



Professional Weighing Equipment

HRB-S Series Intelligent Weighing Scale



Operation Manual

**NOTE: THIS PRODUCT HAS BEEN
CALIBRATED IN THE FACTORY.
PLEASE REFER TO THE MANUAL
BEFORE RE-CALIBRATING
PRODUCT!**

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Declaration of Conformity


Declaration of conformity for apparatus with CE mark

We hereby declare that the product to which this declaration refers conforms to the following standards.

Electronic scale: HRB-S Scales

Model Selection

HRB-S 113(103)	HRB-S 3001
HRB-S 213(203)	HRB-S 3002
HRB-S 313(303)	HRB-S 6001
HRB-S 1002	HRB-S 10000
HRB-S 1002TL	

Mark applied	EU Directive	Standards
	2004/108/EC	EN 61326-1: 2006

Signature:



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Date: 29. 08. 2019

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Introduction

What you should know about these Operating Instructions:

Tree® Professional Weighing Equipment products are simple to operate.

Nevertheless, you should read through these operating instructions in their entirety, so that you can make optimum use of the full potential and the diverse possibilities of the weighing scale in your daily work.

These operating instructions contain guidance in the form of pictograms and keyboard diagrams, which should help you in finding the required information:

For the labeling of potential hazards and advice, please see Safety below.

Safety

Representations and symbols

Important instructions, which involve safety, are highlighted with the appropriate mark:



Safety recommendations

When using the weighing equipment in surroundings with increased safety requirements, the corresponding regulations must be observed.

The weighing scale may only be used with the power adapter supplied. Before connecting the power adapter to the scale, the user must ensure that the operating voltage stated on the power adapter is compliant 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 scale must immediately be disconnected from the electricity supply (pull out the power adapter).

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

If there should be any reason to believe that it is no longer safe to operate the scale, it should be immediately unplugged from the electricity supply (pull out power adapter) and secured against inadvertent operation.

In carrying out maintenance work, it is essential to follow the recommendations set out in maintenance and servicing.

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

Care must be taken when weighing liquids to ensure that no liquid is spilled into the inside of the scale or into connections on the rear of the equipment or the power adapter. If liquid is spilled on the scale, it must immediately be unplugged from the main electricity supply (pull out power adapter).

The weighing scale may be operated after it has first been inspected by a service technician.

These operating instructions must be read by each user and should be easily accessible at the workplace at all times

Functions

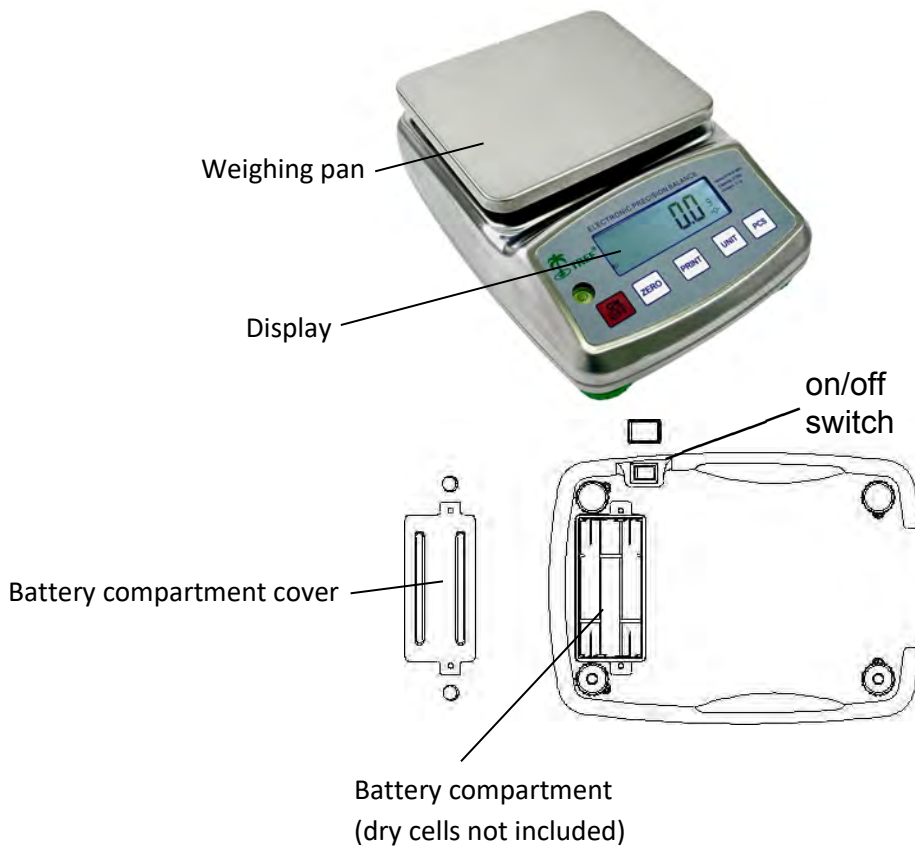
The HRB-S Series are high-quality electronic precision weighing scales designed to function as counting scales and check-weights with the following specifications

