capacity of the scale.
2. Protect the scale from high temperatures.
3. Avoid objects impacting with the scale. Do not drop loads onto the scale or subject the weigh pan to any strong shock loads.
4. Please operate or charge the scale in an open area. Do not squeeze the power cord to avoid wire on fire.
5. Any suggestion for product is welcomed

Preparing to Use the Scale

1. Locate the scale on a firm level surface free from vibrations for accurate weight readings.
2. Adjust the four levelling feet (if fitted) to set the scale pan level.
3. Avoid operating the scale in direct sunlight or drafts of any kind.
4. If possible avoid connecting the scale to ac power outlet sockets which are adjacent to other appliances to minimise the possibility of interference affecting the performance of the scale.
5. Remove any weight that might be on the weigh pan before the scale is switched on and avoid leaving weight on the pan for long periods of time
6. All goods weighed should be placed in the centre of the weigh pan for accurate weighing. The overall dimensions of the goods being weighed should not exceed the dimension of the weigh pan.
7. Once the scale has been powered on, it will go through an LCD display test and it is ready for use when the display shows zero.
8. The scale requires 15~20 minutes warm up before operation to ensure best accuracy
9. Please note when the  symbol keeps flashing on the screen, the batteries need to be recharged.
10. Introduction of Storage Battery



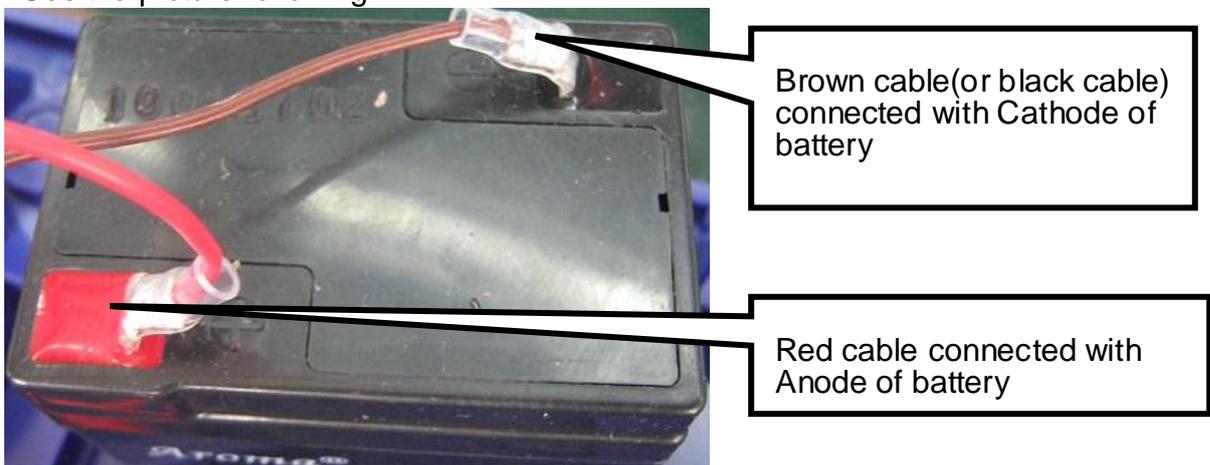
Due to the storage battery adopt the advanced free-maintaining technique, customers need not to replenish electrolyte.

The scale should be recharged every 3 months to prevent failure of the internal rechargeable battery.

1. The battery should be charged for 8~10 hours.
2. The temperature of battery should below 45°C.

Maintaining

1. Please do not discharge with over-current when using the battery. Please charge the battery after discharging current.
2. Please take down the battery when the scale is not used for a long time or break the connection of cathode.
3. Do not short the battery terminals to check whether there is current. Please check whether the connection point is firm to guarantee good connection.
4. The battery should be replaced by specialized person. **No reverse-battery or the product will be damaged.**
 - a) Anode of battery should be connected with Anode of product battery (usually red cable)
 - b) Cathode of battery should be connected with Cathode of product battery (usually brown cable or black cable)
 - c) See the picture following



Safety warnings

1. The electrolyte of battery is caustic which causes metal, cotton, etc to corrode.
2. The hydrogen will be resolved when using or charging the battery and it will cause explosion when approaches fire.



No burning



Caution Corrosion



Warning explosion



Children faraway



Chapter 1 Introduction

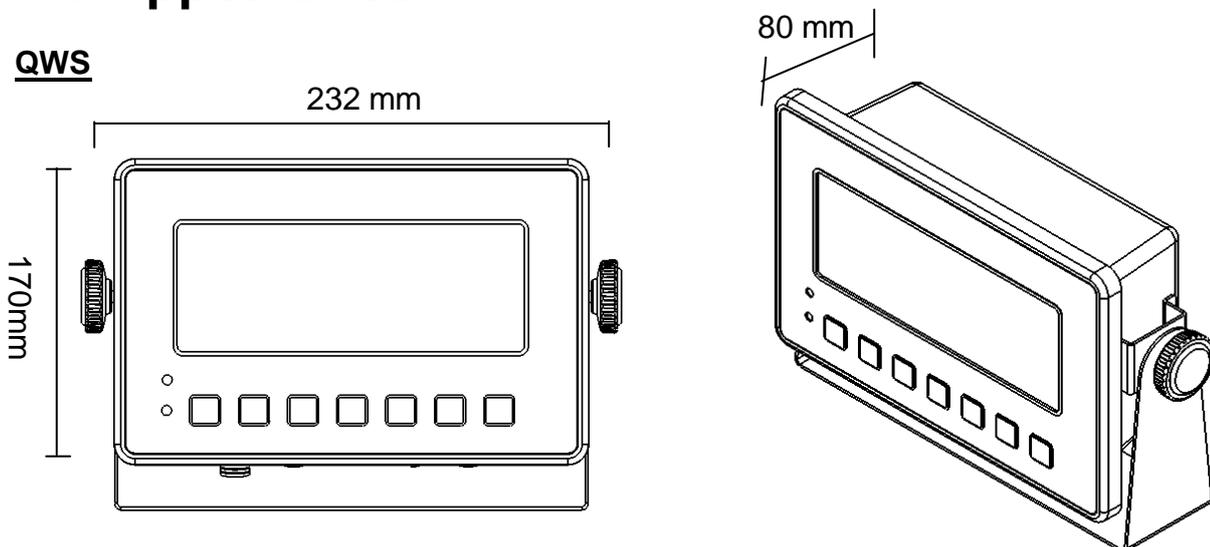
1-1 Features

- ◆ Extra-large and wide LCD display (175 x 70mm) 6 digits with 55mm height
- ◆ COOL WHITE LED backlight
- ◆ QWS with 304 stainless steel housing while GWS with plastic ABS housing.
- ◆ Sealed to IP68, Waterproof, mist-proof and dustproof (Only use cables of 3mm~5mm diameter to ensure correct sealing of the cable glands)
- ◆ Kilogram (kg) and pound (lb) weighing modes
- ◆ Full range tare; Pre-tare; Auto zero tracking; Sampling counting;
- ◆ Gross/Net indication
- ◆ Hold function; Check mode Lo/Hi/OK; Auto average unit weight;
- ◆ Adjustable gravity value
- ◆ Low power indication and auto power off
- ◆ AC/DC power in and rechargeable battery.
- ◆ Built-in RS-232
- ◆ Options: wireless transmitter, foot switch, pressure release valve, and RS-485

1-2 Specifications

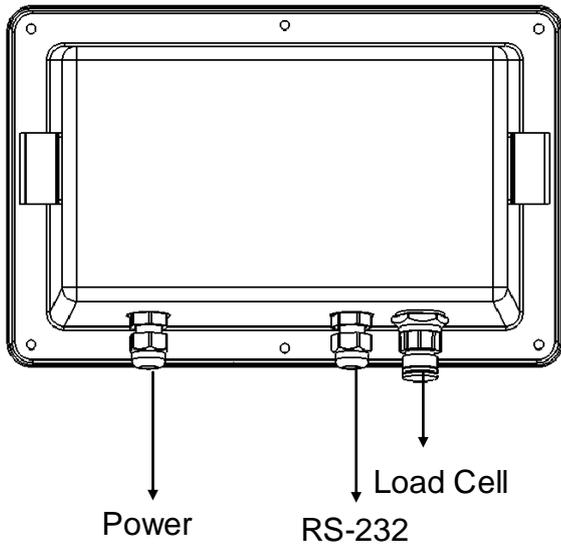
- ◆ Analogue Input: Input Sensitivity $0.3\mu\text{V/d}$ (Min.)
- ◆ Input Signal Range: $-1\text{mV}\sim+14\text{mV}$
- ◆ Input Zero Range: $-1\text{mV}\sim+5\text{mV}$
- ◆ Load Cell Excitation: 5V DC
- ◆ Load Cell Drive Capacity: Up to 8 x 350Ω load cells
- ◆ Non-linearity: 0.01% of full scale
- ◆ A/D Resolution: 500,000 counts (Maximum)
- ◆ Operating temperature: $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$

