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Price Computing Scale

User Manual

20key-6PS

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Thank you for purchasing Price Computing Scale. In order to operate smoothly, to last the durability, and to reduce the chance of breakdown for this product, please read this Manual carefully.

Instruction for Use

1. In order to prevent the scale from dust and static electricity, please fix the dustproof cover on the scale with double-sided adhesive.
2. The scale should not be drenched by rain or water. (If it gets wet carelessly, please wipe it dry with a cloth. If its operation is abnormal, please send it to our distributor for service.)
3. Please keep the scale in a cool and dry place. Do not store at high temperatures or damp places.
4. Please keep the scale clean and free from insect infestation.
5. To avoid impact and it is to be used under designated pressure (the weight put on the platter can not exceed the maximum capacity of the scale).
6. If the scale is not going to be used for some time, please clean it and store it in a plastic bag in dry condition. A desiccant sachet may be included to prevent moisture build up. The scale should be recharged every 3 months to prevent failure of the internal rechargeable battery.
7. The commodity should be placed in the center of platter for accurate weighing. The dimension of the weighted commodity should not exceed the dimension of platter.
8. Please release the protection screw "↺" before weighing.
9. Please operate or charge the scale in an open area. Do not squeeze the power cord to avoid wire on fire.
10. Operating temperature: -10℃ ~ + 40℃
11. Any suggestion for product is welcomed.

Preparation Before Using

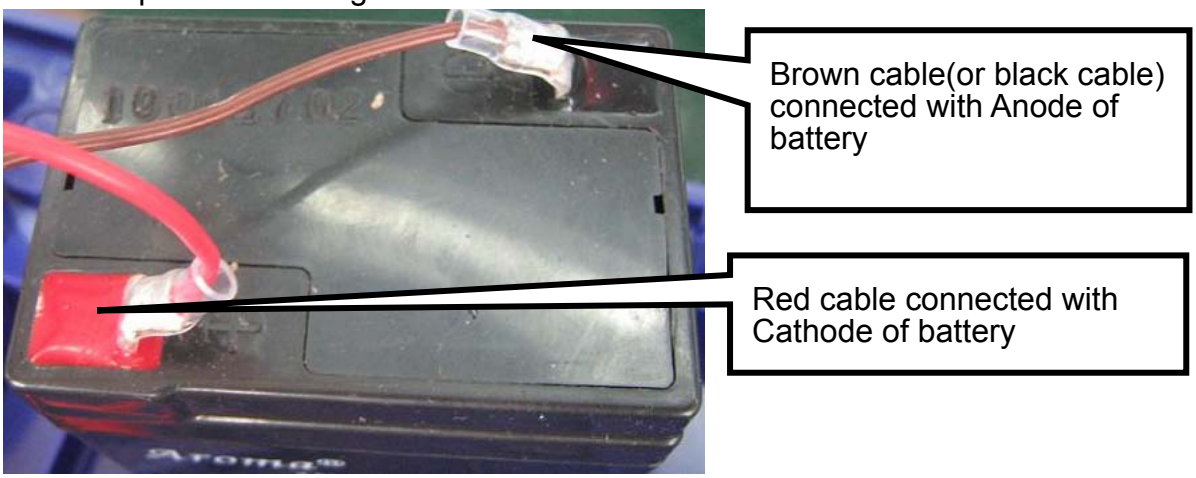
1. Put the scale on a firm level surface free for accurate weight readings. Adjust the four leveling feet to get the leveling bubble at the centre of circle.
2. Scale must be used under a stable temperature and stable air flow. Avoid direct sunlight onto the scale or near the exhaust port of ventilating system.
3. Scale must be used under individual socket to avoid the interference of other electric appliances.
4. Remove any weight that might be on the platter before the scale is switched on.
5. Please note that when  or  symbol appears on the screen, the scale needs to be charged.
6. 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℃.

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.

