RA Series Price Computing Scale

1.   INTRODUCTION

This manual contains installation, operation and maintenance instructions for the RA Series scale.   Please read the manual completely before installation and operation.

Safety Precautions

⚠️   For safe and dependable operation of this scale, please comply with the following safety precautions:

- Verify that the input voltage printed on the AC Adapter and the plug type matches the local AC power supply.
- Make sure that the power cord does not pose an obstacle or tipping hazard.
- Disconnect the scale from the power supply when cleaning the scale.
- Do not operate the scale in hazardous or unstable environments.
- Do not drop loads on the platform.
- Use only approved accessories and peripherals, as available.
- Operate the scale only under ambient conditions specified in these instructions.
- Service should be performed by authorized personnel only.

# 2.   INSTALLATION

2.1   Unpacking

Unpack and verify that the following components have been included:

- Scale Unit
- Weighing Pan
- Power Adapter
- Instruction Manual

Save the packaging material.   This packaging ensures the ideal protection for the storage or transport of the product.

2.2   Assembling

Install the weighing pan as illustrated below, with the rounder corners facing front.
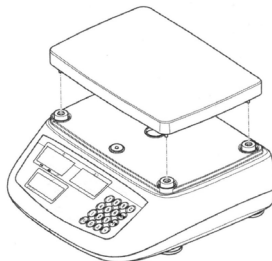
2.3   Selecting the Location

Operate the scale on a firm, level surface.   Avoid locations with rapid temperature changes, excessive air currents, vibrations, electromagnetic fields, heat or direct sunlight.

2.4   Leveling the Scale

Adjust the leveling feet until the bubble is centered in the circle of the level indicator (located on the rear).   Ensure that the scale is level each time its location is changed.
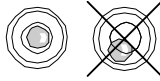
2.5   Connecting Power

2.5.1 AC Power

Verify that the intended AC power source matches the AC adapter rating. Connect the adapter to the power receptacle underneath and to the rear of the scale, then plug the AC adapter into a properly grounded power outlet.

2.5.2 Battery Power

This scale can operate with six D-size standard alkaline batteries (not included).   To install, unplug the scale first from the power supply.   Open the battery cover (located at the bottom of the scale) by twisting the two tabs 90° before pulling out to disengage the cover.   Install the batteries as illustrated on the battery holder.   Re-attach the cover by inserting the tabs back into position, then twist to lock in place.

If AC power is disconnected, the scale will automatically switch to battery power.

Dispose of the batteries according to local laws and regulations.

3. OVERVIEW OF CONTROLS AND FUNCTIONS

3.1 Control Panel
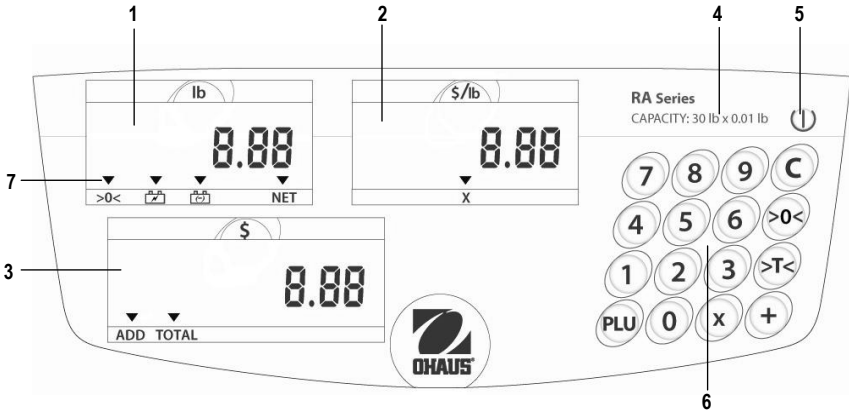
3.2 Customer Display
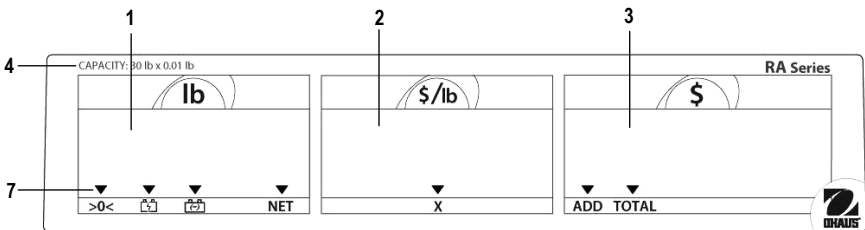
         1   **Weight display**
         2   **Unit Price display**
         3   **Total Price display**
         4   **Weights & Measures marking**
         5   **On/Off Key**
         6   **Numeric Keypad**
         7   **Annunciators**