1-3 Appearance

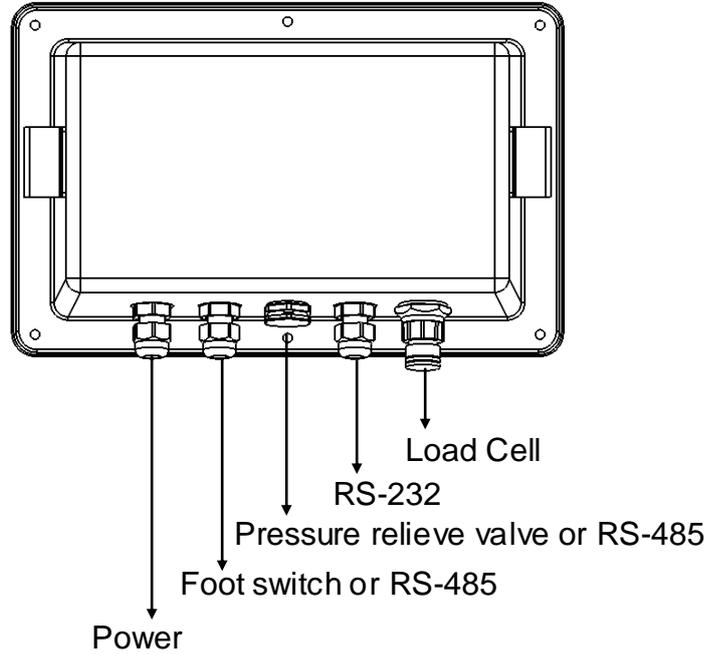




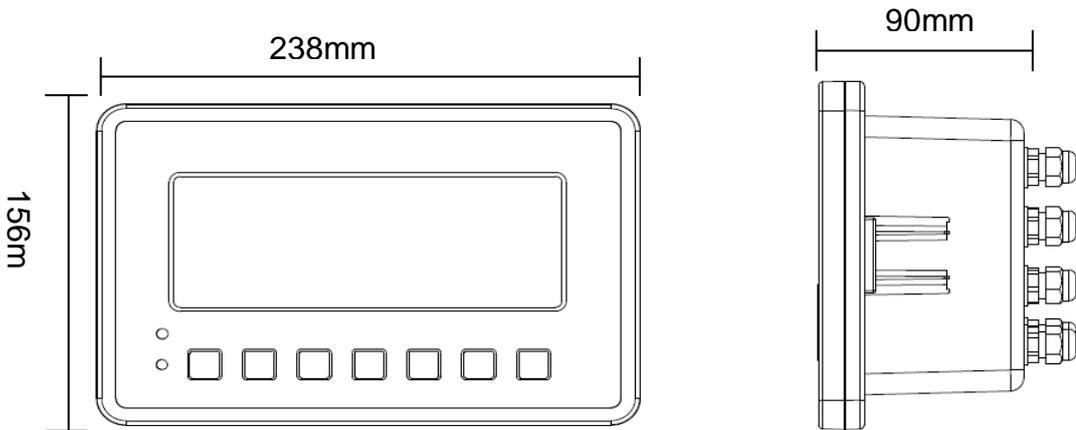
[Standard]



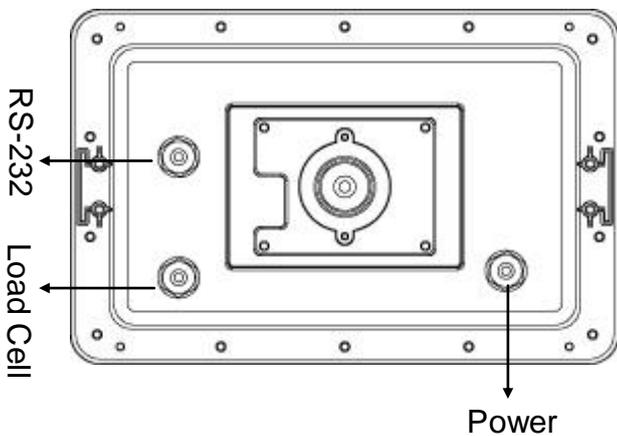
[Option]



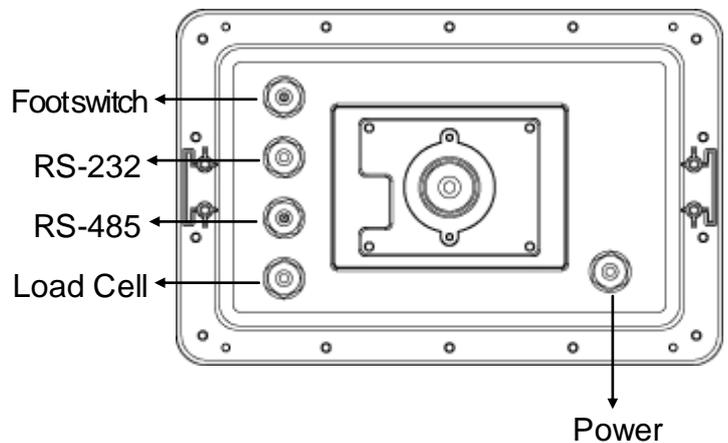
GWS



[Standard]

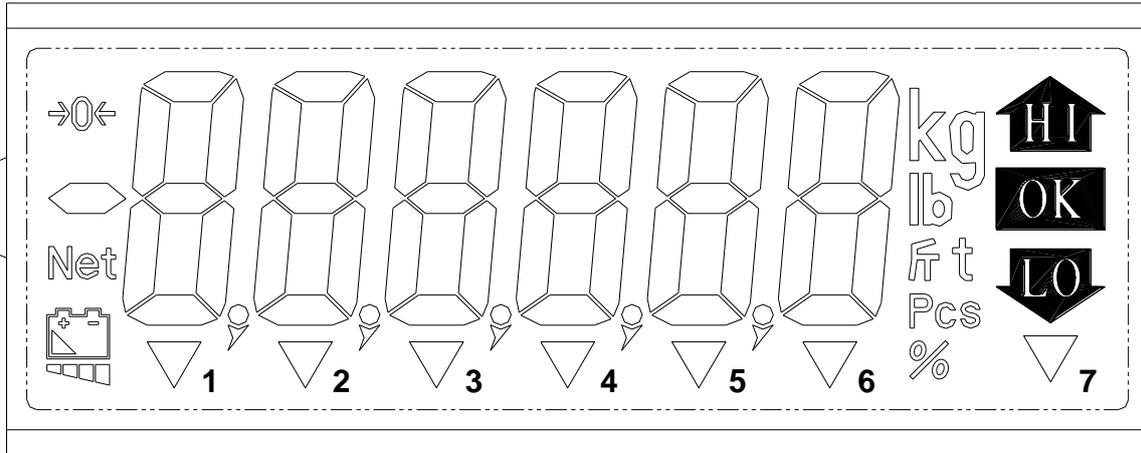


[Option]





1-4 Display Description



HI	:	Upper limit
OK	:	Value between HI and LO
LO	:	Lower limit
kg	:	Unit "kilogram"
g	:	Unit "gram"
lb	:	Unit "pound"
斤	:	Unit "hk tael" or "Taiwan tael"
Pcs	:	"Counting mode" indication
→0←	:	"Zero" indication
Net	:	"Net" indication
	:	Flashing, Low Power indication

"▽" indications description		
▽1	:	"STABLE" indication
▽2	:	"GROSS" indication
▽3	:	"Hold" indication
▽4	:	"Pre-tare" indication
▽5	:	Range 2
▽6	:	Range 1
▽7	:	"M+" indication

1-5 Power Supply

Power Supply Selection

- ① 6V / 4.5Ah rechargeable battery
- ② 110/230VAC ±15% (plugged-in)

Power Consumption

Approximately DC 31 mA (Indicator + Load Cell)

Approximately DC 65 mA (Indicator + Load Cell + Display backlight)

Approximately DC 80 mA (Indicator + Load Cell + Wireless 100M)

Approximately DC 65 mA (Indicator + Load Cell + Display backlight + Wireless 100M)

Charging Voltage

DC 10V/1A

Low Battery Warning

Please note when the () symbol keeps flashing on the display, the battery should be recharged.



- ☰ The scale will turn off automatically after a few hours when the low battery warning symbol shows up. The scale must be fully charged, before operating again.
- ☰ When the battery status indication is full, the power is about 6.1V; each block is about 0.2V; when the battery warning symbol shows up, the power is about 5.4V.

1-6 Keypad Function



: Press the key to switch the indicator on or off.



: ❶ Zero key. If the weighing value is within the range of zero balance, it can be re-zeroed. ❷ Confirm key in function operating ❸ Press this key for 3 seconds to enter backlight setting in weighing mode.



: ❶ Shift between gross weight and net weight. ❷ Press this key for 3 seconds to shift units in weighing mode. ❸ Press this key for 3 seconds to exit in simple counting mode ❹ Press this key to exit or return in function operating.



: ❶ Print key. It needs to connect with printer. According to the setting, press this key to transmit simple or completed mode format. ❷ Press this key to clear the entering numbers.



: ❶ Accumulation key. According to the setting, press this key to transmit simple or completed mode format. ❷ Press this key to move the cursor leftward when entering numbers. ❸ Press this key for 3 seconds to display in high resolution mode.



: ❶ Check accumulation counts and total weight. ❷ Press this key for 3 seconds to enter simple counting mode in weighing mode. ❸ Press this key to move the cursor rightward when entering numbers.



: ❶ Tare key. It can be tare except when the weight is negative and the maximum capacity. ❷ It is selection key in function operating. ❸ Press this key to increase number when entering numbers.

Pre-tare function:

When there is nothing on the platter and weight is zero, press  key and enter pre-tare weight. After enter pre-tare weight, press  key to confirm or press  key to exit without saving. Pre-tare mode, keypad function as following

 ⇒ upward key  ⇒ move cursor leftward  ⇒ save setting

 ⇒ clear  ⇒ move cursor rightward  ⇒ exit without saving



Compound key

+ : Only when it is set“ON”in Hold function, press these 2 keys together to call up Hold function.

+ : Press these 2 keys together to call up Hi/Lo/Ok setting.

+ : Press these 2 keys together to clear the accumulation data when there is no weight in accumulation mode. M+ indication “▼”disappears.

High Resolution : Press key for 3 seconds to shift to high resolution display. And it returns to original resolution after release key for 3 seconds.

1-7 Error Messages

- ⇒The EEPROM is not working correctly. (EEPROM is missing or circuit neaby EEPROM is damaged.)
- ⇒ Zero is higher than the zero range when switching the indicator on.
- ⇒ Zero is lower than the zero range when switching the indicator on.
- ⇒ ADIC value is over the maximum range.
- ⇒ The weight of the object is over 9 divisions of the maximum capacity.
- ⇒ The weight of the object is under -1/6 maximum capacity.

1-8 Available Units

kg	1 g = 0.001 kg
g	1 g = 1 g
lb	1 g = 0.002204623 lb
lb,oz	1 g = 0.03527396 oz
Taiwan Tael	1 g = 0.02666667 Tael
H.K. Tael	1 g = 0.02645546 Tael
viss	1 kg = 0.612245 viss

1-9 Firmware Version

When power is off, hold key and press key to wait till display shows 01 AdC and then press key twice to enter 03 VEr. Press key and displays firmware version 02027 and then press key to display maintenance number 011 for 2 secs. Press key to back to last screen and displays 03 VEr.