Chapter 1 Product Instruction

1-1 Introduction

1. High performance A/D converter
   - 0.3 uv/D high sensitivity
   - Sampling speed 15 tines/second
   - non-linear scale 0.01% full scale
   - zero point adjustable range -5mV~ +5mV
   - use range -4mV ~ +4mV
   - load cell stimulate power source 5V DC +/-2% 100mA
2. linearity calibration function
3. one group of RS232 output
4. adapter or rechargeable battery
5. LCD display
6. battery low protection
   (When battery voltage is lower than system voltage , the system will cut the power off automatically to ensure its stable and accuracy.)
7. LED backlight

1-2 Error Messages

OL ⇒ The weight value is over 9 division of maximum capacity.

E 1 ⇒ Zero value above 10% full scale.

E 2 ⇒ Zero value below 10% full scale.

E 6 ⇒ The internal value is over 350,000.

E 7 ⇒ The internal value is below 80,000.

- - - - - ⇒ If the negative weight is over 20 divisions and there is no tare weight or pre-tare weight, the display shows "- - - - - -"

1-3 Screen Display

Display Column

1. Weight

6 digits in total display the weight on platter.
The left digit is able to display the negative symbol.

2. Unit Price

6 digits in total display the unit price of objects on platter.
The decimal point floats two digits.

3. Total Price

6 digits in total display the total price of the objects on platter or the accumulation.

Symbol Display

1. **Z** : "Zero" indication.
2. T : "Tare" indication.
3. **M+** : "Accumulation" indication.
4.  : Low battery.

1-4 Power Supply

Power Selection

1. 6 V / 4 Ah Rechargeable battery
2. 110 / 220 V ±15 % AC Main power

Recharge Voltage

1. AC 110 V +10%, -15%
2. AC 220 V +10%, -15%

Power Consumption

30 mA (system+ no backlight)	About 140 hours
40 mA (system+ front display backlight)	About 100 hours
50 mA (system+ front display backlight + rear display backlight)	About 80 hours

Low Power Alarm

When the () symbol keeps flashing on the left down corner of the display, it need charging.

- The indicator will turn off automatically after 5 ~ 10 hours (approximately 1 ~ 2 hours with backlight on), when the low battery warning symbol shows up. The indicator must be fully charged, before operating again.
- When the low battery warning symbol shows up, please recharge the indicator immediately for fear of weight instability.

Chapter 2 Keyboard Function

0 ~ **9** : Number key. Press the keys to input the numbers (0 ~ 9) and to set unit price.

CE : Press the key to clear the old unit price and then input the new one if you would like to change the unit price (If the unit price has been input for 3 seconds, you can input the new one immediately).

T : Press the key to deduct the containers' weight and the symbol "◄" in Weight will appear.

Z : Weight return to zero

P1~**P5** : Press the key to preset unit price and save the unit price.

P6 : Press the key to save the presetting unit price or to correspond **0** **0** ~ **7** **9** to save the unit price

↵ : Press the key to input presetting unit price or to comfirm

There are 2 types of keyboard for 20key-6preset as follow

20key -6 PRESET keyboard

7	8	9	**P1**	**P2**
4	5	6	**P3**	**P4**
1	2	3	Z	**P5**
0	↵	CE	T	**P6**

20key-6 PRESET keyboard

7	8	9	0	**P1**	**P2**	**P3**
4	5	6	↵	**P4**	**P5**	**P6**
1	2	3	CE	Z	T	

Chapter 3 Operation Instruction

3-1 Internal Value Display Mode

Press [Z] key, when the display show "– – – – – –" ,then, press [CE] key immediately. The display will show internal value. Pres [0] to exit the internal value mode and return to the weighing mode.

3-2 Setting Up Backlight Mode (option)

<Method 1>

Press [**Z**] key, the display will show "– – – – – –" ,then press [**4**] key right away. It is "auto-backlight mode".

Press [**Z**] key, the display will show "– – – – – –", then press [**5**] key right away.
It is "backlight-off mode".

<Method 2>

Press [0] key for 2 seconds, the beeper will beep …three times.
The scale will change to backlight mode ⇒
"Auto-backlight mode" or "backlight-off mode".

