



Ohaus Corporation
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**DS Series
Electronic Digital
Bench Scales**

Instruction Manual





Unauthorized changes or modifications to this equipment are not permitted. See manual for replacement parts.

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 Class A, digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



This device corresponds to requirements stipulated in 90/384/EEC and features radio interference suppression in compliance with valid EC Regulation 89/336/EEC. Note: The displayed value may be adversely affected under extreme electromagnetic influences, eg. when using a radio unit in the immediate vicinity of the device. Once the interference has been rectified, the product can once again be used for its intended purpose. The device may have to be switched on again.

Cet appareil correspond aux exigences selon la norme 90/384/CEE et est déparasité conformément à la directive de la CE 89/336/CEE en vigueur. Remarque: Dans des conditions d'influences électromagnétiques extrêmes, par exemple en cas d'exploitation d'un appareil radio à proximité immédiate de l'appareil la valeur d'affichage risque d'être influencée. Une fois que l'influence parasite est terminée, le produit peut être de nouveau utilisé de manière conforme aux prescriptions; le cas échéant, il est nécessaire de le remettre en marche.

Dieses Gerät entspricht den Anforderungen nach 90/384/EWG und ist funkentstört entsprechend der geltenden EG-Richtlinie 89/336/EWG. Hinweis: Unter extremen elektromagnetischen Einflüssen z.B. bei Betreiben eines Funkgerätes in unmittelbarer Nähe des Gerätes kann eine Beeinflussung des Anzeigewertes verursacht werden. Nach Ende des Störeinflusses ist das Produkt wieder bestimmungsgemäss benutzbar, ggfs. ist ein Wiedereinschalten erforderlich.

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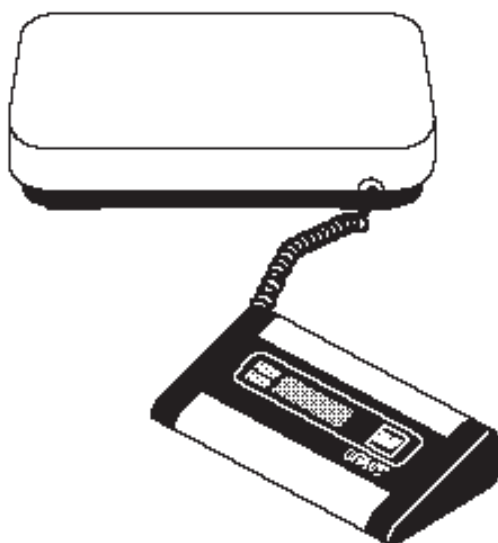
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INTRODUCTION

This manual covers installation, operation and troubleshooting for the Ohaus DS Series Bench Scales, Models DS4, DS10, DS10L, DS20L and DS44L. To ensure proper operation of the scale, please read this manual completely.

DESCRIPTION

The Ohaus DS Series Bench Scales are precision industrial weighing instruments which can be used for almost any application with capacities from 44 to 440 pounds or 20 to 200 kilograms. The scale is designed to provide years of service with virtually no maintenance. The DS series indicator is constructed using an extruded aluminum housing which is anodized, contains a one piece PC board, a five digit LCD display which is 0.8 inches in height. The indicator is connected to the platform by a coiled cord and can be positioned up to eight feet from the platform for ease of viewing. The platforms on Models DS4 and DS10 are constructed of stainless steel, and painted steel on Models DS10L, DS20L and DS44L. The platforms are rugged and easily cleaned. Power is supplied through an AC Adapter/Charger which is available in three configurations for world-wide usage. An internal Nickel Cadmium battery powers the indicator, is rechargeable and provides up to eight hours operation. Typical recharge time is seven hours. Accessories include a tower to support the indicator at a higher position to permit easier viewing of the display on the indicator. An indicator wall mount is included with the DS Series Bench Scales.



DS Series Electronic Digital Bench Scale

UNPACKING

DS Series Bench Scales are shipped with the following components:

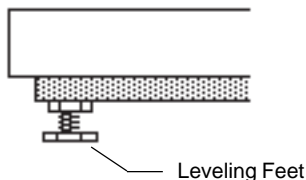
- a platform
- a power adapter/charger
- an indicator unit
- a wall mounting bracket and screws
- this instruction manual
- a warranty card

Carefully unpack and verify that all items are on hand.