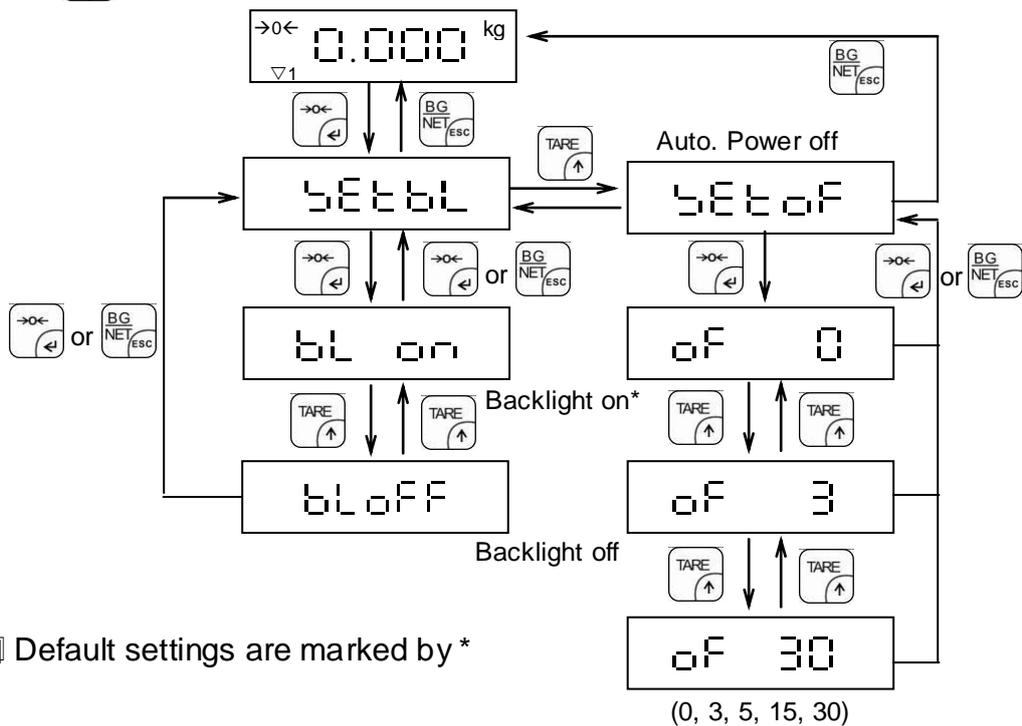


Chapter 2 General Function Setting

2-1 Backlight and Auto. Power Off Setting

Press key for 3 seconds to enter backlight setting (SEt bL). Press key again to confirm. Press key to select on/oFF and press key to exit.

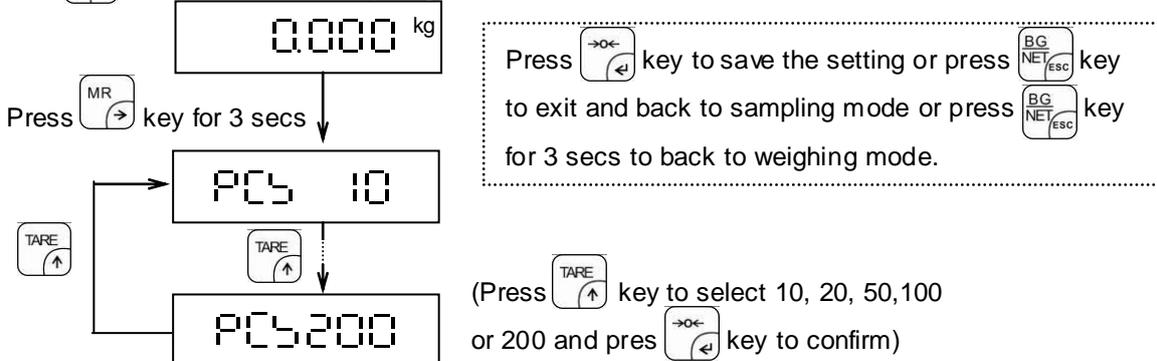
Auto. Power off setting: Press key for 3 seconds to enter backlight setting (SEt bL), and then press key to select SEt oF. Press key again to confirm. Press key to select time 0, 3,5,15 or 30 min. After selecting time, press key to save the setting or press key to exit.



Default settings are marked by *

2-2 Simple Counting Mode

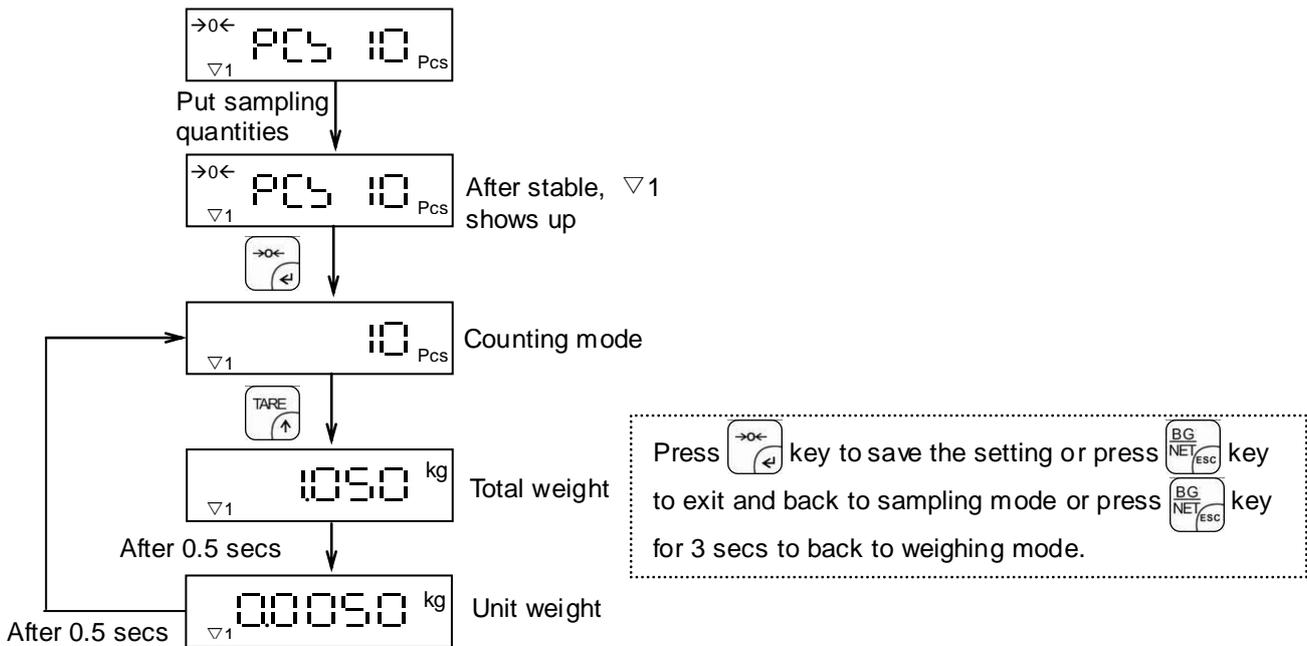
In weighing mode, hold key for 3 seconds to enter simple counting mode and display shows "PCS 10". Use key to select sampling number 10, 20, 50,100 or 200.



Select a sampling number, and put appropriate weight on platter, and press key. Display shows "-----". The scale enter counting mode after weight is stable, and display shows the sampling number.



- Press key before finishing sampling, it will exit and back to weighing mode.
- After Power-off, the scale automatically memorizes the sampling number, and it is available when “Pcs” unit is selected next time.
- When the setting “automatic average unit weight” is turned on, if the object on platter > the previous sampling number more than 5 pcs, and also <200% the previous sampling number, the scale will execute unit weight calibration automatically.



2-3 Accumulation

Manual Accumulation

Please set as following: P2 CoM \Rightarrow ModE \Rightarrow Pr2.

Manual accumulation will sum up the individual weighing values into the memory by pressing key. This can be repeated 99 times or up to the capacity of the system.

To check accumulation counts and accumulation weight by pressing key.

To print by pressing key.

To clear the accumulation data when there is no weight by pressing + keys. Then M+ indication “ ∇ ” disappears.

Auto. Accumulation

Please set as following: P2 CoM \Rightarrow ModE \Rightarrow Auto.

Auto. accumulation will sum up the individual weighing values into the memory automatically. This can be repeated 99 times or up to the capacity of the system.

To check accumulation counts and accumulation weight by pressing key.

To print by pressing key. To clear the accumulation data when there is no weight by pressing + keys. Then M+ indication “ ∇ ” disappears.



Examples for Manual Accumulation

Setting as following: P2 COM ⇒ Lab2/Prt 1

No.: 1
G: 5.000kg
C: 5.000kg

1 First weighing

No.: 2
G: 3.000kg
C: 8.000kg

2 Second weighing

No.: 3
G: 2.000kg
C: 10.000kg

3 Third weighing

Total
No.: 3
C: 10.000kg

4 Number of weighings
 print

Setting as following: P2 COM ⇒ Lab0/Prt0

G: 5.000kg

1 First weighing

G: 3.000kg

2 Second weighing

G: 2.000kg

3 Third weighing

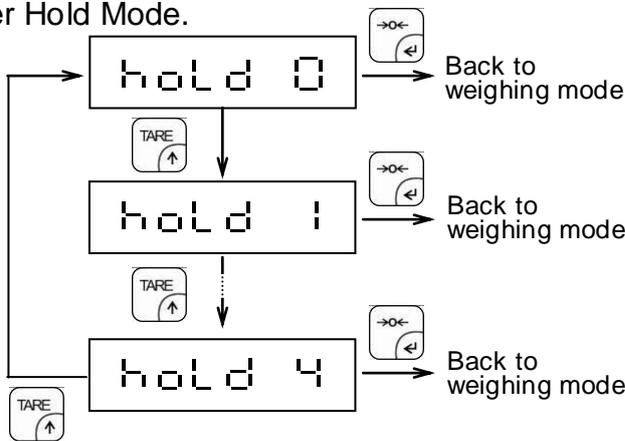
Total
No.: 3
C: 10.000kg

4 Number of weighings
 print

Please see Appendix 1 Output Format (A)

2-4 Hold Mode (Animal)

When the animal mode is enabled (P4 oth → AnM is set to on), press + keys to enter Hold Mode.



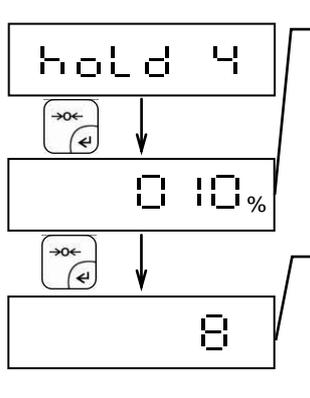
Press key to save the setting or press key to exit with out saving and back to weighing mode.

