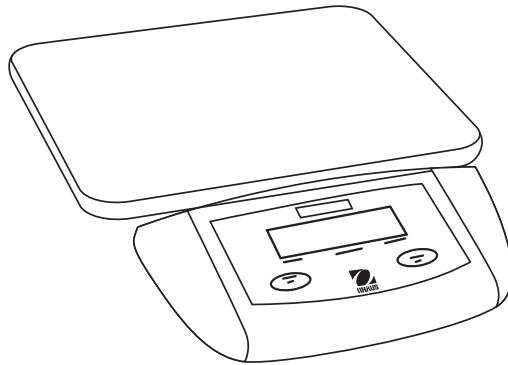




Ohaus ES Series Bench Scale

INSTRUCTION MANUAL




DECLARATION OF CONFORMITY

Ohaus Corporation,
19A Chapin Road, P.O. Box 2033, Pine Brook, NJ, 07058, USA

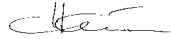
We, Ohaus Corporation, declare under our sole responsibility that the models listed below are in conformity with the directives and standards mentioned.

Models: ES Series Bench Scales

Year in which the CE Mark was first Attached: 2001

Marking	EC Directive (including applicable amendments)	Standard
	73/23/EC Electrical equipment for use within voltage limits	EN60950 Safety of information technology equipment
	89/336/EC Electromagnetic Compatibility	EN61326 Electrical equipment measurement, control and laboratory use.

ISO 9001 Registration for Ohaus Corporation. Ohaus Corporation, USA, was examined and evaluated in 1994 by the Bureau Veritas Quality International, BVQI, and was awarded ISO 9001 registration. This certifies that Ohaus Corporation, USA, has a quality system that conforms with the international standards for quality management and quality assurance (ISO 9000 series). Repeat audits are carried out by BVQI at intervals to check that the quality system is operated in the proper manner.



Ted Xia
President

FCC NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS A LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE INTERFERENCE-CAUSING EQUIPMENT STANDARD ENTITLED "DIGITAL APPARATUS", ICES-003 OF THE DEPARTMENT OF COMMUNICATIONS CANADA.

CET APPAREIL NUMERIQUE RESPECTE LES LIMITES DE BRUITS RADIOELECTRIQUES APPLICABLES AUX APPAREILS NUMERIQUES DE CLASSE A PRESCRITES DANS LA NORME SUR LE MATERIEL BROUILLEUR: "APPAREILS NUMERIQUES", NMB-003 EDICTEE PAR LE MINISTRE DES COMMUNICATIONS.



Unauthorized changes or modifications to this equipment are not permitted.

Before plugging in the ES Series Bench Scale, make sure that the line voltage of the power adapter and plug match.

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Ohaus ES Series Bench Scale

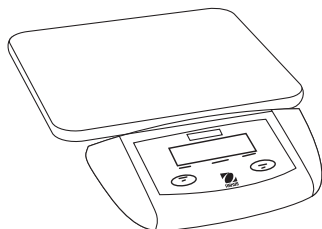
INSTRUCTION MANUAL

Models: ES6R, ES30R, ES50R, ES50L, ES100L, ES200L

- The contents of this manual applies to all models of the ES Series Bench Scale.
- Calibration weights are not provided with the ES Series Bench Scale.
- For best results, use the product within the specified optimum operating temperature range.
- For best accuracy, perform your mass measurements in a clean environment, free of electrostatic and magnetic fields, dust and dirt, moisture, vibration and air currents.
- Use your ES Series Bench Scale with care, gently loading items to be weighed on the center of the platform. Avoiding rough treatment will aid in extending the life of your ES Series Bench Scale.

Introduction

This manual covers operation and troubleshooting for the Ohaus **ES Series Bench Scale**, models **ES6R, ES30R, ES50R, ES50L, ES100L** and **ES200L**.



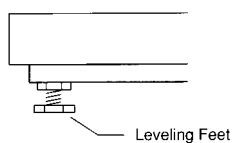
Unpacking

ES Series Bench Scale is shipped with the following components:

- Scale Base
- Indicator
- Power Adapter
- Mounting Bracket and Screws
- This Instruction Manual
- Warranty Card
- Plastic Insert

Leveling Scale Platform

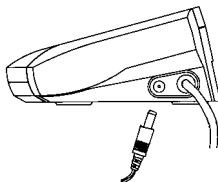
Model ES50L, ES100L and ES200L are equipped with adjustable leveling feet. Adjust the four leveling feet under the platform to level it.