Auto-backlight mode

When there is a weight on the pan which weight is over 10d or pressing any keys, the backlight will be on. After back to zero for 10 desonds (the weight is under 10d), backlight will be off. (d=division)

The scale will keep the auto-backlight mode after the next bootup, if the auto-backlight mode is set before last power-off.

3-3 Settings of Pricing Unit

❶ Selecting the pricing unit:

Double press [↵] key, the display will show the current pricing unit:

❷ Press [1] ~ [6] to select pricing units. The scale will be back to weighing & price mode. The display will show the symbol indication "◀" for the request pricing unit.

1 ⇒ kg 2 ⇒ 100g 3 ⇒ HK catty
4 ⇒ tl.T 5 ⇒ lb 6 ⇒ oz

If the price unit "lb" is seleteced, the displaying will show three symbols "◀" .
If the price unit "oz" is selected, the displaying will **not** show any symbol "◀" .

3-4 6 Prset Operating Instruction

1. Preset Mode

1.1 Preset Unit Price (P1-P5 Preset mode)

	Weight	Unit Price	Total
1	0.000	0.00	0.00

Both the scale is empty and there is weight on are ok

2	0.000	1.23	0.00

Input the unit price you need by pressing number key [0]-[9] in Unit Price

3 Press "↵" after inputing unit price，and then press any key of [P1]-[P5]，the input unit price will be recorded in the corresponding place

1.2 P6 Preset Unit Price Mode

After the above 2 of 1.1,press "↵" then press P6，if the number key 00~79 are not input within 2 seconds，memory P6 directly ；If the any group of number key 00~79 are input within 2 seconds，the unit price will be recordedin the place you need.

2. Calling Preset Unit Price Mode

2.1 Calling Preset Unit Price (P1-P5)

	Weight	Unit Price	Total
1	0.000	0.00	0.00

Both the scale is empty and there is weight on are ok

2	0.000	1.23	0.00

Press [P1]-[P5] you can call input unit price

2.2 P6 Calling Preset Unit Price

After pressing P6，if the number key 00~79 are not input within 2 seconds，the unit price of P6 is called directly ；If the any group of number key 00~79 are input within 2 seconds, the unit price of this group is called.

3-5 G Value Adjustment

Steps:

1. Press [0] key and do not release, and then power on to enter int G value adjustion mode.
2. Press [T] key to search the historic G value data.
3. Press [P2] key to set and confirm G value.
4. Press [0] ~ [9] key to input the value.
5. Press [CE] key to shift the flashing digit one space to left.
6. Press [↵] key to exit.

It can be revising the G value in 9 times.

G value range is from 9.78031 to 9.83217.

Chapter 4 RS232 Function Setting(option)

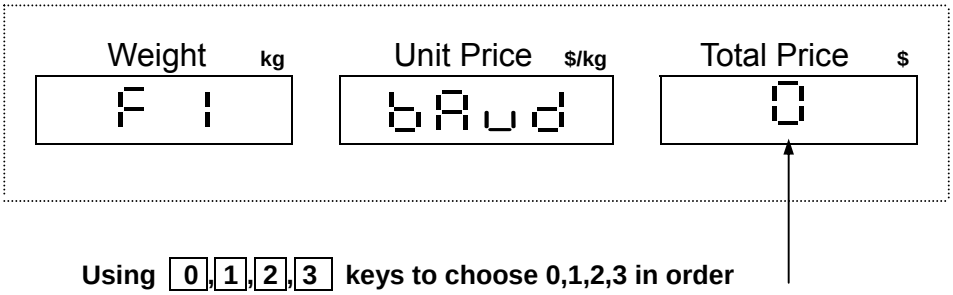
Press [P5] key do not release, and turn power on to enter function setting mode.

F1 bAud ⇒ RS-232 Baud Rate

F2 SEt C ⇒ Transmission Mode (RS-232)

Press [T] key to circulate selection function.

4-1 F1 ⇒ RS-232 Baud Rate



Using [0],[1],[2],[3] keys to choose 0,1,2,3 in order

0 ⇒ 9600 bits/second

1 ⇒ 4800 bits/second

2 ⇒ 2400 bits/second

3 ⇒ 1200 bits/second

Press [T] key to enter the next setting mode.