3.3 Keys and Display Indicators

- Short press turns the scale on or off
- With the scale off, press together with *[>0<]* to enter User Setup Mode

- Numeric keys to enter Unit Price, Keyboard Tare, PLU number and other data

- Clears the Unit Price or Accumulation data
- In SETUP Mode, ends the setup mode

- Zeros the display
- With the scale off, press together with ⏻ to enter User Setup Mode
- In SETUP Mode, toggles back to the previous step

- Inputs the weight of the object on the weighing pan as a Tare value
- In SETUP Mode, toggles through the available settings
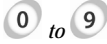
- Adds displayed Total Price into accumulation memory
- In SETUP Mode, accepts the displayed setting and proceeds to the next step

- Activates the By-Count operation and calculates the price of the item

- Stores or recalls a PLU

- LCD annunciator indicates scale is at Center of Zero

- LCD annunciator indicates scale is on battery power
- LCD annunciator blinks to indicate the battery needs to be changed

- LCD annunciator indicates scale is on AC power or battery is full

NET
- LCD annunciator indicates Net (Gross minus Tare) value

X
- LCD annunciator indicates scale is in By-Count mode

ADD
- LCD annunciator indicates scale is in Accumulation mode; data exists in Accumulation memory

TOTAL
- LCD annunciator indicates displayed Total Price is added into Accumulation memory

4.   OPERATIONS

4.1   Turning the Unit On and Off

Press ⏻ to turn the scale on or off. If a weight on the pan exceeds the power on zero range (±10% of the scale capacity), "------" is displayed. Remove the excess weight for the scale to capture zero. Ideally allow 15~30 minutes for the scale to warm up before use.

4.2   Zero Operation

Press *[>O<]* to zero the displayed weight (the weight must be stable and within ±2% of the scale capacity). Center of Zero is indicated by the *>O<* annunciator.

4.3   Manual Tare

Place a container on the pan, then press *[>T<]*. The Weight display will show a net value of "*0.0 0*", and the *NET* annunciator will turn on. Remove the container; and the negative value displayed will be equivalent to the Tare weight.

4.4   Keyboard Tare

With the pan empty, enter the known Tare value (up to the scale capacity, and in increments of the scale readability) via the numeric keypad, then press *[>T<]*. The Weight display will show the Tare as a negative net value, and the *NET* annunciator will turn on as the Tare weight is registered.

4.5   Clearing Tare

Press *[>T<]* with the pan empty to clear any Tare value.

4.6   Weighing and Pricing

Place the item to be weighed on the pan, then enter the Unit Price via the numeric keypad. The item weight will be shown in the Weight display, the unit price in the Unit Price display, and the resulting total price in the Total Price display.

The Unit Price and Total Price values are cleared automatically when the item is removed from the pan.

4.7   PLU Function (Price Lookup)

The PLU function can be used for frequently sold goods.   The price is looked up by simply entering the PLU number via the numeric keypad.   The PLU function can store up to 25 PLU's.

4.7.1   Storing a PLU

1.   Enter the Unit Price
2.   Press and hold *[PLU]* until 2 beeps are heard (the Weight display shows "*PLu* ")
3.   Enter the PLU number (1-25).   The scale beeps twice again, indicating that the PLU data was stored.

4.7.2   Recalling a PLU

Press *[PLU]*, then the PLU number with pre-stored data.   The scale will beep once as the corresponding Unit Price is shown in the Unit Price display.   If entering a PLU number with no stored data, "*noPLu* " will show momentarily in the Weight display.

4.8   By-Count Function

The By-Count function is used as reference to calculate the price of non-weighing items, e.g., the price for 36 pieces when 3 pieces cost a total of $1.50.

1.   Enter the deal quantity (1-99), e.g., "*3* " (displayed as "*0.03* " in the Unit Price display), then press *[X]*. The *X* annunciator will also be on to indicate the scale is in the By-Count mode.
2.   Enter the deal price, e.g., "*1.50* ", then press *[+]*.   The Total Price display will show "*1.50* ".
3.   Enter the quantity to be sold, e.g., "*36* ".   The resulting total price of "*18.00* " is shown in the Total Price display.   Keep entering another quantity as needed.
4.   To end the By-Count function and return to normal weighing mode, press *[C]*.