(Press key to select 0, 1, 2, 3 or 4
press key to confirm)

- hold 0 : Hold mode disabled
- hold 1 : "Peak hold" mode: The scale keeps displaying the maximum weight when the weight is continually changing. Press any key to exit this mode.
- hold 2 : "Stable hold 1" mode: When the weight is stable, the LCD shows the current weight value (Not changeable due to external variables). Press any key to exit this mode.
- hold 3 : "Stable hold 2" mode: When the weight is stable, the LCD shows the current weight value (Not changeable due to external variables). When the weight backs to zero(<10e), the hold mode is cancelled automatically.
- hold 4 : "Animal scale hold" mode: When the scale returns back to zero, the display shows " - - - - - ". After the animal or object is on the platter and the scale becomes stable, the display shows the weight value and hold. Then when the animal or object is off the platter, the display shows " - - - - - " (or the weight is less than 10e) and the hold function is off. If the scale is hardly stable when the animal is on the platter, the scale shows the average weight in 10 seconds and holds the status.



Hold Mode (Animal) Setting hold 4



Error range setting (1%~100%)

Press key to adjust; Press key to confirm

Press or key to move cursor

Default setting = 10%

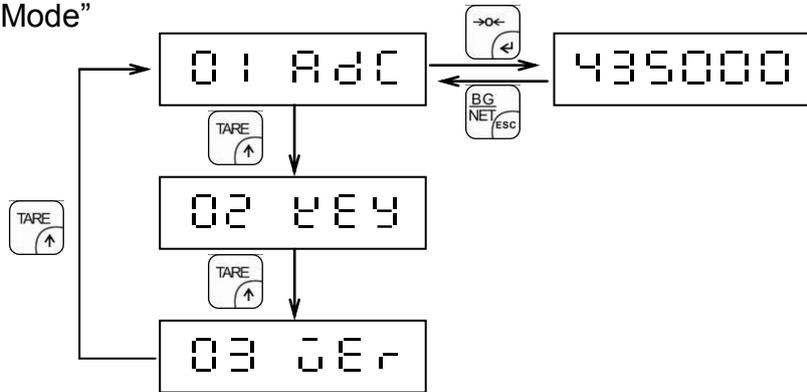
Counts averaging setting

Press key to select 1, 2, 4, 8, 16, 32, 64

Press key to confirm. Default setting = 8

2-5 Self-Test Mode

When power is off, hold key and press key to wait till display shows 01 AdC to enter "Self-Test Mode"



01 AdC Internal Value Mode (must hook up full-bridge Load Cell to test)

- ① Press key and display shows internal value
- ② Please check the internal value is within range
- ③ Check whether the backlight is on
- ④ Press key to back to last screen, the display shows 01 AdC

02 EEY Keypad Test Mode

- ① Press key to enter, display shows EEY 03
- ② Keypad's internal cod: = 04, = 05, = 07, = 06, = 03
- ③ Press key to back to last screen, the display shows 02 EEY

03 UEr Firmware Version Display Mode

- ① Press key to enter, display shows the firmware version 02027
- ② Press key again, the display shows maintenance number 011 for 2 seconds
- ③ Press key to back to the last screen, display shows 03 UEr

Back to the Last Screen

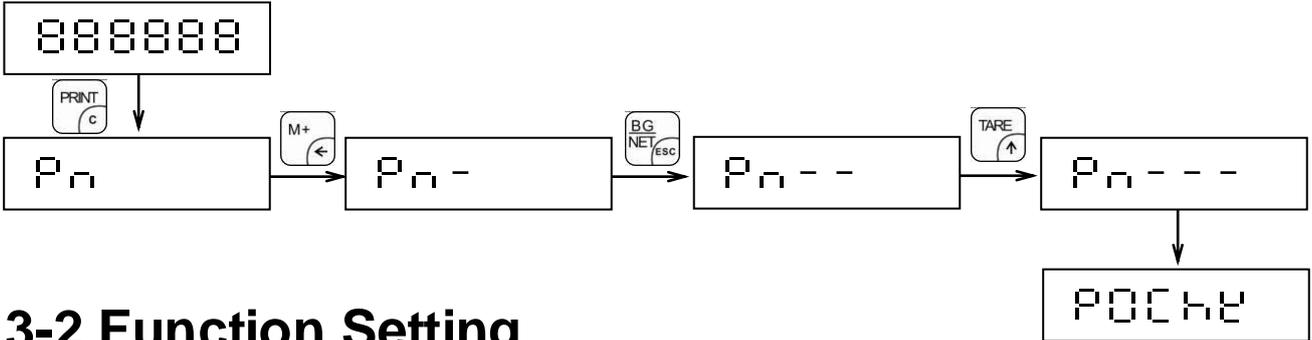
Press key, exit self-test mode, the scale will reboot automatically.



Chapter 3 Further Function Setting

3-1 Enter Function Setting

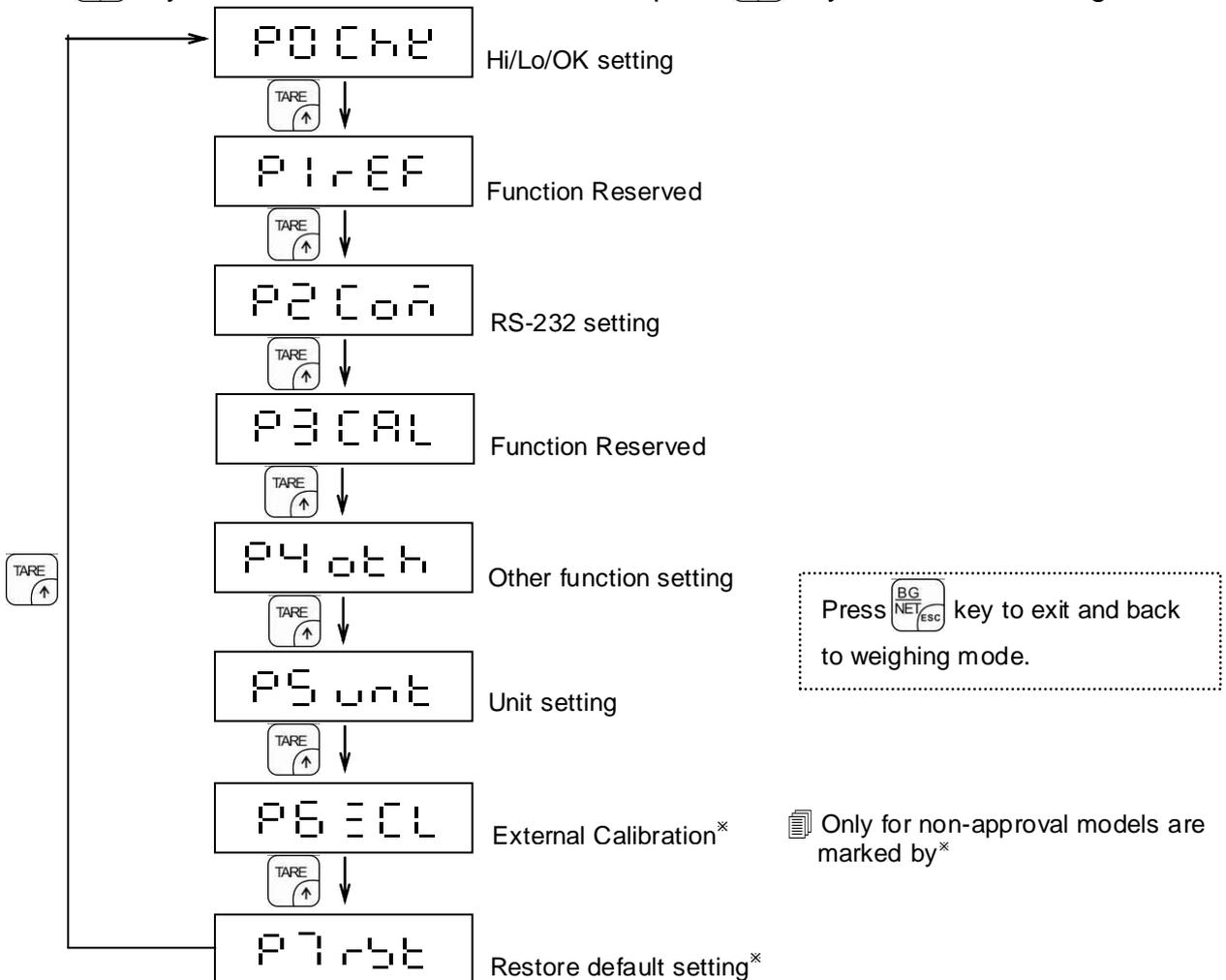
Power on the scale and before the scale counts down to zero, press key first. And then press , , keys in order and within 10 seconds to enter Function setting. If you press the wrong key, please press key again and press three keys in order before entering weighing mode.



3-2 Function Setting

Switch the switch SWA1 back to the LOCK position for approval models, while switch the switch SWA1 to the ADJ position for non-approval models.