Press [P2] key to save setting values. The scale will count backwards to zero and back to weighing mode.

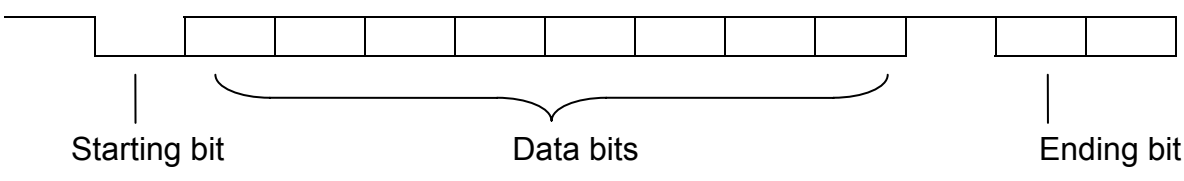
RS-232 Interface Format

Ⅰ. Type**:** UART Signal of EIA-RS0232 C

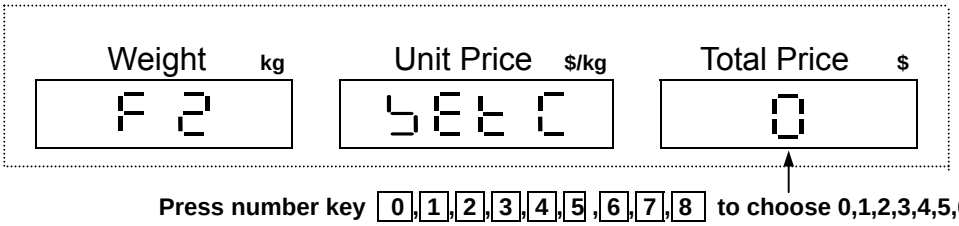
Ⅱ. Protocol:

1. Baud rate **:** 1 200, 2 400, 4 800, 9 600 bits/second
2. Data bits **:** 8 bits
3. Parity bit **:** None
4. Stop bits **:** 1 bit
5. Code **:** ASCII

(American Standard Code for Informaiton Interchange)



4-2 F2 ⇒ Transmission Mode (RS-232)



0 ⇒ Press [M+] and [MC] key transmit RS232

1 ⇒ Continuous transmission (only RS-232)

2 ⇒ Stable transmission (only RS-232)

3 ⇒ RS-232 off

4 ⇒ Continious transmission (weight transmission only)

5 ⇒ Stable transmission (weight transmission only)

6 ⇒ Continuous transmission (printing format: +001.000)

7 ⇒ Stable transmission (printing format: +001.000)

8 ⇒ Command mode

Press [T] the next setting mode.
Press [P2] to save setting values. The scale will count backwards to zero and back to weight mode.

When F2 setting is “4 ” or “5”, the RS232 format is as below.

4 ⇒ Continious transmission (weight transmission only)
5 ⇒ Stable transmission (weight transmission only)

When current weight is 10KG, the format is as below.

10.000 (In stable transmission, it only output once. You need put it up again and the scale will read next data)
10.000
10.000
10.000

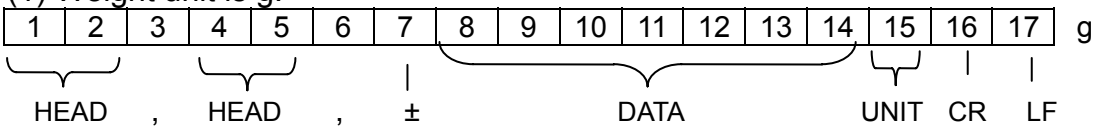
When F2 setting is “8”, the command format is as below.