INSTALLATION

Leveling

Models DS10L, DS20L, and DS44L are equipped with adjustable leveling feet. Adjust the four leveling feet under the platform to level it.



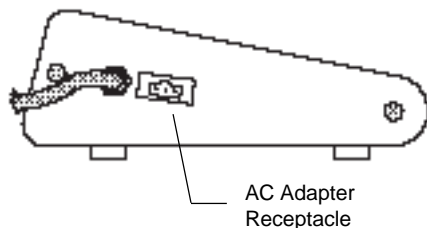
Power Options

All models may be operated using the Power Adapter or the built-in rechargeable Nickel Cadmium batteries.

Nickel Cadmium batteries will initially provide approximately 3 hours of service before recharging is needed. After 3 to 5 **full charging cycles**, the battery will reach full capacity providing a minimum of 8 hours of service. A full charging cycle takes about 7 hours with the display unit turned off.

AC Adapter

Connect the Power Adapter/Charger to the receptacle on the display unit. Plug the adapter into a convenient AC outlet.



OPERATION

Turning the Scale ON

With no load on the platform, switch the scale ON by pressing the *ON/OFF/RE-ZERO* button.

When first switched ON, all segments of the display should be on as shown in the illustration. This display check will be displayed briefly, then zero will be displayed. When zero is displayed, the balance is ready for use.



OR



Turning the Scale OFF

Press the *ON/OFF/RE-ZERO* button when zero is displayed.

Checking Calibration

Before using the scale, calibration should be verified. The scale has been calibrated before shipment, however, calibration is influenced by factors such as:

- Variations in the earth's gravitational field at different latitudes of the world.
- Rough handling.
- Changes in work location.
- Height above sea level.

To check the scale's calibration, place a traceable calibration mass on the center of the platform and read the displayed weight.

If the displayed weight differs from the traceable calibration mass by more than acceptable limits, calibration is required. Refer to the Calibration section and the Specifications at the rear of the manual.

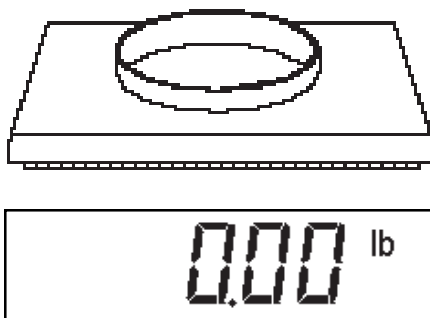
Weighing

1. Press *ON/OFF/RE-ZERO* to rezero the display.
2. Place the object(s) or material to be weighed on the platform and read the weight on the display.

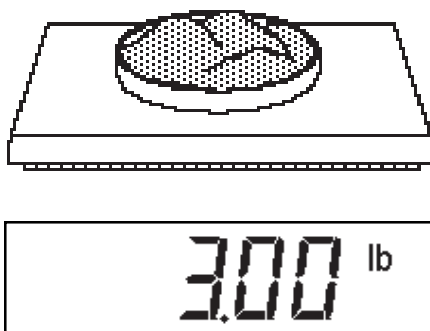
Taring

When weighing material or objects that must be held in a container, taring stores the container weight in the scale's memory and subtracts it from the total weight on the platform.

1. Place an empty container on the platform. Its weight will be displayed.
2. Press *ON/OFF/RE-ZERO* to rezero the display. The container's weight will be stored in memory.



3. Add material to the container. As material is added, its net weight will be displayed.
4. Removing the container and material from the platform will cause the balance to display the container's weight as a negative number.



Tared weight remains in balance memory until *ON/OFF/RE-ZERO* is pressed again.

Calibration

NOTE: This procedure requires that the scale **must be ON**. Calibration can be in made in pounds or kilograms.

1. Remove all weights from the platform.

2. Press *ON/OFF/RE-ZERO* to turn ON the scale. The display should show either 0.00 kg or 0.00 lb.



3. Press *ON/OFF/RE-ZERO* and hold for **five seconds** until CO appears in the display. Wait for display C100.



4. Place a test weight or weights on the platform which equals the full capacity of the scale. For example, on Model DS4, a weight of 20 kg would be used. Press *ON/OFF/RE-ZERO* and wait for display 100.