Power Options

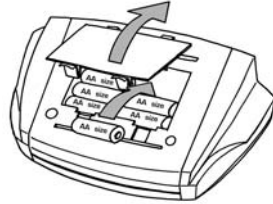
AC Adapter Operation

- The 9 Volt output AC adapter (included with the ES Series Bench Scale) with positive female plug shall be used.
- Connect the AC Adapter to the power input jack on the side of the scale.
- Plug the AC Adapter into a properly grounded wall outlet.



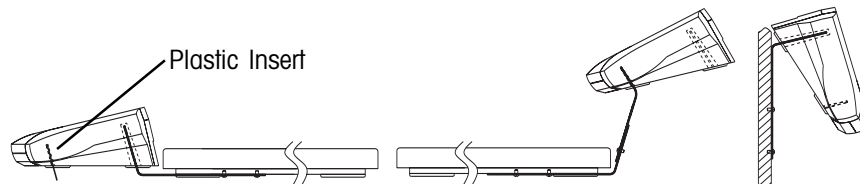
Battery Installation

- Remove the battery cover on the bottom of the indicator and place six "AA" size alkaline batteries into the compartment as indicated. Re-insert the battery cover.
- Batteries are not included.



Wall / Base Mount

- A Wall / base mounting bracket and screws are provided.
- When the indicator is fastened to the front of the base, make sure to install the plastic insert underneath the indicator.



Operation & Product Features

- **Power Up Test:** When the scale is turned on, all display segments will appear for approximately 3 seconds before resetting to zero or disappearing and 0 being displayed.



- **Stable Reading Indication:** On the display, a down arrow will appear in the lower left corner indicating that the weight reading is stable. During weighing, this down indicator disappears and will reappear once a stable reading has been reached.
- **Weight Unit Indication:** On the display, one of the four right facing arrows on the right side will appear indicating the weight unit selected: kg, lb, oz or lb:oz. (kg, lb or oz only for ES200L)

- **Overload:** If the applied load exceeds the capacity of the scale, an "E" will appear on the display and the load should be removed immediately. The scale will return to normal operation.
- **Negative Value:** When a load is removed from the scale, any zeroed value will be displayed as a negative number. To return to normal operation, the zeroed value can be cancelled by pressing "On/Off/Zero".
- **Zero Function:** Values can progressively be added to a sample. By pressing the "On/Off/Zero" key, the scale display returns to zero. After adding additional mass, press "On/Off/Zero" to zero the scale again. Additional mass may be added up to the capacity of the scale. While removing the sample from the scale, a total gross weight of the sample will be displayed as a negative value. Zero the scale again before subsequent usage.
- **Low Battery Indication:** The display will show "Lo" when the batteries are weak and need to be replaced.
- **Auto Shut-Off:** To extend battery life, the scale will automatically turn off after approximately five minutes if no key press or active weighing is occurring. This feature is only active with battery operation.

Two Button Keypad

- **On/Off/Zero:** Pressing this key turns on the scale. The same key operates the zero feature when the scale is "ON". A long press of three seconds will turn the scale off.
- **Units/Cal:** Press this key briefly to change the weighing unit. The following weight units may be selected: kilogram (kg), pound (lb), ounce (oz), or pound:ounce (lb:oz), (kg, lb, or oz only for ES200L). Pressing and holding this key longer will start the calibration process.

Calibration

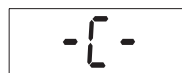
For best results, calibrate the scale at regular intervals. This is especially important if the scale is in use for prolonged periods.

1. Allow the scale to warm up and stabilize for two minutes before commencing the calibration procedure.

2. Press and hold the "Units/Cal" key until "CAL" flashes on the display.



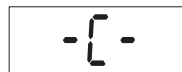
3. Press the "On/Off/Zero" key to capture the scale zero. The platform should be empty and the display shows "-C-"



4. After the zero is captured, the display will show "xxx". The value "xxx" is the span calibration weight.



5. Place the calibration weight on the platform and press "On/Off/Zero" key. The display will again show "-C-".



6. After span capture, the display will return to the normal weighing mode.



NOTE: If "CAL E" appears on the display, a calibration error has occurred and the process should be repeated. The message "CAL E" will appear if the calibration steps are not followed in the correct order or if an incorrect calibration weight was applied.