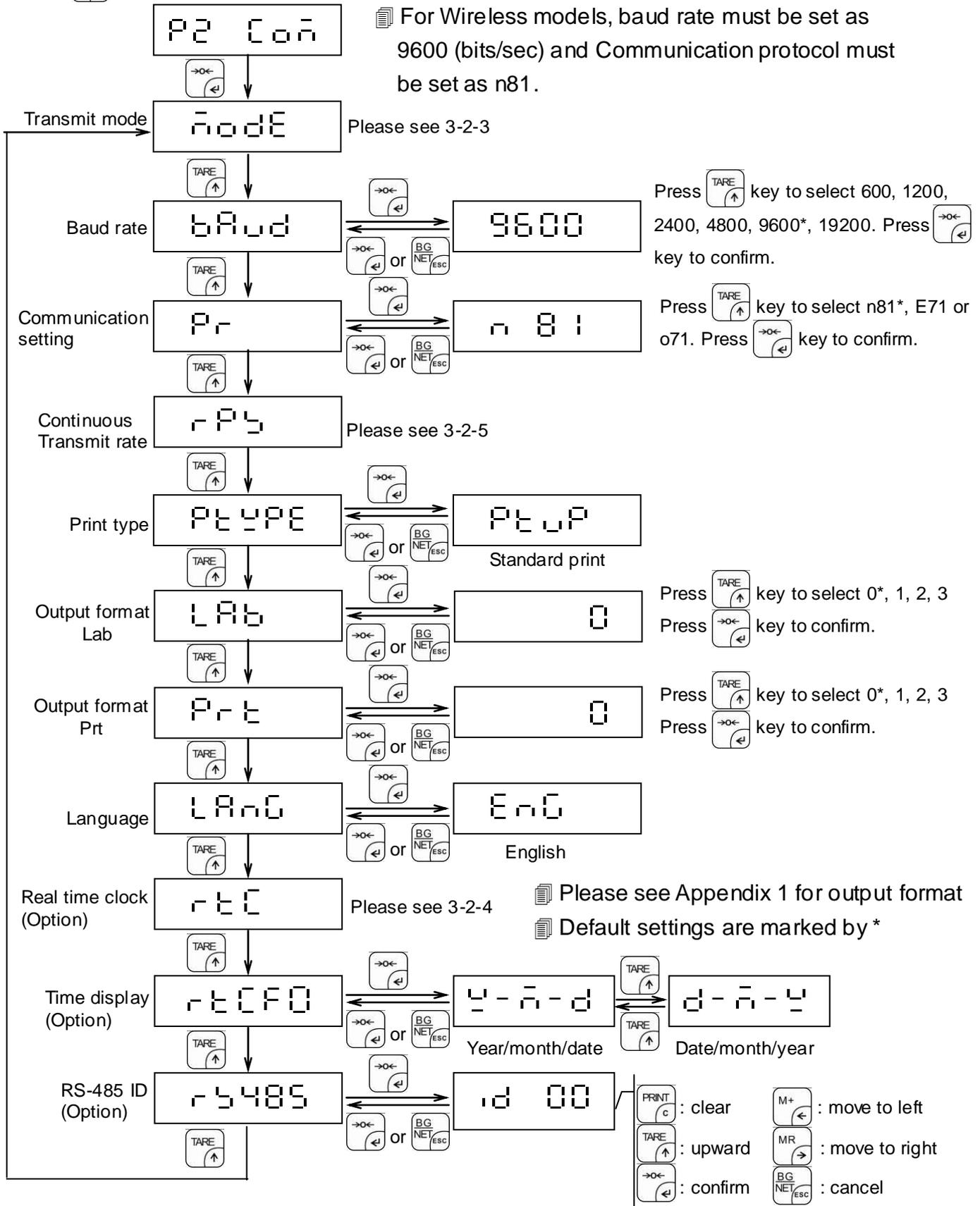
Press key to select function. After selection, press key to enter the setting.





3-2-2 RS-232 Setting (P2 CoM)

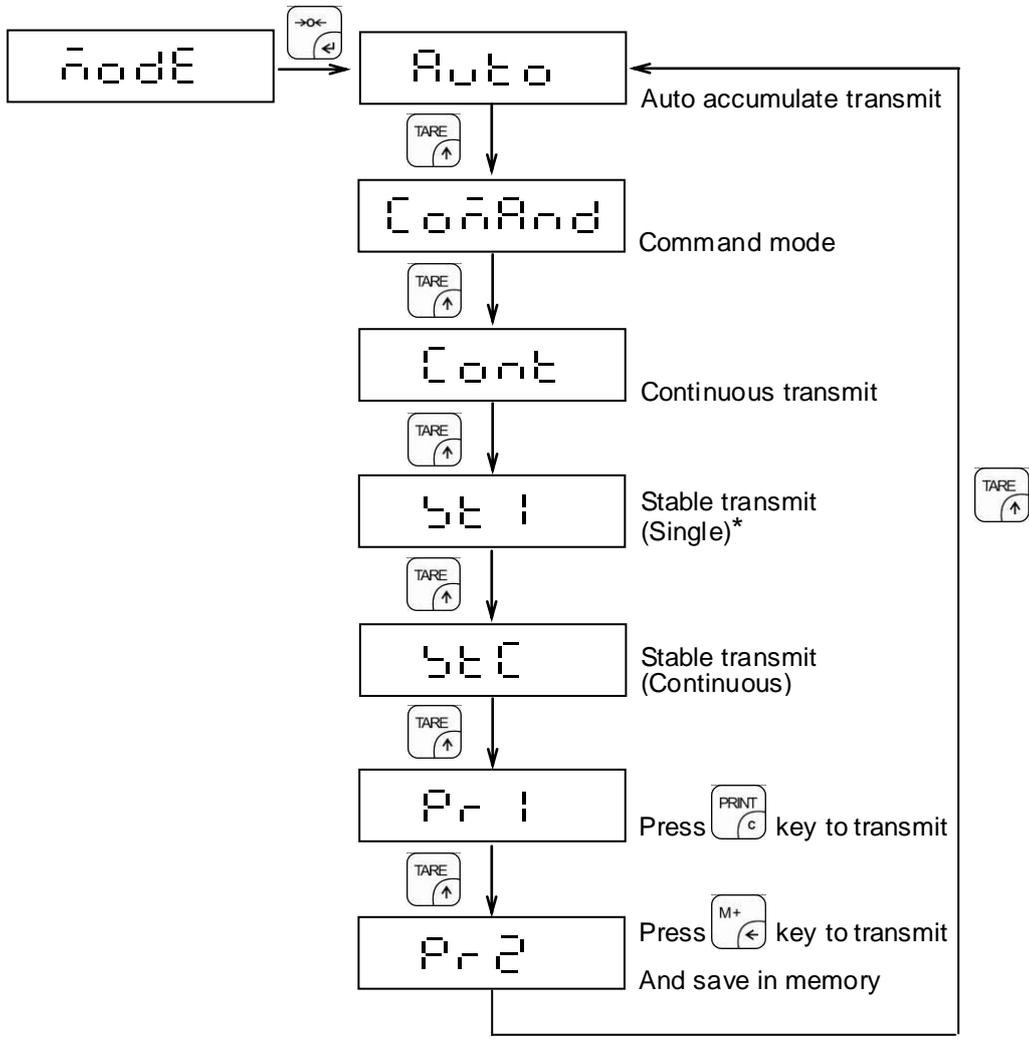
Press key to select "P2 CoM". In each setting, Press key to save the setting or press key to exit without saving and back to last setting.





3-2-3 Transmit Mode Setting

After enter RS-232 setting, press key to select transmit mode. After selecting, press key to save the setting and back to last setting (ModE). After all settings finished, press key to back to weighing mode.



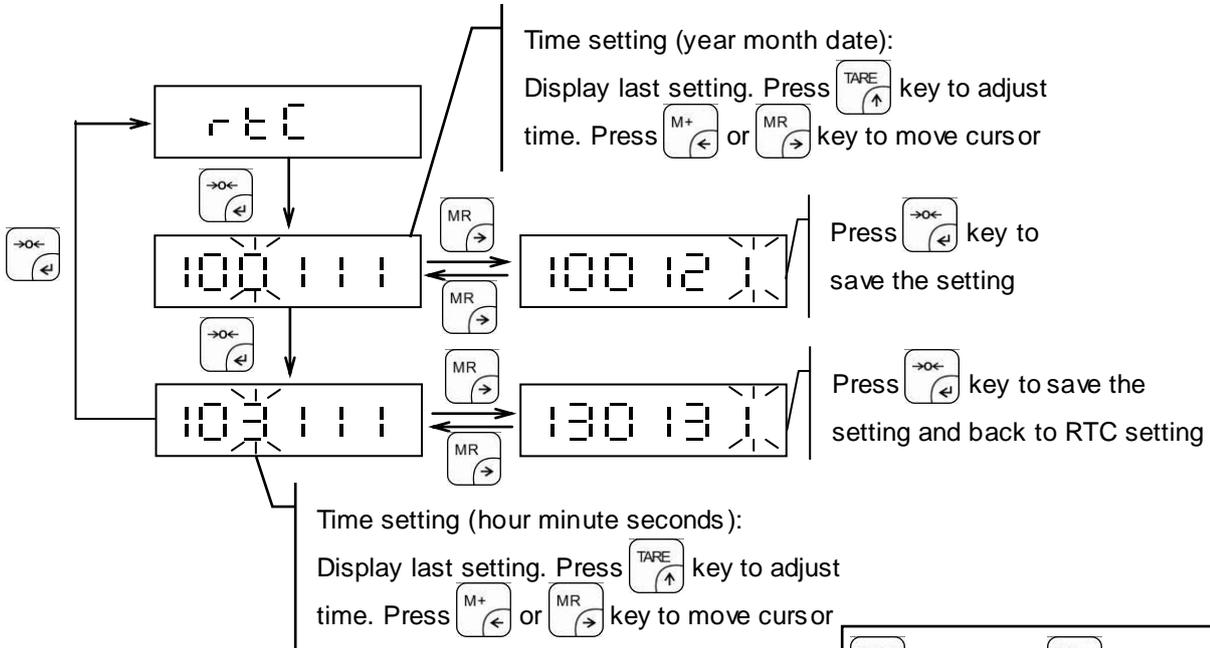
Press key to exit and back to weighing mode.

- ☞ Please see Appendix 1 for output format.
- ☞ Default settings are marked by *



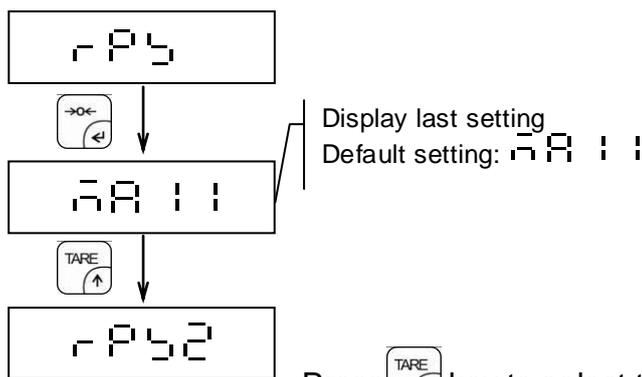
3-2-4 Real Time Clock Setting

The cursor stays at the third digits. After entering numbers, press key to save the setting or press key to exit without saving.



