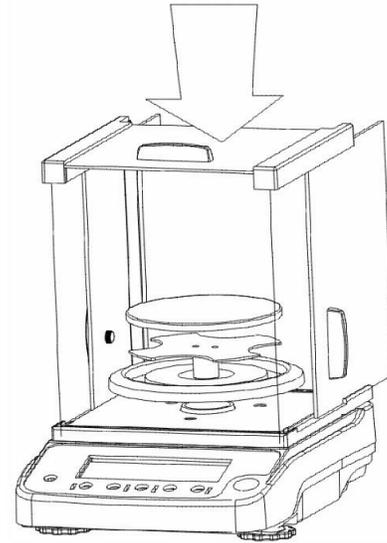
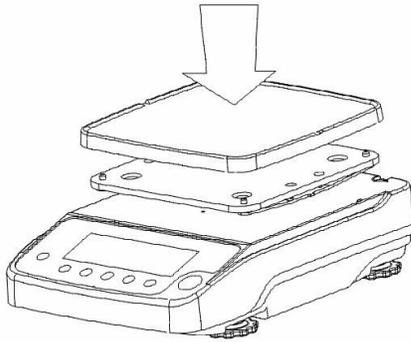




LW MEASUREMENTS, LLC

Professional Weighing Equipment

HRB Series intelligent weighing scale
High Resolution Balance



HRB 224 HRB 623 HRB 6202

Operation Manual

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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 High Resolution Scale

Models:

Imperial version

Metric version

HRB 224
HRB 623
HRB 6202

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

Signature:



Boon Lim, R & D Manager

Date: 02/02/2016

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Introduction

What you should know about this Operation Manual:

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 of the weighing scale in your daily work activities.

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

For the labeling of potential hazards, please refer to the Safety proportion of this operation manual

Safety

Representations & Symbols

Note: 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.

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.

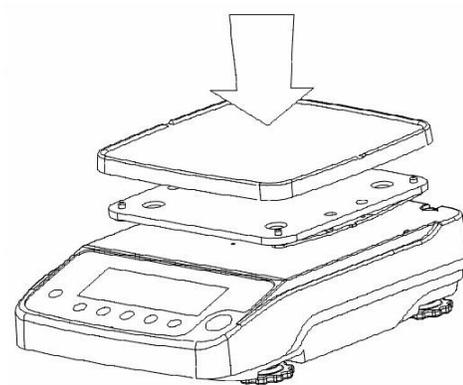
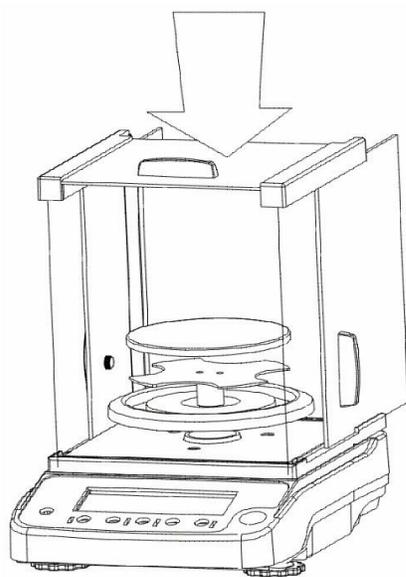
These operating instructions must be read by each user and should be easily accessible at the workplace at all times.

Weight Scale

Construction & Functions

The weighing scale consists of certain parts

- The scale body
- The scale-pan
- Pan support
- AC adapter
- Operating manual



Functions

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

Metric weight unit version

Model number	Capacity	Graduation	Weighing pan Size
HRB 6202	6200g	0.01g	7inx7in
HRB 623	620g	0.001g	4 ½ in. dia.
HRB 224	220g.	0.0001g	3 ½ in dia.
Net/gross weight	HRB 224 13 lbs. HRB6202 9 lbs. HRB 623 13 lbs.		
Package	HRB 224 14"x16"x19" in, HRB 6202 16"x13"x10" in		
	HRB 623 14"x16"x19"		
Operating Temp.	32°F -104°F		
Power source	Input: Auto Switching Ac 100-240 V 50-60 HZ		
	Output: 7.5V 0.3A		

Features

- Auto Zero Tracking
- Large bright backlight LCD
- Large Stainless steel pan
- Stability Indicator
- One button CAL
- Alarm
- 21 Unit switching
- Magnetic force sensor
- Easy operation

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 series weighing scales

Power supply:

Input: Auto Switching AC 100-240 V 50/60 Hz SW

Output: 7.5V 0.3A

Allowable ambient conditions

Temperature: 5°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 pg. 6).