Specifications

	ES6R	ES30R	ES50R
Capacity x Readability	6.000 x 0.002 kg 13.225 x 0.005 lb 211.6 x 0.1 oz 13 lb:3 oz x 1 oz	30.00 x 0.01 kg 66.10 x 0.05 lb 1,058.0 x 0.5 oz 66 lb:2oz x 1 oz	50.00 x 0.02 kg 110.20 x 0.05 lb 1,763 x 1 oz 110 lb:3 oz x 1 oz
Linearity	±0.002kg	±0.01kg	±0.02kg
Weighing Units	kg, lb, oz, lb:oz		
Calibration	Auto calibration from keypad, 100% capacity weight required		
Stabilization Time	3 seconds		
Tare Range	To capacity by subtraction		
Maximum Overload	150% of capacity		
Overload Indication	[E]		
Underload Indication	Negative value		
Auto Shut-off	5 minutes no activity (battery operation only)		
Optimum Operating Temperature	41° to 95° F / 5° to 35° C		
Platform Size	12.4" L x 11" W / 31.6cm L x 28cm W		
Indicator Size	9.8" L x 5.5" W x 2.7" H / 25cm L x 14cm W x 7cm H		
Power Requirements	6 "AA" Alkaline batteries		
Net Weight	6 lb / 2.7 kg		

	ES50L	ES100L	ES200L
Capacity x Readability	50.00 x 0.02 kg 110.20 x 0.05 lb 1,763 x 1 oz 110 lb:3 oz x 1 oz	100.00 x 0.05 kg 220.4 x 0.1 lb 3,526 x 2 oz 220 lb:6oz x 2 oz	200.00 x 0.1 kg 440.8 x 0.2lb 7,050 x 5 oz N/A
Linearity	±0.02kg	±0.05kg	±0.1kg
Weighing Units	kg, lb, oz, lb:oz		kg, lb, oz
Calibration	Auto calibration from keypad, 100% capacity weight required	Auto calibration from keypad, 50% capacity weight required	
Stabilization Time	3 seconds		
Tare Range	To capacity by subtraction		
Maximum Overload	150% of capacity		
Overload Indication	[E]		
Underload Indication	Negative value		
Auto Shut-off	5 minutes no activity (battery operation only)		
Optimum Operating Temperature	41° to 95° F / 5° to 35° C		
Platform Size	20.5" L x 15.7" W / 52cm L x 40cm W		
Indicator Size	9.8" L x 5.5" W x 2.7" H / 25cm L x 14cm W x 7cm H		
Power Requirements	6 "AA" Alkaline batteries		
Net Weight	30 lb / 13.6 kg		

Troubleshooting

SYMPTOM	PROBABLE CAUSE	REMEDY
Unit will not turn ON.	Power adapter not plugged in or battery low.	Check the power adapter. Change batteries.
Incorrect weight reading.	Scale was not re-zeroed.	Press On/Off/Zero with no weight on the platform.
	Scale was not properly calibrated.	Recalibrate.

LIMITED WARRANTY

Ohaus ES Series Bench Scales are warranted against defects in materials and workmanship for a period of 12 months from the date of delivery. During the warranty period, Ohaus will repair, or, at its option, replace any component(s) that prove to be defective at no charge, provided that the product is returned, freight prepaid, to Ohaus.

This warranty does not apply if the product has been damaged by accident or misuse, exposed to radioactive or corrosive materials, has foreign material penetrating to the inside of the product, or as a result of service or modification by other than Ohaus. In lieu of a properly returned warranty registration card, the warranty period shall begin on the date of shipment to the authorized dealer. No other express or implied warranty is given by Ohaus Corporation. Ohaus Corporation shall not be liable for any consequential damages.

As warranty legislation differs from state to state and country to country, please contact Ohaus or your local Ohaus dealer for further details.

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