: clear	: move to left
: upward	: move to right
: confirm	: cancel

3-2-5 Continuous Transmit Rate (rPS)



Press key to select transmit rate in cycle and press key to save the setting

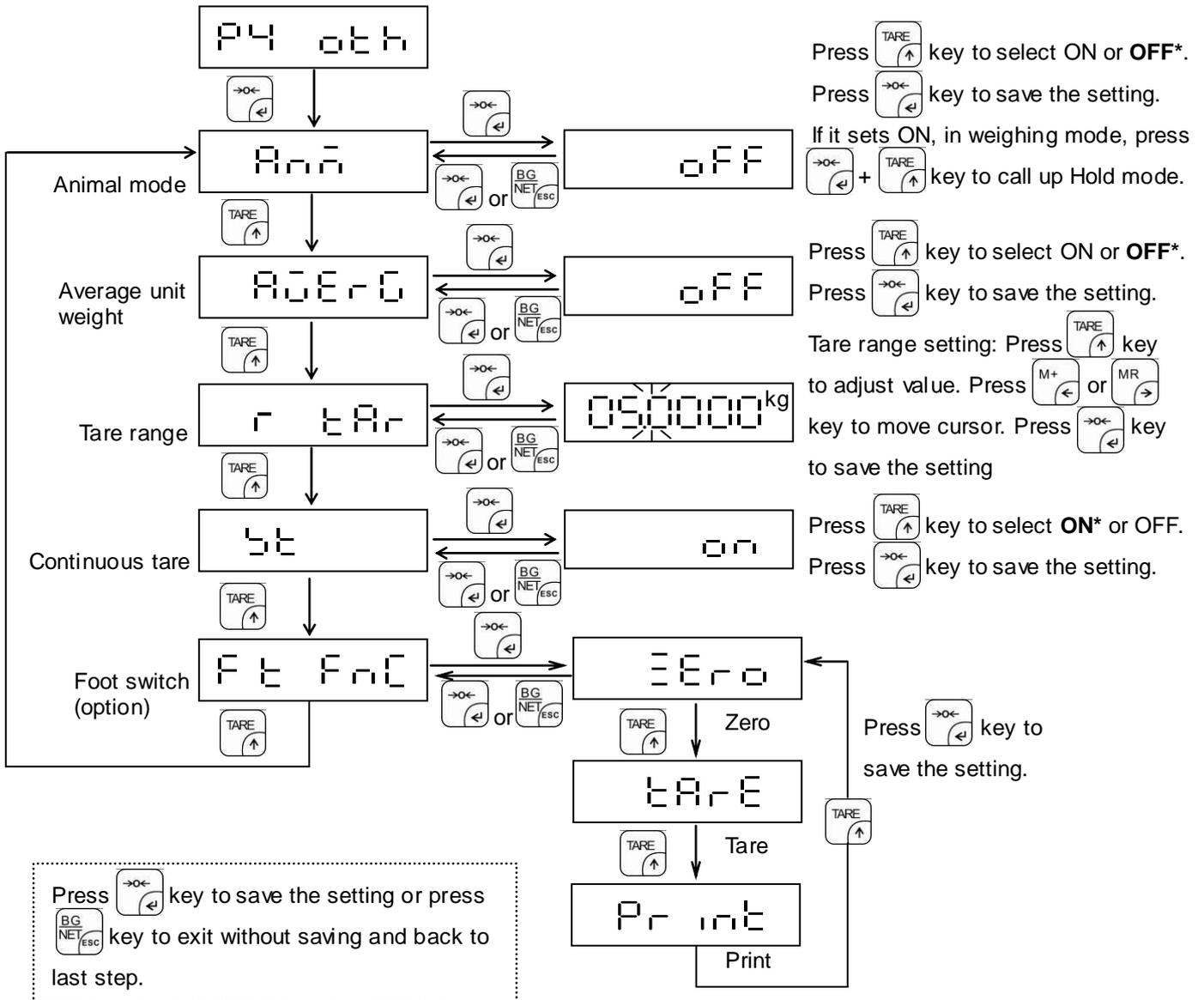
- rPS 1 ⇒ 1 time/sec
- rPS 2 ⇒ 2 time/sec
- rPS 4 ⇒ 4 time/sec
- rPS 8 ⇒ 8 time/sec
- rPS 16 ⇒ 16 time/sec
- rA 1 1 ⇒ More than 16 times/sec (default)

Actual output times vary by hardware implements



3-3 Other Function Settings (P4 oth)

Enter other function settings "P4 oth" and press key to enter sub-menu setting. Press key to select ON or OFF in Animal mode and Auto. average unit weight. After selecting, press key to save the setting or press key to exit without saving. After all settings finished, press key to back to weighing mode.

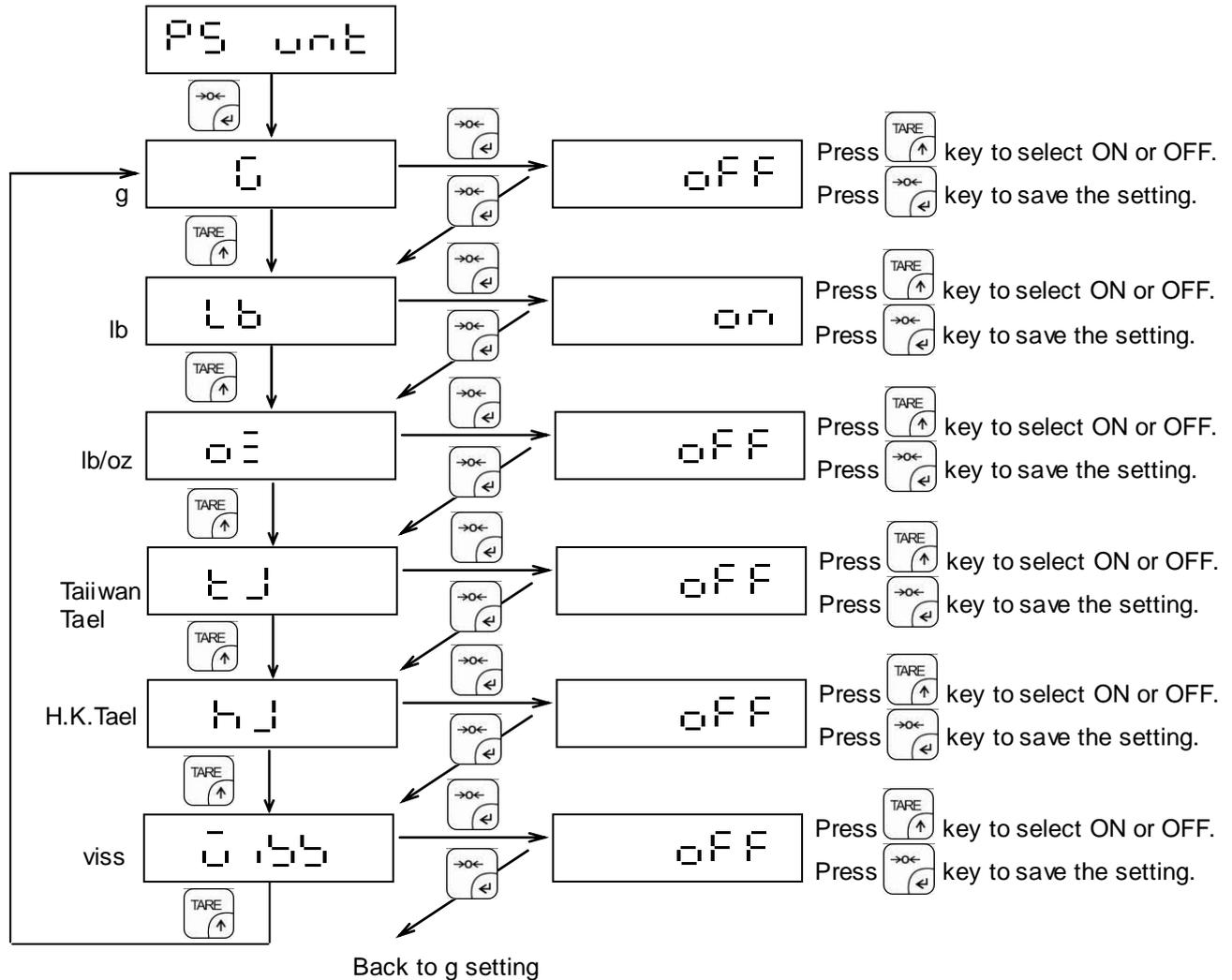


- Animal mode: Use when weighing animals that are in motion. The weight value can be held for maximum weight or when the weight is stable depending on the hold function setting.
- Average unit weight: If the weight of the objects on platter > the previous sampling number more than 5 pcs, and also < 200% the previous sampling number, the scale will automatically adjust the unit weight.
- Continuous tare: If this function off, it only can be tare for once. It can not be tare until tare cancel; If this function on, it can be tare continuously except gross weight > capacity.
- Default settings are marked by *



3-4 Weight Unit Setting (P5 unt)

Kg is the primary weight unit. To turn on/off other weight units, please enter weight unit setting "P5 unt" and press key. Press key to select ON or OFF. Press key to save the setting or press key to exit without saving. And then enter next unit setting. Press key to back to weighing mode after all the setting finished. When there is no load on platter in weighing mode, press key for 3 seconds to shift units.



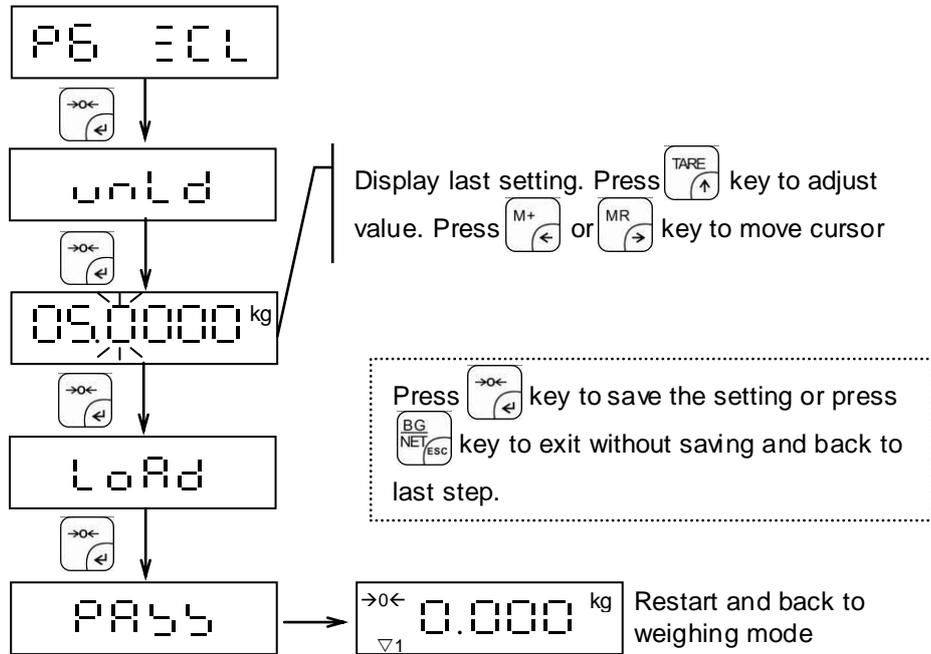
- ☞ Only one of the "tJ", "hJ" and "VISS" can be turned on at a time. Before turning one of them on, please make sure the other two are off. Otherwise, the screen will display "Error" to indicate an error has occurred and the setting is not saved. "G", "Lb", "oZ" are freely to set as "on" or "off".
- ☞ In dual range, viss unit indicator is located in the originally Range1. When Range2 indicator is off, it means currently is in Range 1.
- ☞ It will display the previous saved setting first.