4.9   Accumulation Function

The Accumulation (totalize) function is used to add the total price of several weighings.

4.9.1   Accumulating

1.   Perform a pricing transaction as described in Section 4.6.
2.   Press *[+]*. The displayed total price is added to the accumulation memory, and the *ADD* and *TOTAL* annunciators will be on.
3.   The Weight display will show "*Total*", the Unit Price display will show "*1*" (the number of weighments), and the Total Price display will show the accumulated total price value.
4.   Remove the item, then repeat steps 1 and 2 until all desired transactions are finished. The corresponding total number of weighments and accumulated price will be displayed.

4.9.2   Recalling and Clearing Accumulation

With the pan empty, press *[+]*. The accumulated total number of weighments and total price will be displayed. To clear accumulation memory, press *[C]* at this time. The scale returns to normal weighing mode and the *ADD* annunciator will turn off.

4.10 Backlight Feature

With the scale on, long-press *[C]* until the backlight turns on (repeat this step to turn off, or when the scale is turned off and on again). When on, the backlight temporarily switches off after 2 minutes of inactivity, and reactivates with a key pressed or item placed on the pan.

4.11 Battery Power Saving Feature

When powered on batteries (not included), the scale will enter sleep mode (Weight display will only show one "*0*" digit, and Unit Price and Total Price displays will be blank) after 2 minutes of inactivity. It reactivates when a key is pressed or an item placed on the pan.

If the scale still remains inactive after 15 minutes, the scale will turn off automatically (see Section 5.2 to disable this function).

5. SCALE SETTINGS

5.1 Accessing the User Setup Mode

With the scale off, press ⏻ and *[C]* together momentarily. The scale turns on and "*grP 1*" is displayed.

To navigate in the User Setup Mode:
- Press *[+]* to accept the displayed setting and proceed to the next step
- Press *[>T<]* to toggle through available settings
- Press *[>0<]* to return to the previous steps
- Press *[C]* to end setup and proceed to "Save"

5.2 User Setup Parameters

| Window Display		Description	Available Settings
Weight	Unit Price		
grP 1	StEP 3	Key-press beeper	**ON** : enables this function **OFF** : disables this function
	StEP 4	Automatic Power off	**ON** : enables this function **OFF** : disables this function
	StEP 6	Automatic clearing of tare and unit price	**ON** : Auto-clear when weight is removed from the platform **OFF** : Manual clear by pressing *[C]*
grP 2	StEP 7	Data output	**0**, 1, 2, 3, 4 (not applicable, no RS232 functionality; do not change)
	StEP 8	Content of output	0, 1, **2** (not applicable, no RS232 functionality; do not change)
	StEP 9	Content of entry	ON, **OFF** (not applicable, do not change)
	StEP 10	Data output format	ON, **OFF** (not applicable, no RS232 functionality; do not change)
grP 3	StEP 1	Filtering level	**0** : Light, faster display speed *1* : Normal *2* : High
SAUE		Save or Abort	***Save*** : Saves changes and restarts to weighing mode **Abort** : Restarts to weighing mode without saving changes

Note: Bold settings are defaults.

6. CALIBRATION AND SEALING

6.1 Calibration

For best results, calibrate the scale at regular intervals. Temperature changes, geographic gravity variations, altitude changes and abuse are few reasons why a scale may need recalibration.

Note: The following procedure requires the use of hand tools and calibration weights. If unable to perform the calibration, contact an authorized Ohaus service organization.

1. With the scale on, gently press the switch inside the access hole at the bottom of the scale (1). A narrow screwdriver may be inserted through the hole to press the switch.
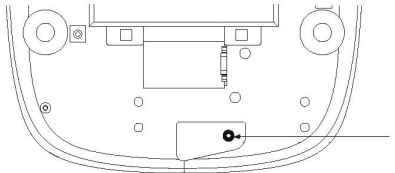
⚠ *Note:* When accessing the bottom of the scale, avoid placing the scale upside down on the pan or sub-platform. Place the scale on its side.

2. "*grP 1*" is displayed in the Weight display. Press *[>T<]* successively to move through the succeeding parameters: "*grP 2*".

   Note: Press *[>0<]* at any time to return to the previous parameter.

3. When "*grP 3*" is displayed, press *[+]* to select.

4. "*StEP 1*" is displayed in the Unit Price display. Press *[+]* successively to move through the succeeding parameters: "*StEP 2*", "*StEP 3*".