Model number	Capacity	Division	Weighing pan Size
HRB-S 113(103)	110g.	0.001g	3.85"Φ
HRB-S 213(203)	210g	0.001g	3.85"Φ
HRB-S 313(303)	310g	0.001g	3.85"Φ
HRB-S 1002	1100g	0.01g	4.7in x 5.3in
HRB-S 1002TL	1100g	0.01g	4.7in x 5.3in
HRB-S 3002	3100g	0.01g	6.4in x 7in
HRB-S 3001	3100g	0.1g	6.4in x 7in
HRB-S 6001	6100g	0.1g	6.4in x 7in
HRB-S 10000	10000g	0.1g	6.4in x 7in
Package (Standard carton)	18"x18"x17" / 14"x11"x7"		
Package (Master carton)	2/4Units in one box: 23"x16"x15" / 23"x15"x15"		
Operating Temperature	0-40°C(32-104°F)		
Power source	6 x AA dry cells or AC/DC Adapter 12V DC /500mA		

FEATURES

- Auto zero tracking
- Intelligent applications: weight unit conversion
- Low battery indication
- Bright backlit LCD
- Large heavy gauge stainless steel square pan
- Stability indication
- Auto calibration
- Selectable auto back light
- Selectable auto shut off
- Unit switching kg ,g, lb, oz....
- Variable kg or lb reference weight calibration software.

Figure 2.2 Details of your weighing machine



Application & Conformity

The Following are instructions of how to correctly use the weight scale:

The weighing scale may only be used for the weighing of solid-materials and of liquids filled into secure containers.

The maximum capacity load of the weighing scale must never be exceeded, otherwise the weighing scale may be damaged.

In using the weighing scale in combination with other devices as well as with devices produced by other manufacturers, the appropriate regulations for the safe use of the relevant attachments and their application in accordance with instructions must be observed.

The weighing scale has been manufactured and tested in accordance with the standards and recommendations set out in the declaration of conformity.

The power adapter supplied for the weighing scale complies with the appropriate electrical protection class.

The following applies to all HRB-S series weighing scales

Power supply:

Input: 110V 50Hz to 60Hz

Output: 12V DC 500mA

Allowable ambient conditions

Temperature: 0°C - 40°C

Relative humidity: 25% - 85%, non-condensing

If you have any questions on the technical data or require detailed technical information on your balance, please contact your technical representative.

Getting Started

The scale is packaged in an environmentally-friendly carton, which provides optimum protection for the balance during transportation.

We suggest that you keep the original packaging in order to avoid damage if you are shipping or transporting the scale to a different location. It is also the best way to keep it in the best conditions if it will not be used for an extended period of time.

In order to avoid damage, please follow the instructions provided below, when unpacking the scale:

- Unpack the scale carefully.
- When outside temperatures are very low, the scale should be stored for a couple hours and kept in its box in a dry room at normal temperature, so that no condensation settles on the unit when opening the box.
- Check the scale immediately after unpacking for any external visual damage. If there is any damage on scale, contact customer service immediately.
- If the scale is not to be used immediately after purchase, it should be stored in a dry place where fluctuations in temperature are low. (Reference pg.).
- Read through these operating instruction, before you work with the unit and pay attention to the Safety recommendations (reference Safety)

Delivery

Inspect delivery for completeness immediately on unpacking all components.

Checklist for complete delivery

Component	Component delivered present yes / no
Weighing unit body	
Weighing pan	
Power adapter	
Operating manual	

Assembly & Installation

The weighing scale is delivered in a partly dismantled condition. Assemble the individual components in the following sequence:

- Place your machine on a level, clean, and dry surface to obtain accurate readings.
- Place the stainless steel platters on top of the plastic platter with the flat side facing up.

Connecting the AC Adapter

The following Safety recommendations must be observed when connecting the balance:



The Scale should only be connected to the mains voltage socket with the power adapter supplied. Check before connecting the power adapter to the mains socket, that the operating voltage stated on the power adapter complies with the local mains voltage. If the operating voltage is not the same as the mains voltage, the power adapter must not be connected to the mains socket and contact customer service.

