ELECTRONIC PRICE SCALES

OPERATION MANUAL

1. Introduction

The ACS series of electronic price scales are equipped with high precision load cell as primary instrument, the secondary instrument designed by using new technology and new materials such as 8951 single-chip microprocessor as main chip and A/D converted with three-integral.

The ACS series of electronic price scale are good products with reasonable prices. It has the functions of accumulation up to 99 times, overload and under-voltage alarms, auto and continuous AC/DC shift, power supply identification, auto temperature compensation, auto power-saving mode without weights for 20 seconds and unit price storage and shift (8 different prices can be saved for scale with 24 keys). Particularly, it can protect the saved data to ensure accurate weighing.

2. Measuring Performance

2.1 Accuracy

2.1.1 Class: (III)

2.1.2 Precision: 1/3000 F.S

2.2 Other parameters

Indexes of interval number (n) display, verification interval, maximum capacity, minimum capacity, zero set range, tare range, zero tracking range and limit display (overload alarm) are shown in the following table:

Table 1

Specification	3kg	6kg	15kg	30 kg	30 kg	30 kg
interval number(n)	3000	3000	3000	3000	6000	15000
verification interval (e)	1g	2g	5g	10g	5g	2g
Max capacity	3kg	6kg	15kg	30kg	30kg	30kg
Min capacity	20g	40g	100g	200g	200g	40g
Zero range	0~60d	0~60d	0~60d	0~60d	0~60d	0~60d
Tare range	0~3kg	0~6kg	0~15kg	0~30kg	0~30kg	0~30kg
Zero tracking range	0~0.5g	0~1g	0~2.5g	0~5g	0~5g	0~1g
Limit display	3.009kg	6.018kg	15.045kg	30.090kg	30.090kg	30.018

Note: e=d

2.3 Error range

Table 2

weight (described as e)	Error range	
	Outgoing inspection	Inspection after repair
0≤m≤500e	±0.5e	±1.0e
500e<m≤2000e	±1.0e	±2.0e
2000e<m≤3000e	±1.5e	±3.0e

3. Electrical Characteristics

3.1 Alternating currents characteristics

3.1.1 Working voltage:220V(+10%~-15%);50±2%Hz

110V(+10%~-15%);60±2%Hz

3.1.2 Power consumption:

LED electronic scale: Not larger than 8VA, normal power consumption lower than2VA

Fluorescence electronic scale: Not larger than 12VA, normal power consumption lower than10VA

LCD electronic scale: Not larger than 1VA, normal power consumption lower than0.2VA

3.2 Direct currents characteristics:

3.2.1 Storage battery capacity: 6V 4Ah

3.2.2 Rated voltage: DC6V

3.2.3 Backup power nonstop service time: Not shorter than 8 hours.

4. Display Characteristics

4.1 Display windows:

Weight window: 5 digits

Unit price window: 5 digits

Amount window: 6 digits

4.2 Symbol and auxiliary display

4.2.1 Weight window

4.2.1.1 Apart from displaying weight, it also has functions as shown in the table 3.

4.2.1.2 Zero position indicator lamp: at the right bottom of the weight window. It lights up to indicate that the scale is at the zero position.

4.2.1.3 Tare indicator lamp: at the left bottom of the weight window. It lights up to indicate that the tare weight is cleared away.

4.2.2 Unit price window:

4.2.2.1 Under adding mode (the weight displays "Add"), the unit price window will display the adding times. For example, it displays "01" for the first time of adding operation and so on.

4.2.2.2 AC indicator lamp: it lights up to indicate that AC is applied (commercial power). If it doesn't light up when using AC, it indicates that power supply is not well connected. Please check power cord, socket and fuse.

4.2.3 Amount window

Adding indicator lamp: at the bottom of the amount window. It lights up to indicate that the scale has entered into adding mode.

Table 3

Display	meaning	description
--------- (Mid transverse line)	A long period display, the zero position is unstable	windy or get damp
--------- (upper transverse line)	The zero position is too high	Send for repair
--------- (lower transverse line)	The zero position is too low	Send for repair
Add	Under adding mode	normal
—Lb— (alarm sound)	Voltage is lower than 5.4± 0.1V	Charge immediately
—OL— (alarm sound)	overload	Remove goods immediately
—NO (alarm sound)	Circuit integrator doesn't work	Send for repair
0	Under power-saving mode	normal

5. Operation

5.1 Preparation before use

5.1.1 Insert the AC power plug at the right side at the bottom of the scale; put the scale on a solid and smooth platform. The scale should avoid vibration, violent air current, direct sunshine and high temperature.

5.1.2 Adjust four level legs to make the spirit bubble in the level gage is located in the center of the inner circle, and make sure that four level legs are supported on the platform reliably, then fasten them with clamp rings.

5.1.3 While placing the scale pan, check the moth-proof ring for free motion. The ring that gets stuck by the support leg for the scale pan will result in inaccurate weighing value. And the scale pan should not be touched by other things

5.1.4 After connecting with AC power, please check whether the AC indicator lamp lights up, if not, check relevant parts.

5.2 Weighing:

Not weigh goods over the max capacity. Once overload (weight window displays OL), and the buzzer gives consecutive sound, please remove the goods immediately to avoid unexpected damage.

5.3 Entering the unit price:

5.3.1 Input the unit price with ten number keys from 0 to 9 before or after loading.

5.3.2 The interval between one number and the next of the same unit price should not more than about six seconds (if over six seconds, the system will clear the previous value automatically)

5.3.3 If the weight window displays negative value (eg. Negative tare weight), the amount window will display "----------", which indicates no amount.