5. The scale is readjusted and ready for operation after pressing the *ON/OFF/RE-ZERO* button once again. Wait for 0.00 kg or 0.00 lb.



Changing Units kg/lb

NOTE: When it is required to change from lb to kg, or kg to lb, the scale **must be OFF** before proceeding.

1. Remove all weights from the platform.

2. Press *ON/OFF/RE-ZERO* and hold for **five seconds**, the display will show 88888. Release the *ON/OFF/RE-ZERO* button, the display will show the current unit of measure.



3. Repeated pressing of the *ON/OFF/RE-ZERO* button will switch between kg and lb on the display.



OR



4. When the desired unit is displayed, press and hold the *ON/OFF/RE-ZERO* button for another **five seconds** and then release. The display will now show the selected unit either 0.00 kg or 0.00 lb.



OR



CARE AND MAINTENANCE

To keep the scale operating properly, the indicator and platform should be kept clean and free from foreign material. If necessary, a cloth dampened with a mild detergent may be used. Keep calibration weights in a safe dry place.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE(S)	REMEDY
Unit will not turn on.	Power adapter not plugged in or properly connected to scale or batteries are low.	Check power adapter connections. Charge batteries.
Incorrect weight reading.	Scale was not re-zeroed before weighing. Scale not properly calibrated.	Press ON/OFF/RE-ZERO with no weight on the platform, then weigh item. Recalibrate correctly.
Error message display.	_____	See Error Messages.

Error Messages



Overload: The load on the platform exceeds the capacity of the scale.



Underload: Platform has been removed.



Low Battery: NiCad battery pack must be charged.

SPECIFICATIONS

Models	DS4	DS10	DS10L	DS20L	DS44L
Capacity (lb)	44	110	110	220	440
Readability (lb)	0.02	0.05	0.05	0.1	0.2
Capacity (kg)	20	50	50	100	200
Readability (kg)	0.01	0.02	0.02	0.05	0.1
All Models					
Linearity	3 divisions				
Auto zero tracking capture range	0.5 divisions				
Tare range	To Capacity by Subtraction				
Over range capacity	Capacity + 9 divisions				
Stabilization time	3 seconds				
Shift accuracy	± 1 division				
Operating temperature	32° to 104°F/0° to 40° C				
Weighing system	4 corner strain gauge load cells				
Display (in/cm)	LCD (0.8/2 high)				
Power requirements	Built in NiCad rechargeable battery pack or AC Adapter/Charger: 120, 220, 240 V ac				
Platform size (in/cm) (W x H x D)	12.2 x 1.4 x 10.8/ 31 x 3.6 x 27.4		20.5 x 2.7 x 15.7/ 52.1 x 6.9 x 40		
Indicator size (in/cm) (W x H x D)	10.2 x 2.4 x 5.5/ 25.9 x 6.1 x 5.5				
Net weight (lb/kg)	8.8/4		33/15		

SERVICE INFORMATION

For service assistance in the United States, please call Ohaus Corporation toll-free at (800) 526-0659. An Ohaus Product Service Specialist will be available to help you.

PARTS INFORMATION

If you require replacement parts or would like to purchase accessories, please call Ohaus Corporation toll-free at (800) 526-0659, an Ohaus Product Parts Specialist will be available to help you.

REPLACEMENT PARTS

	OHAUS <u>Part No.</u>
Power Adapter/Chargers	
120 V ac, 60 Hz North American Plug	90924-12
220 V ac, 50 Hz Euro Plug	90924-13
240 V ac, 50 Hz UK Plug	90924-14

ACCESSORIES

	OHAUS <u>Part No.</u>
Tower (DS4 and DS10)	77627-01
Tower (DS10L, DS20L and DS44L)	77627-02

LIMITED WARRANTY

Ohaus products are warranted against defects in materials and workmanship from the date of delivery through the duration of the warranty period. During the warranty period Ohaus will repair, or, at its option, replace any component(s) that proves 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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