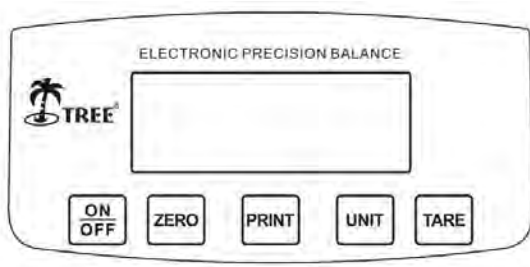
Placement of Scale

The location in which the scale is placed is very important in order for the scale to work to its full potential. Certain conditions can affect the capabilities of the scale, conditions like: the presence of air flow, variations in temperature, and direct sunlight. Please follow the recommendations given below in choosing a location to place your scale.

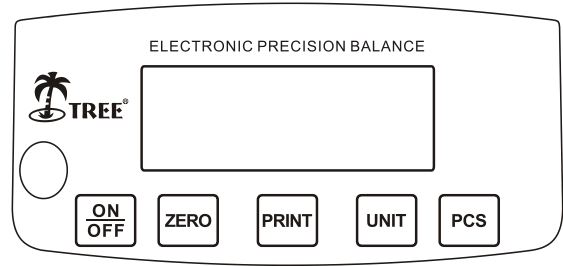
- Place the scale on a solid, firm and preferably vibration-proof, horizontal base
- Make sure that the weighing machine cannot be shaken or knocked over
- Protect from direct solar radiation
- Avoid drafts and excessive temperature fluctuations

Avoid placing the scale near or on any magnetic surfaces

Application Menu



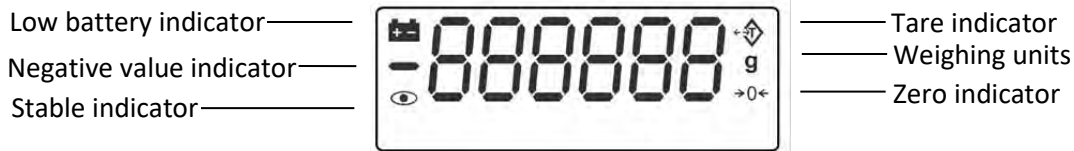
HRB-S 113 HRB-S 213 HRB-S 313 HRB-S 1002



HRB-S 1002TL HRB-S 3001 HRB-S 3002 HRB-S 6001
HRB-S 10000

Display messages & Key functions

Display messages



Key functions

- The On/Off key is to turn the Balance On or Off (Note: it has an On/Off hard switch at the bottom)
- The ZERO key allows the subtraction of multiple container values through the weighing range and is used to set or re-adjust the weighing machine in correct zero position.
- The Print key is send data to external device.
- The UNIT key is to toggle between different weighing units.
- The TARE allows the user to subtract the container value and returns the display to zero
- The PCS key is for piece counting

Program Options

Interface Settings

- Press [ON/OFF] to turn on the scale, when instrument displays -----
- Press [PRINT], the display will show b xxx value
- Press [UNIT] to select among (1200,2400,4800,9600), default setting is 9600
- Press [ZERO] to enter Parity mode, the display will show P xxx
- Press [UNIT] to select odd, even or none (odd stands for 7 data bits with odd parity, even stands for 7 data bits with even parity, none stands for 8 data bit without parity), default setting is none
- Press [ZERO] to enter Print mode, the display will show n xxx
- Press [UNIT] to select CON,OFF, KEY, STB
 - a) OFF stands for serial data output disabled
 - b) KEY stands for manual mode by pressing [PRINT]
 - c) STB stands for automatic print when scale is stable
 - d) CON stands for continuous print

Default setting is KEY

- Press [ZERO] again to return to weighing mode.

Parameter settings

Setting Zero range when power on

Press ON/OFF key, and when “- - - - -” shows, press TARE(or PCS) key, display will show “Pzr x.x”, press UNIT key to select, factory default setting is 20.

Setting Zero range of ZERO key

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key, display shows “Kzr xx”, press UNIT key to select, factory default setting is 4.

Setting Zero range of TARE key

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key multiple times till display shows “Ktr xxx”, press UNIT key to select, factory default setting is 100.

Setting overload range

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key multiple times till display shows “Ovr xx”, press UNIT key to select, factory default setting is 9d.