Delivery

Inspect delivery for completeness immediately upon unpacking all components.

Checklist for complete delivery

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

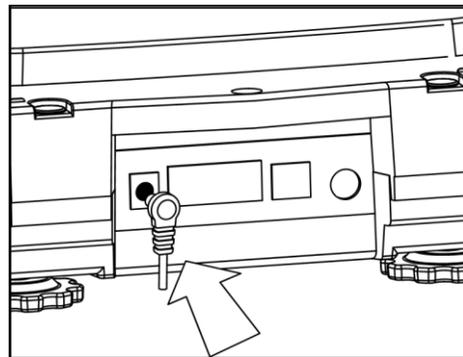
Assembly & Installation

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 plastic platter on top of the scale, flat side facing up so the platter sits firmly on the machine with the four “legs” inserted into the corresponding four receptacles.
- Place the stainless steel platter on top of the plastic platter with the flat side facing up.
- Unwrap and place the clear plastic bowl, open side facing up, on top of the stainless platter.

Connecting the AC Adapter

- Insert the plug from AC adapter into the Jack on the scale.



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



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.

The balance is fitted with one bubble level, and adjustable feet for level-control that allow for small height differences or any unevenness in the surface on which the balance is placed.

The screw feet must be adjusted so that the air bubble is precisely in the center of the sight glass of the bubble level (see Fig. 3.2)

Place the scale horizontally and keep the bubble inside the bubble level aligned with the circle (Fig.3.2). In order to get exact measurements, the balance must be carefully leveled after each re-location.

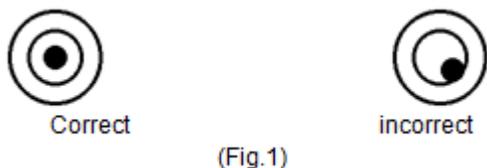
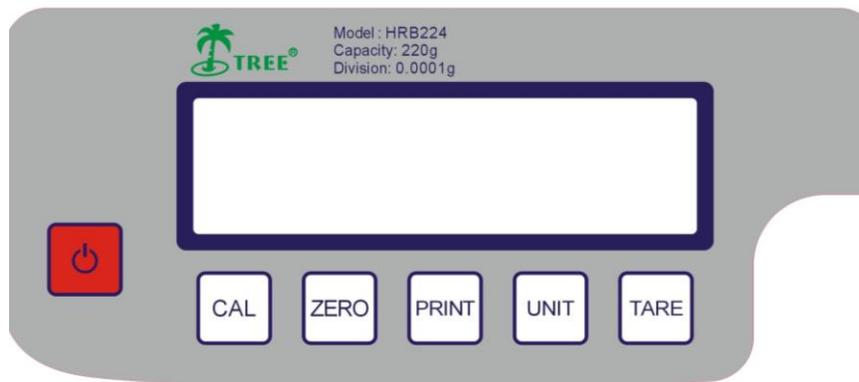


Fig. 3.2 correct leveling with the aid of the bubble level

Application Menu



Key Functions:

- The “Power” key is to turn the scale on/off.
- The “Zero” key function allows the subtraction of multiple container values through the zero range and is used to set or re-adjust to zero.
- The “Tare” key function allows the user to subtract the container value and will also set the scale at zero.
- The “Unit Weight” key function is used to toggle between different weighing units.
- The “CAL” key function is to calibrate the scale.
- The “Print” key is used to send data to an external device and print weight info.

Program Options

Interface Setting

- Press the “Power” key to turn on the scale.
- When the instrument displays a series of 8’s “8888”, press the “Print” key and the scale will display the BAU value. There are different value options the user can choose from 1200, 2400, 4800, and 960) the default setting is 9600. To select a value use the “Unit” key to toggle between the options
- Press the “Zero” key to enter parity mode. Then press the “Unit” key to select odd, even or none. The default setting is none.
 - Odd stands for 7 data bits with odd parity
 - Even stands for 7 data bits with even parity
 - None stands for 8 data bits with no parity
- Press the “Zero” key to enter the print settings. Then press “Unit” To toggle between the choices (CON, OFF, KEY, STB.) default setting is KEY
 - OFF stands for serial data output disabled.
 - KEY stands for manual mode
 - STB stands for automatic print when scale is stable
 - CON stands for continuous print or output
- Press “Zero” to return to weight mode

Parameter Settings

Zero Range Setting

Press the “Power” key and when a series of 8’s “8888” appears, press the “Tare” key to choose a division setting. The options are 3, 4, 10, and 20, the default setting is 20, to choose between these options use the “Unit” key.