3-5 External calibration (P6 ZCL)

This function is not available for approval models.

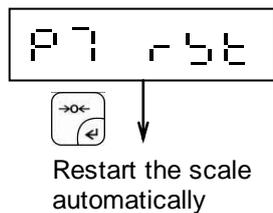
Enter external calibration "P6 ZCL" and press key to confirm and enter sub-menu or Press key to exit without saving.



3-6 Restore Default Setting (P7 rSt)

This function is not available for approval models.

Enter restore default setting "P7 rSt" and press key to restart the scale.



The defaults are included the following:

- 1) External weight calibration
- 2) HI/LO/OK setting values
- 3) Parameters in P1 rEF
- 4) Sampling settings for the counting function
- 5) Backlight and autopower off setting

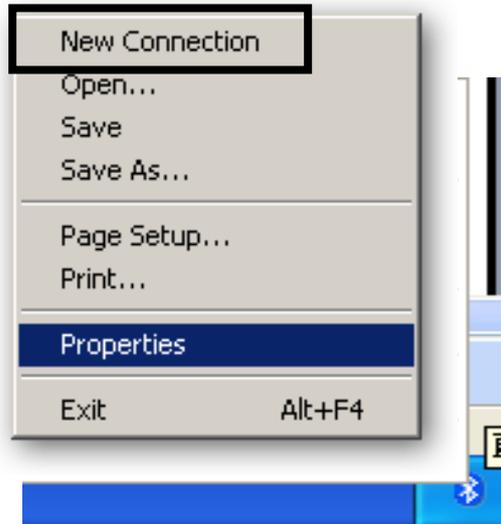


Chapter 4 Wireless Connection Instruction

☞ Baud rate must be set as 9600 (bits/sec) and Communication protocol must be set as n81.

Step 1: Connect to your device

1. Enable Wireless on your computer. Right-click on the  icon of the bottom-right corner on taskbar, highlight “**New Connection**” and left click.



Due to the different bluetooth supplier software could be installed, the setting dialogs shown below are just for reference.

2. Check “**My device is set up and ready to be found**” in the dialogue box.





3. If the device is ready, the device names **Device-C1** or **C2** will be found. Double-click on Device-C1 or Device-C2.



4. Circle “**Let me choose my own passkey**”, input the passkey “111111” and click “**Next >**” button





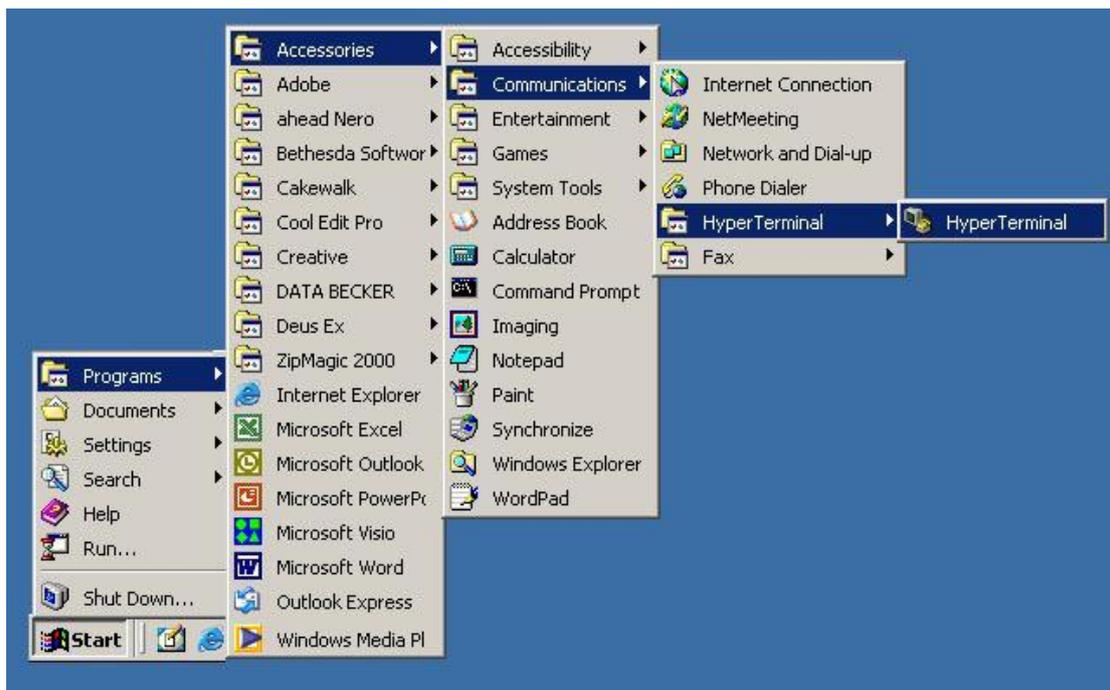
5. Device is added so far. Please disconnect COM port and click “**Finish.**”



Step 2: Connection test

To test the connection, use **HyperTerminal** recommended in Windows XP

1. go “**START**” → “**All programs**” → “**Accessories**” → “**Communications**” → “**HyperTerminal**”





2. Key in a name and select icon, then press “OK.”

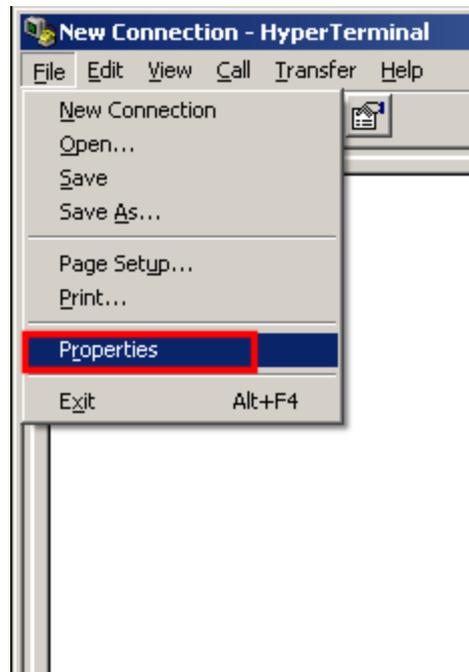


3. After select the COM port referred by step 1 point 5 and click “OK.”

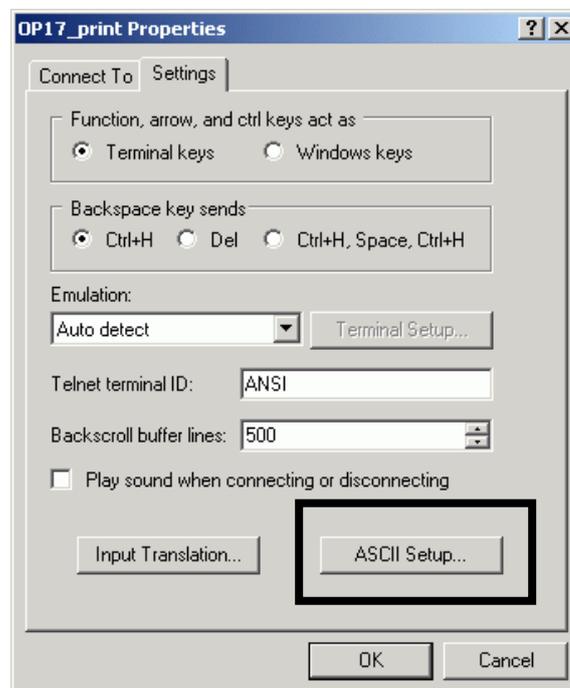




4. Click “File” → “Properties”

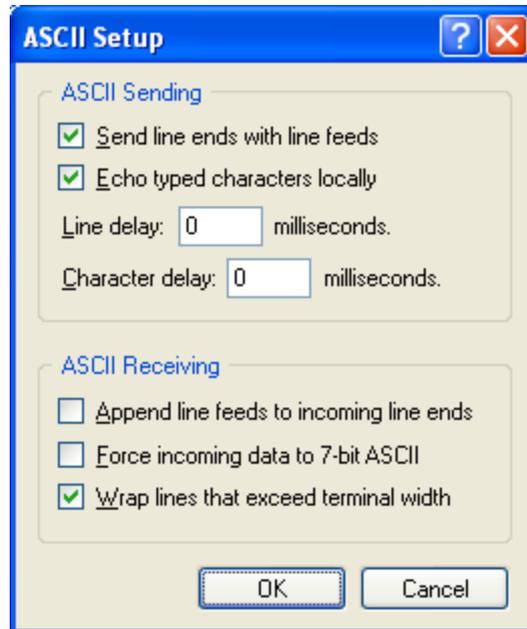


5. Select “settings” from the menu, and click “ASCII setup” on the bottom of the box.





6. Check “Send line ends with line feeds” and “Echo typed characters locally” and click “OK”.



7. Key in commands such **S**、**W**、**T**、**Z**、**P**... in the main screen to test...



Appendix 1 Output Format

(A). Accumulate output format (ModE = Auto or Pr2)