Setting Beeper

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key multiple times till display shows “bz ON” or “bz OFF”, press UNIT key to switch it ON or OFF.

Setting ZERO and TARE function merge function

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key multiple times till display shows “Zt ON” or “Zt OFF”, press UNIT key to switch it ON or OFF.

Setting Auto Shut off

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key multiple times till display shows “A 3”, “A 5”, “A 10” or “A OFF”, Press UNIT key to select Auto shut off mode “3”, “5”, “10” or “OFF”.

Setting Backlight

Press ON/OFF key, and when“- - - - -”shows, press TARE(or PCS) key, and then press ZERO key multiple times till display shows “L ON”, “L OFF” or “L AU”, Press UNIT key to select backlight to be “On”, “Off” or “Auto”.

Calibration

Using an External Calibration Weight:

Calibration is required when the weighing machine is initially installed or if the balance is moved to a substantial distance from the original location or if ambient conditions change considerably. 30 minutes' warm-up of the balance is always needed before weighing and calibration.

- Turn the balance on and when display shows “-----”, press ZERO key, the display will show “CAL”
- Press ZERO key again, the display will show “X000.00”, “X” is the flashing digit.
- Press UNIT key, the flashing digit will move to right. Press the TARE (or PCS, depending on the model) key to increase the value of the flashing digit (“X” is the calibration weight can be set according to users' requirements, we recommend a minimum weight of at least 50% of the Balance capacity).
- Press the ZERO key, the display will show a series of digits known as the A/D value, these numbers will continuously move, once the display shows the stable indicator (please see page 10 for help locating the stable indicator), press the UNIT key, the display will show “X00.00” or “X000.00” depending on the model and capacity.
- Place the corresponding test weight on the center of the pan.
- The display backlight lights up and returns to weighing mode. Now the calibration is completed .
- Turn off the power, then turn on the power again, place a known weight on the platform to verify if it is accurate.
- If the weight displayed does not correspond with the value of the calibration weight, please repeat above steps.

Maintenance and service

The weighing scale is a precision instrument and must be treated carefully and cleaned regularly.

DANGER

For maintenance-work, the balance must be disconnected from the power supply (remove power adapter plug from socket). Also, ensure that the balance cannot be connected to the power

Make sure that no liquid spills into the balance while performing maintenance work. If liquid is spilled on the balance, it must be inspected by a service technician.

Regularly perform maintenance to the weighing pan and the weighing pan holder by removing any dirt or dust from under the weighing pan and on the balance housing. Use a soft brush or a soft, lint-free cloth, moistened with a mild soap solution.

CAUTION

Never use solvents, acids, alkalis, paint thinners, scouring powders or other aggressive or corrosive chemicals for cleaning, these substances cause damage to the surfaces of the scale housing.

Transport & Storage

Your weighing machine is a precision instrument, treat it carefully. Avoid shaking, severe impacts and vibration during the transportation. Make sure that there are no marked temperature fluctuations during the transportation and that the weighing machine does not become damp (condensation).

If you would like to take the weighing machine out of service for an extended period, disconnect it from the electricity supply, clean it thoroughly (refer to Maintenance & Service) and store it in a place which meets the following conditions:

- No violent shaking, no vibrations
- Minimum temperature fluctuations
- No direct solar radiation
- Minimum moisture

Warranty

LW Measurements products are under warranty against factory defects for a period of two (2) years from the date of shipment for Customers in the continental United States.

LW Measurements will pay for freight both ways within the first 30 days of purchase if technical support is required. (Determined by our certified Technical Support Team) In the event technical support is needed the customer is responsible for shipping the product back to us after the 30 day period has expired. Once the product is received, the technical support team will inspect and as necessary repair or replace the scale. LW Measurements will ship the product back to the customer at our expense.

Any new scales returned for warranty must be properly packaged in the original box. If they are not properly packed in the original box, the customer is responsible for the shipping cost. If we determine there is a factory defect, we will provide a replacement and accept responsibility for shipping back to customer. If we determine that it is not a factory defect, the customer will be responsible for shipping fees incurred.

For Customers outside the lower 48 States, including Mexico, Canada, Puerto Rico, Hawaii, Alaska and all other countries are responsible for all shipping fees incurred.

Our warranty does not cover misuse or neglect including but not limited to battery or water damage, overloading, and chewed or cut wires, keypad damage (punctures), scratched platforms, dented platforms unless caused by shipping (Must report/return within 30 days). If the product is found to have been misused or damaged by the customer, LW measurements is not responsible for the cost of return.

For warranty claims please call your customer service representative.

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