Input order ‘W’ in PC, the scale will reply the weight to PC, for example +004.000

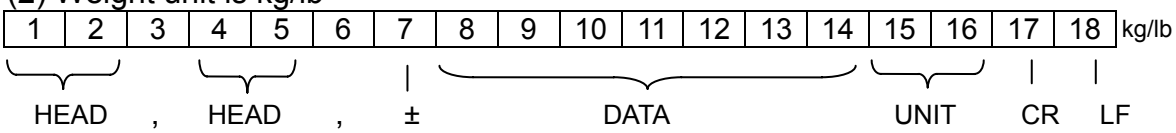
RS232 DATA FORMAT

Stable transmission **or** Continuous transmission

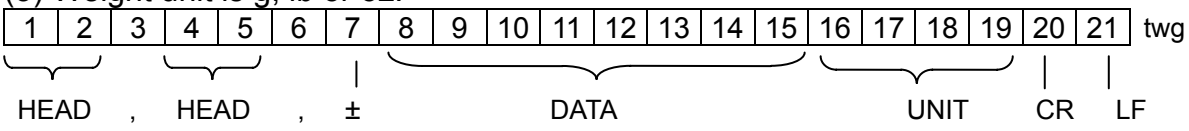
(1) Weight unit is g.



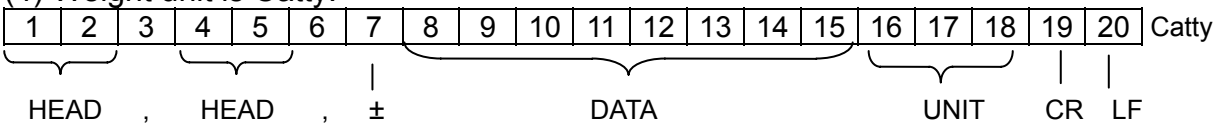
(2) Weight unit is kg/lb



(3) Weight unit is g, lb or oz.



(4) Weight unit is Catty.



HEAD1 (2 BYTES)	HEAD2 (2 BYTES)
OL - Overload , Under load	
ST - Display is Stable	NT - NET Mode
US - Display is Unstable	GS - GROSS Mode

DATA (7 or 8 BYTE)

2D (HEX) = " – " (MINUS)
2B (HEX) = " + " (PLUS)
2E (HEX) = " . " (DECIMAL POINT)

UNIT (2、3 or 4 BYTE)

kg = 6B (HEX) ; 67 (HEX)
lb = 6C (HEX) ; 62 (HEX)
tl.T = 74 (HEX) ; 6C (HEX) ; 2E (HEX) ; 54 (HEX)
hkg = 68 (HEX) ; 6B (HEX) ; 67 (HEX)

Example of Transmission:

Data format for RS-232 continuous transmission are as below.

1. The gross weight (+0.876 kg) shown as below, after stable: (under no tare or pre-tare mode)

S	T	,	G	S	,	+	0	0	0	.	8	7	6	k	g	0D	0A
HEAD		,	HEAD		,	DATA								UNIT		C	LF

2. The net weight (-1.568lb) shows as below, after unstable: (under tare or pre-tare mode)

U	S	,	N	T	,	-	0	0	1	.	5	6	8	l	b	0D	0A
HEAD		,	HEAD		,	DATA								UNIT		C	LF

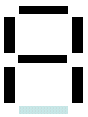
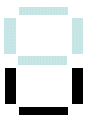
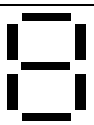
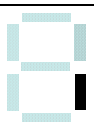
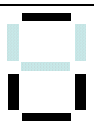
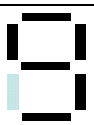
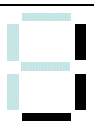
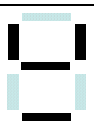
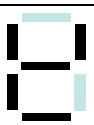
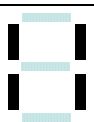
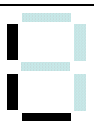
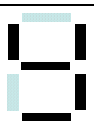
3. The net weight (+15 TW Catty and 6.24 tl.T), after stable: (under tare or pre-tare mode)

S	T	,	N	T	,	+	1	5	.	0	6	.	2	4	t	l	.	T	0D	0A
HEAD		,	HEAD		,	DATA									UNIT				C	LF

4. The net weight (+15 Catty and 6.24 HK Catty), after stable: (under tare or pre-tare mode)

S	T	,	N	T	,	+	1	5	.	0	6	.	2	4	h	k	g	0D	0A
HEAD		,	HEAD		,	DATA									UNIT			C	LF

Appendix: 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