ES-HB Series

Precision Balance

Product Manual (V1611)

Anyload Transducer Co. Ltd
Website: www.anyload.com
Email: info@anyload.com
Fax: +1 866 612 9088
North America Toll Free: 1-855-ANYLOAD (269 5623)

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1. Introduction

Thank you for purchasing and using the ES-HB series balances. The ES-HB balances are equipped with weigh and measure with high precision load cell, microcomputer and big liquid crystal display screen which have the advantages of simple operations, speedy weighing, accuracy, stability, and much more.

Please read this manual carefully before using this product, in order to make full use of this product with the functions and the troubleshooting to help you. You can secure a copy of this manual at our website at www.anyload.com

2. Safety Recommendations

When using this weighing equipment the following recommendations shall be observed for safety:

The weighing machine may only be used with the power adapter supplied exclusively for use with the weighing machine.

Before inserting the power adapter, the user must ensure that the operating voltage stated on the power adapter agrees with the mains voltage.

If not, please contact Customer Service at the address above.

If the power adapter or its cable is damaged, the weighing machine must immediately be disconnected from the electricity supply (pull out the power adapter).

The weighing machine may only be operated from mains electricity supply with a power adapter which is in perfect condition.

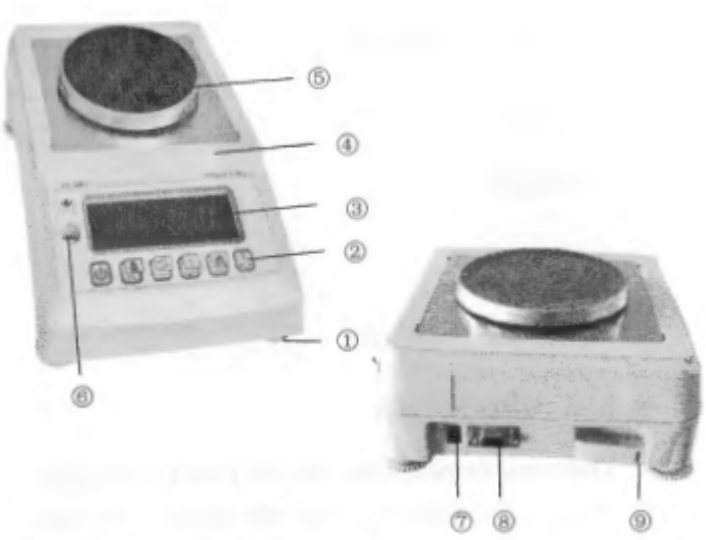
If there should be any reason to believe that it is no longer possible to operate the weighing machine without danger, the weighing machine is to be immediately unplugged from the electricity supply (pull out power adapter) and secured against inadvertent operation.

The weighing machine must not be operated in an area subject to explosion risks.

Care must be taken when weighing liquids to ensure that no liquid is spilt into the inside of the weighing machine or into connections on the rear of the equipment or the power adapter. If liquid is spilt on the weighing machine, it must immediately be unplugged from the mains electricity supply (pull out power adapter). The weighing machine may only be operated again after it has first been re-checked by a service technician.

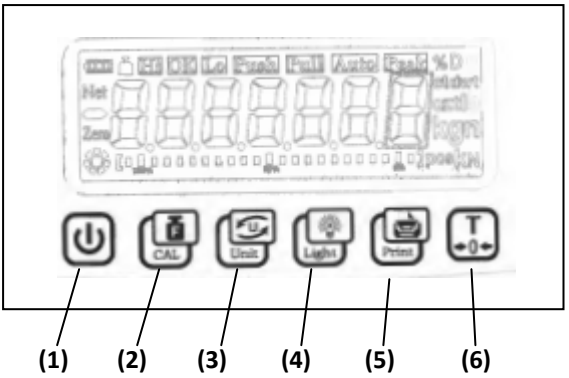
These instructions must be read by each operator of the equipment and must be available at the workplace at all times.