5.3.4 If the amount window displays"----------", it indicates that the accumulation sum is over 9999.99 (USD)

5.4 Tare:

When weighing bulk goods, put the container on the scale pan, then press key [TARE] and wait for the weight window displays "000.00", indicating that the scale is ready for weighing. Put the goods into the container, and the weight window will display the net weight.

Note: tare weight + net weight <max capacity

5.5 Saving, changing the unit price

Saving: first input the unit price you want to save by choosing ten digit keys from 0 to 9, then press key [SAVE] , and then press key [Mx] (x=1~8), the unit price will be saved (the original unit price saved in the key[Mx] will be replaced by the new one)

5.6 Adding:

When a customer buys many goods with different prices, this scale can add amount one by one and get the total amount.

For example:

Goods A, 1.500kg, USD5.00/kg; Goods B, 0.700kg, USD8.00/kg;

Please operate as follows:

1). Put the goods A on the scale pan, the weight window will display "1.500" (kg). Input the unit price "5.00" (USD/kg), the amount window will display "7.50" (USD);

2). Press key [ADD], the adding indicator lamp will light up to indicate the scale is under adding mode. The weight window will display "Add01", and the amount window will display "7.50" (USD).

3). Remove the goods A and wait for that the scale returns back to the weighing mode;

4). Put the goods B on the scale pan, the weight window will display "0.700" (kg), then input the unit price "8.00" (USD/kg), the amount window will display "5.60" (USD);

5). Press key [ADD], the adding indicator lamp will light up to indicate the scale is under adding mode. The weight window will display "Add", the unit price window will display "02", and the amount window will display"13.10"(USD).You can continue the adding operation as the above steps up to 99 times.

5.7 Clearing:

5.7.1Under the adding mode, press key [C], the unit price window will display "Clr", and the adding indicator lamp will be out which indicates that the scale is not in adding status, and you can operate adding next time.

5.7.2 Under non-adding mode, if you input the wrong unit price, press key [C] and input the correct unit price;

5.8 Zero:

The weight window does not display "0.000" when unloaded, please press key [ZERO](within the range of ±60d).

5.9 Unit shift

Press key [*] to shift unit between **kg** and **lb.**

6.0 Turning off the scale:

Please press key [ON/OFF] and then pull power plug out.

6. Environment temperature:

Transportation and storage: -25℃~ +50 ℃

Work: 0℃ ~ + 40℃

7. Environment humidity:

Transportation and storage: <70% R H (Non-dew)

Work: <90% R H (Non-dew)

8. Attention:

8.1 Please charge the storage battery in time after using it to avoid damage. The charge time should be at least 1.2hours for using one hour. If the scale will be not used for a long time, please do not forget to charge the scale for consecutive 24 hours every 2 or 3 months to avoid damage caused by self-discharge of storage battery.(when the scale is connected to AC power, the system will charge the storage battery automatically whether the scale is turned on or off. It is advised to charge the electronic scale after it is turned off).

8.2 Never put the electronic scale in the rain or flush it with water. Particularly the inner parts of the scale should avoid water.

8.3 It is forbidden to put the scale in the place with high temperature or humidity

8.4 Avoid any strong shock or heavy weight. Don't put any article or give pressure over maximum capacity on the scale pan even the scale is not in use.

8.5 While the scale doesn't work normally, please send it to our company's maintenance point or post it to the head office of our company. Don't open the scale by yourself to avoid further destruction.

8.6 Wrong wires connection of storage battery is forbidden.

Right connection:

Red wire should be connected with red end;

Black wire should be connected with black end.

8.7 Please check whether the battery is good while you are buying because it is not granted the free repair guarantee.

9. Maintenance

9.1 Please send the duplicate guarantee card back to the company within three weeks from invoice date.

9.2 If non-artificially obstacle about the scale occurs under correct installation and use, after confirmation by our quality department, the user can get free repair for the scale with its guarantee card within the valid period.

9.3 The following situation are not in the line of free repair

9.3.1 After the product is sold out, the guarantee card without the seller's seal and sale date or not registered before the regulated date.

9.3.2 Obliteration of the guarantee card.

9.3.3 After product is sold out, damage or obstacles caused by user's improper transportation or storage or not using it according to the operation instruction or voltage over the specified range.

9.3.4 User opens the product's leaden seal by himself.

9.4 Please use the original package and pay the postage while sending product back to our company for repair.

9.5 Each scale has one guarantee card, please keep it safe.

The guarantee card and invoice can't be provided again when missing and the obliterated one are invalid.

9.6 The scale is granted for one-year free repair since the invoice date and lifetime service.

10 After-sale service

Dear users, if you find any problem with the electronic scale you have bought, please judge whether it is one of the problems listed in the following table. If it is, please deal with them according to methods in the table 4.

Table 4

Failure	Description	Reason	Method
AC indicator lamp doesn't light up	Failure to connect with the AC power	1.poor contact with the power plug 2.broken power cord 3.blown fuse	1.insert the plug well or change socket 2.change power cord 3.change fuse of the same type
While using storage battery,	No DC power in the	1.damaged storage battery, no voltage	1.change the storage battery of the same

no display and sound when turning on	scale	2.wire's poor contact with storage battery	type 2.contact wire with battery well (note: color corresponding)
Display "— Lb —" with alarm sound and turn itself off automatically	Insufficient of voltage of battery	Too long use of battery	Charge the scale by connecting with the AC power supply
Unstable weighing display	Insufficient of voltage or get damped	Continue to use the battery when the scale gives alarm sound of insufficient voltage or the environmental humidity is too high	Charge the scale for 10 hours by connecting with the AC power supply or clean the main board and dry it