You can move on to the next setting by pressing the “Zero” key.

Zero Range for “Zero” key

Press the “Power” key and when a series of 8’s “8888” appears, press the “Tare” key and then the “Zero” key to bring up the setting in the menu. The setting options are 4,3,10, and 20, the default setting is 4, press the “Unit” key to choose between the options.

You can move on to the next setting by pressing the “Zero” key.

Zero Range for “Tare” Key

Press “Power” key and when a series of 8’s “8888” appears, press the “Tare” key and press the “Zero” key two times to bring up the setting in the menu (disregard pressing the power and zero key if you are continuing from the last setting). The setting options are 50 and 100, with the default setting being 100. Press the “Unit” key to choose between the options.

You can move on to the next setting by pressing the “Zero” key.

Overload Range Setting

Press “Power” key and when a series of 8’s “8888” appears press the “Tare” key and press the “Zero” key three times to bring up the setting in the menu (disregard pressing the power and zero key if you are continuing from the last setting). The setting options are between 9 and 90 divisions, the default setting is 9 division. To select the desired number press the “Unit” key.

You can move on to the next setting by pressing the “Zero” key.

Alarm Setting

Press the “Power” key and when a series of 8’s “8888” the “Tare” key, and then press the “Zero” key four times to bring up the setting in the menu (disregard pressing the power and zero key if you are continuing from the last setting). The setting options are “b2 On” or “b2 Off”, you can choose between the options by pressing the “Unit” key.

You can move on to the next setting by pressing the “Zero” key.

Automatic Powered Down Setting

Press the “Power” key and when a series of 8’s “8888” appears press the “Tare” key and then the “Zero” key five times to bring up the setting in the menu (disregard pressing the power and zero key if you are continuing from the last setting). The setting options are “A Off”, “A3”, “A5”, and “A10”. You can choose between the options by pressing the “Unit” key.

You can move on to the next setting by pressing the “Zero” key.

Backlight Setting

Press the “Power Key” and when a series of 8’s “8888” appears, press the “Tare” key and then press the “Zero” six times to bring up the setting in the menu (disregard pressing the power and zero key if you are continuing from the last setting). The setting options are “bl On”, “bl AUT” and “bl Off”, to choose between these options press the “Unit” key.

Press the “Zero” key to return to normal operation.

Calibration

Using an External Calibration Weight:

Calibration is required when the weighing scale is initially installed or if the scale is moved to a substantial distance from the original location. Single segment calibration (recommended). It is recommended to warm up the scale for at least 30 minutes for it to reach the required operating temperature.

To calibrate:

- Turn on the Scale and wait for it to stabilize.
- Press the “CAL” button to go into calibration mode
- The scale will show the capacity (for the HRB 224 the capacity is 200g, HRB 623 is 500g and HRB 6202 is 5000g.)
- Place the required weight capacity on the scale pan and wait for the scale to stabilize.
- Once the scale is stabilizes, the calibration process is complete and the scale will return to normal operation menu.

Maintenance & Service

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 supply during the work by a third party.

Make sure that no liquid spills into the scale while performing maintenance work. If liquid is spilled on the scale, 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 weighing scale 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 can cause damage to the surfaces of the scale housing.

Transportation & 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

The products are under warranty against factory defects for a period of two (2) years from the date of shipment.

For Customers within the lower 48 states of the continental United States. LW Measurements will pay for freight both ways for the first 30 days after purchase. After 30 days expire the customer is responsible for shipping the product back to us. After the product is received we will inspect it and as necessary we will repair or replace and 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 and in the original box, the customer pays for shipping cost. If we determine there is a factory defect, we will pay for the shipping back. If we determine that it is not a factory defect, the customer will pay shipping.

For Customers outside the lower 48 States, including Mexico, Canada, Puerto Rico, Hawaii, Alaska and all other countries, customers must pay for shipping.

Our warranty does not cover misuse or neglect including but not limited to battery or water damage, overloading, and chewed or cut wires. 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 go online to lwmeasurements.com and fill out the warranty submission form or call your customer service representative.