3. Structure Diagram



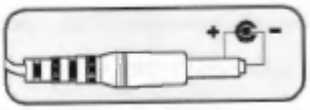
code	name	code	name
1	adjust foot	2	Key
3	Display	4	platform
6	Level	7	The power socket
8	RS232C interface	9	Kensington lock hole
5	Body		

4. Display and Keys



KEY	FUNCTION	ASCII CODE
(1)	ON/ OFF the machine	Ox4F+OxOD+OxOA
(2)	Calibrate the machine	Ox43+0xOD+OxOA
(3)	Exchange units	Ox55+0xOD+OxOA
(4)	Backlight mode switch	Ox4D+OxOD+OxOA
(5)	Date print	Ox50+0xOD+OxOA
(6)	Zero and tare	Ox54+0xOD+OxOA

5. Adaptor



DC 6V/ 200mA adaptor

6. Operation

6.1 ON/OFF the machine

With no load on the platform, Put the round plug of AC adapter into the square hole on the back of the balance, then put AC adapter into an alternating outlet, or install 6 alkaline batteries AA SIZE in the battery holder at the bottom of the balance (pay attention to the Plus(+) and minus(-) ends), press the key to turn on the balance, and the balance will display the capacity and division and then will show “0” Press to zero and,
Normal weighing can be started on, Press to t urn off the balance

6.2. Weighing Method

With no load on the platform , Press  to zero, and the balance will display "0", Put the object on the platform. Wait until the unit "g" appears and the reading value becomes stable, then the weight can be read.

6.3. Calibration

6.3.1. Sensitivity calibration

First, take away the object from the platform. Then, press  key, the balance will display "CAL" and then press  key, "0.00" will show and then the calibrating weight value will be shown, put the corresponding calibrating weight on the center of the platform according to the shown weight value. In a few seconds the display will stop, and meanwhile the calibrating weight value will be shown, indicating that calibration is over. Normal weighing can be started on. and the percentage of the state will increase from 0% to 100%, indicating that calibration is over. Normal weighing can be started on

6.3.2. Linear calibration

First, take away the object from the platform. Then press  key, the balance will display "CAL" and then press  key switch to "LINE", then press  key and "0.00"will show and then the calibrating weight value will be shown, put the corresponding calibrating weight on the center of the platform according to the shown weight value. In a few seconds, the display will stop, and the percentage of the state will increase from 0% to1 00%, indicating that calibration is over. Normal weighing can be started on.

6.4 Counting Function (pcs)

Press  key to switch to "pcs", and the balance enters the counting state. If you need resample for counting, please take away the object from the platform, and press  key, the balance will display "0",then press  key, "PCS=xxx" will display, "xxx" indicate the quantity value of samples, and press  key to change the quantity value , then put the same quantity sample on the platform , then press  key to confirm, when the reading value becomes stable, Normal counting and weighing can be started on.

NOTE: If the balance displays "no", that indicates the samples' weight is too light

6.5 Percentage Setting Function

Press Unit key to switch to "%" and enter percentage weighing ; if you need resample, please take away the object from the platform, and press T key to display"0", then press CAL key to display "PEr=xxx", and "xxx" indicates the percentage value of sample, press Unit key to change the value , and put the same percentage samples on the centre of platform, press T to confirm , when the reading value becomes stable, Normal percentage and weighing can be started on.

NOTE: If the balance displays "no", that indicates the samples' weight is too light

6.6. Backlight Function

Press Light key to sw1tch backlight, "ON" indicates backlight is always on, "oFF" indicates backlight is always off, and "Auto" indicate backlight is auto

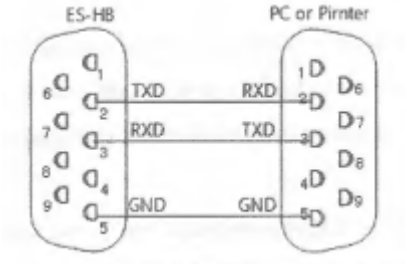
6. 7. Unit Selection

This balance has the function to select these units: g, kg, cL oz, ozt, lb , I, tl, dwt, gn, pes , % Press Unit to switch.

7. RS-232C Communication

RS232C interface: Connecting to PC or printer

Wiring diagram is as follows



Baud rate= 9600bps, check bit= None, data bit =8Bit, stop bit=1 Bit, input instruction format please read "Key" function; output data format: 7 bytes of data code +3 byte unit code +2 byte end code, all the characters are ASCII code

8. Troubleshooting

SYMPTOM	PROBABLE CAUSE	REMEDY
No Display	Power Adapter not connected Batteries are dead	Connect power Adapter Replace batteries
Display	Batteries are weak	Replace batteries
Incorrect Weight Reading	Balance was not set to zero Balance has not been correctly calibrated	With no load on the platform press Recalibrate the balance
Calibration incorrect	Incorrect weights being used	Use correct weights to calibrate
Err 1	Over load	Stop weighing immediately