5. When "*StEP 4*" and "*no*" are displayed, press *[>T<]* to change the setting in the Total Weight display to "*YES*".

6. When "*YES*" is displayed, press *[+]* to enter the Span Calibration sequence.

⚠ *Note:* **Do not change the settings of any parameters unless specified above. Other parameters are service settings intended for authorized servicing use only. The scale may be turned off at any time to abort setup without saving any changes.**

7. **Span Calibration Sequence:**

Window Display				
Weight	**Unit Price**	**Total Price**	**Description**	**Actions**
CAL	StEP 1	15.00	Scale capacity	*Press [+] to select and proceed to next step.* **Make sure the displayed value matches the scale model capacity.** **Do not press [>T<], which will toggle through other capacity settings that may not match the scale model's.**
	StEP 2	- - - - - -	Establish zero	*Press [+] to initiate countdown sequence.* **Ensure the pan is empty and the scale stable.**
		5 ... 0	Countdown	The countdown will repeat if the scale is not stable during this process.
	StEP 3	⊦⊦⊦⊦⊦⊦	2/3 calibration point	*Place 2/3 capacity weight on the pan, then press [+] to proceed to the next step.*
	StEP 4	0	Full span	*Enter the scale capacity value from Step 1 (e.g., "15").*
		15	Establish full span	*Place the indicated weight on the pan, then press [+] to initiate countdown sequence.*
		5 ... 0	Countdown	The countdown will repeat if the scale is not stable during this process.
SAUE			Save or Abort	*Remove the weight from the pan, then press [+] to save settings and restart scale to weighing mode.* **If needing to abort calibration and retain previous calibration data, press [>T<] ("Abort" will be displayed) then [+] at this time (or turn the scale off at any time during the process).**

6.2   Type Approval Sealing

After the scale has been found to comply with local regulations by respective approving authorities, the scale may be sealed in the following manner:

6.2.1 Lead and Wire Seal

(1) Install the 2 through-hole sealing screws securely as illustrated below. Run thw wire seal into the through-holes, then apply the lead seal in place.
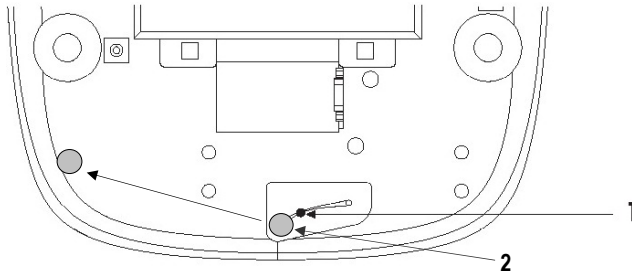
6.2.2. Sticker Seal

Install 2 regular pan-head screws, then apply a sticker over one of the screws or on one of the through-holes for the housing screw (2).

7.   MAINTENANCE

7.1   Cleaning

⚠️   **Comply with safety precautions when cleaning and maintaining the scale**

- **Turn off and disconnect the scale from the power supply during cleaning.**
- **Wipe the exterior components of the scale using a soft cloth dampened with water and a mild detergent (DO NOT use acids, alkalis, strong solvents or abrasive cleaning agents).**
- **Inspect the scale regularly.   Ensure that the housing, pan and sub-platform are clean and free from foreign material.**
- **DO NOT allow liquids to enter the scale.**
- **DO NOT open the scale; no user-repairable components inside.   Service should be performed by authorized personnel only.**
- **DO NOT carry the scale by the pan or sub-platform.   Use the handhold behind the scale housing.**
- **DO NOT place the scale upside down.   If accessing the bottom, place the scale on its side.**

7.2 Troubleshooting

The following table lists common problems, possible causes and remedies. If the problem persists, contact Ohaus or your authorized Ohaus dealer:

| Symptom	Possible Causes	Remedy
Scale will not turn on.	AC power not connected to scale or to outlet.	Connect scale to power.
	No power in outlet.	Connect to different power outlet.
	Battery discharged.	Replace battery.
Weight reading does not stabilize.	Unstable environment.	Ensure a stable environment.
	Interference under pan or sub-platform.	Ensure that the weighing pan and sub-platform are unobstructed.
Scale does not display accurately.	Improper calibration.	Calibrate the scale using proper calibration weights.
- - - - - - **Weight display**	Weight exceeds power-on zero range	Remove excess weight from the pan during power-on.
⌐⌐⌐⌐⌐⌐ **Weight display**	Overload condition	Reduce the load on the pan.
⌐⌐⌐⌐⌐⌐ **Total Price display**	Price > 9999.99	Reduce the load on the pan.
⌐⌐⌐⌐⌐⌐ **Weight display**	Underload condition	Install the pan. Re-zero the scale.
"E 11" displayed	RAM error	Turn the scale off and on again. Return scale for service.
"E 16" displayed	ROM error	Recalibrate the scale. Return scale for service.
"E 18" displayed	EEPROM error	Return scale for service.
"E 31" displayed	By-Count operation error	Enter only up to 2 digits (99)
"E 33" displayed	Accumulation total price > 999.99 or the number of transactions > 99	Clear accumulation memory and start anew
"E 34" displayed	PLU number > 25	Enter correct PLU number: 1-25
"noPLu" displayed	PLU data not found	Store data in the PLU number

8.   TECHNICAL DATA

8.1   Specifications

Model	RA6US	RA15US
Capacity x Readability	15 lb x 0.005 lb	30 lb x 0.01 lb
NTEP* Displayed Resolution	3,000d	
Construction	High-grade polymer housing with stainless steel pan	
Pan Dimensions	7.9W x 11.4D in. / 200W x 290D mm	
Leveling Components	4 adjustable rubber feet with integral rear mounted level bubble indicator	
Display	3-window backlit LCD, front and rear; Weight-Unit Price-Total Price 6-digit (5-digit for Weight), 7-segment, 0.5 in./12 mm high characters	
Weighing Units	lb	
Application Modes	Price computing for items by count and weight, 25 PLU memory	
Keyboard	Numeric, 17-key raised, tactile membrane switch with key-press beeper	
Span Calibration	2/3 and full scale capacity	
Tare Range	To full capacity by subtraction	
Zero Range	At power on: ±10% / keyboard: ±2% full scale capacity	
Stabilization Time	within 2 seconds	
Power	12VDC 800mA AC Adapter (included) / 6 D-cell alkaline batteries (not included)	
Battery Operation	60~70 hours of continuous use	
Safe Overload	150% Full Scale Capacity	
Operating Temperature Range	14°F to 104°F / -10°C to 40°C	
Storage Temperature Range	-4°F to 158°F / -20°C to 70°C	
Humidity Range	10% to 85% humidity, non-condensing	
Scale Dimensions	12.3W x 12.9D x 4.6H in. / 312W x 328D x117H mm	
Shipping Dimensions	14.8W x 14.8D x 8.5H in. / 376W x 376D x 216H mm	
Scale Unit Weight	7.0 lb / 3.2 kg	
Shipping Weight	10.6 lb / 4.8 kg	

* NTEP CC No. 08-058

8.2 Drawings
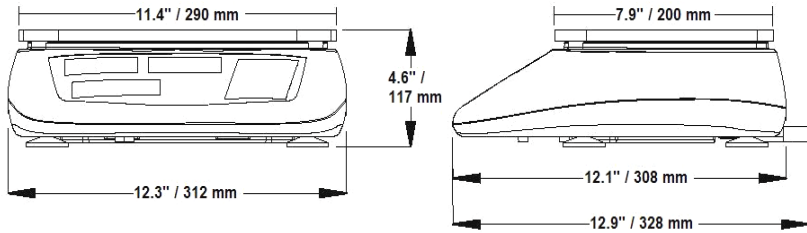
8.3 Compliance

Compliance to the following standards is indicated by the corresponding mark on the product

Marking	Standard
(ϵ	This product conforms to the EMC directive 89/336/EEC, the Low Voltage Directive 73/23/EEC and the Non-automatic Weighing Instruments Directive 90/384/EEC. The complete Declaration of Conformity is available from Ohaus Corporation.
c (UL) US	UL60950-1: 2003

EC Emissions Note
This device complies with EN61326/CISPR 11 Class B Group 1.

	Disposal
	In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements.
	Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.
	If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.
	Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.
	Thank you for your contribution to environmental protection.
	For disposal instructions in Europe, refer to www.ohaus.com/weee.

FCC Note

This equipment has been tested and found to comply with the limits for a Class B 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.

Industry Canada Note

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

ISO 9001 Registration

In 1994, Ohaus Corporation, USA, was awarded a certificate of registration to ISO 9001 by Bureau Veritus Quality International (BVQI), confirming that the Ohaus quality management system is compliant with the ISO 9001 standard's requirements. On May 15, 2003, Ohaus Corporation, USA, was re-registered to the ISO 9001:2000 standard.

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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