Lab Prt	0	1	2	3
0	***** G: 5.000kg *****	***** N: 5.000kg T: 5.000kg G: 10.000kg *****	***** G: 5.000kg C: 10.000kg *****	***** N: 5.000kg T: 5.000kg G: 10.000kg C: 10.000kg *****
1	***** No.: 1 G: 5.000kg *****	***** No.: 1 N: 5.000kg T: 5.000kg G: 10.000kg *****	***** No.: 1 G: 5.000kg C: 10.000kg *****	***** No.: 1 N: 5.000kg T: 5.000kg G: 10.000kg C: 10.000kg *****
2	***** 2014-03-14 G: 5.000kg *****	***** 2014-03-14 N: 5.000kg T: 5.000kg G: 10.000kg *****	***** 2014-03-14 G: 5.000kg C: 10.000kg *****	***** 2014-03-14 N: 5.000kg T: 5.000kg G: 10.000kg C: 10.000kg *****
3	***** 2014-03-14 No.: 1 G: 5.000kg *****	***** 2014-03-14 No.: 1 N: 5.000kg T: 5.000kg G: 10.000kg *****	***** 2014-03-14 No.: 1 G: 5.000kg C: 10.000kg *****	***** 2014-03-14 No.: 1 N: 5.000kg T: 5.000kg G: 10.000kg C: 10.000kg *****

Quantities output format

PCS 100



(B). Continous/keys/command Output format

	,		/								k	g	CR	LF
Head 1		Head 2										unit		stop

Symbole description:

- ST Stable value
- US Unstable value
- G Gross weight
- N Net weight
- T Tare weight
- NO Number weighing processes
- C Total of all individual weighings
- <LF> Space line
- PCS Quantities

(C). Remote control Instructions

Command	Function description	Printout examples
S	Stable Weighing value for the weight is sent via the RS-232 interface	ST,G,+ 1.000 kg
W	Weighing value for the weight (stable or unstable) is sent via the RS-232 interface	US,G,+ 1.342 kg ST,G,+ 1.000 kg
T	No data are sent, the balance carries out the tare function	-
Z	No data are sent, the balance carries out the tare function	-
P	Quantity will be sent via the RS-232 interface	10 pcs



Appendix 2 ASC II Code Table

Symbol	ASC II Code	Symbol	ASC II Code	Symbol	ASC II Code
A	41H	a	61H	0	30H
B	42H	b	62H	1	31H
C	43H	c	63H	2	32H
D	44H	d	64H	3	33H
E	45H	e	65H	4	34H
F	46H	f	66H	5	35H
G	47H	g	67H	6	36H
H	48H	h	68H	7	37H
I	49H	i	69H	8	38H
J	4AH	j	6AH	9	39H
K	4BH	k	6BH	↵	0DH
L	4CH	l	6CH		
M	4DH	m	6DH		
N	4EH	n	6EH		
O	4FH	o	6FH		
P	50H	p	70H		
Q	51H	q	71H		
R	52H	r	72H		
S	53H	s	73H		
T	54H	t	74H		
U	55H	u	75H		
V	56H	v	76H		
W	57H	w	77H		
X	58H	x	78H		
Y	59H	y	79H		
Z	5AH	z	7AH		



Appendix 3 7-Segment Display Characters

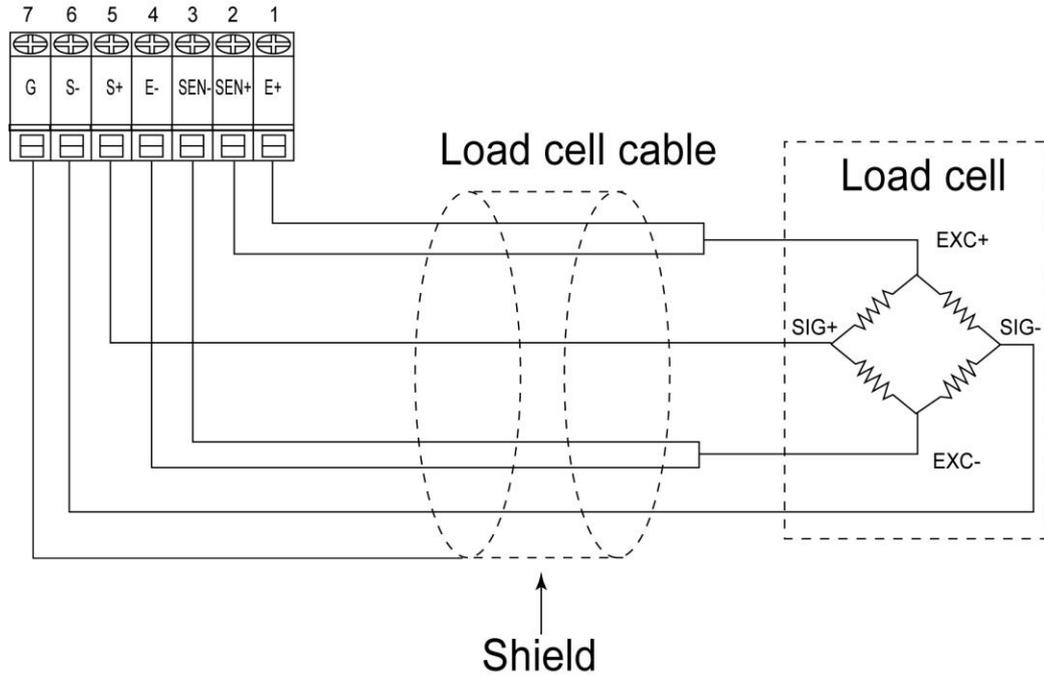
Number	Display	Letter	Display	Letter	Display
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
		M		Z	



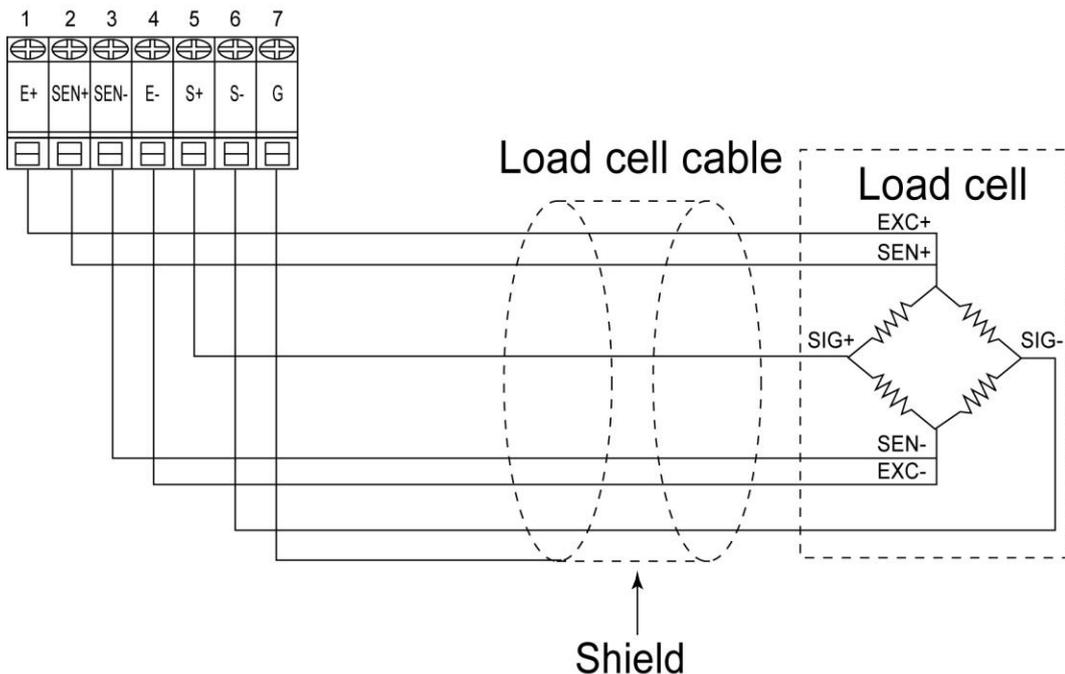
Appendix 4 Wiring Instructions

Load cell wiring method

- (1) As shown below, when a load cell is connected with a 4PIN cable, SEN+ and SEN- can be unconnected. J11 and J12 on PCB must be tin-soldered in short circuit.



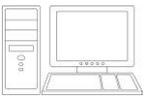
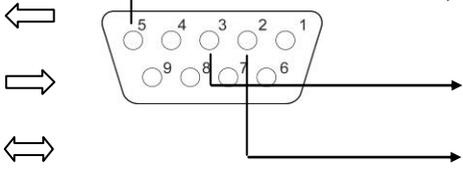
- (2) If Load Cell is 6PIN, please wire as the following diagram

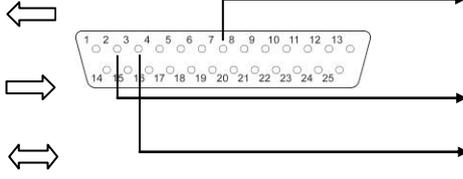




RS-232 Wiring instruction

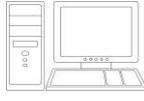
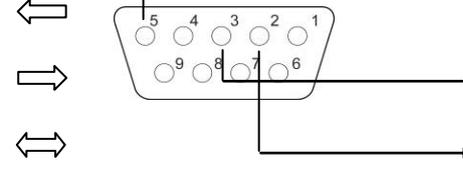
To connect RS232, please open the housing, RS-232's PIN connectors locate on the bottom-right corner of the main board. The most common connection method is using 9PIN and 25PIN, as shown below

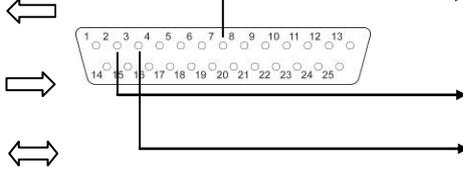
PC	PIN	Function	Female 9 PINS	Function	QWS/GWS
	2	Transmit Data		SG	
	3	Receive Data		RxD	
	5	Signal Ground		TxD	

Printer	PIN	Function	Male 25 PINS	Function	QWS/GWS
	2	Receive Data		SG	
	3	Transmit Data		RxD	
	7	Signal Ground		TxD	

RS-485 Wiring instruction

To connect RS-485, please make J17, J18 short and J15, J16 open on main board.

PC	PIN	Function	Female 9 PINS	Function	QWS/GWS
	2	Transmit Data		SG	
	3	Receive Data		DA	
	5	Signal Ground		DB	

Printer	PIN	Function	Male 25 PINS	Function	QWS/GWS
	2	Receive Data		SG	
	3	Transmit Data		DA	
	7	Signal Ground		DB	

To use other connection methods, please identify the signal and following the above principles. After it is finished, please install the housing by the instruction in the *SPECIAL NOTICE*.