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> Ohaus PX224/E, Pioneer Analytical Electronic Balance, 220 g x 0.0001 g User Manual

Ohaus PX224/E

Ohaus PX224/E Pioneer Analytical Electronic Balance User Manual

Model: PX224/E | Brand: Ohaus

1. INTRODUCTION

The Ohaus PX224/E Pioneer Analytical Electronic Balance is designed for precise weighing in laboratory, industrial, and educational environments. It offers high accuracy and repeatability, making it suitable for essential weighing applications. This manual provides comprehensive instructions for the setup, operation, maintenance, and troubleshooting of your Ohaus PX224/E balance.

2. SAFETY INFORMATION

Always observe the following safety precautions to ensure safe operation and to prevent damage to the balance or injury to personnel:

- Read this entire manual before operating the balance.
- Use the balance only for its intended purpose as described in this manual.
- Ensure the balance is placed on a stable, level surface away from vibrations, drafts, and direct sunlight.
- Do not operate the balance in hazardous or unstable environments.
- Use only the original AC adapter supplied with the balance.
- Avoid spilling liquids on the balance. In case of spillage, disconnect power immediately and clean thoroughly.
- Do not attempt to service or repair the balance yourself. Refer all servicing to qualified personnel.
- The balance features a static removal bar for convenient grounding. Utilize this feature to minimize electrostatic interference, especially when handling sensitive samples.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

3. PRODUCT FEATURES

The Ohaus PX224/E Pioneer Analytical Electronic Balance is equipped with several features designed for optimal performance and user convenience:

- **Weighing Units:** Supports Carat, Custom, Grain, Gram, Hong Kong Tael, Kilogram, Mesghal, Milligram, Momme,

Newton, Ounce, Ounce Troy, Pennyweight, Pound, Singapore Tael, Taiwan Tael, Tical, Tola.

- **Display:** 2-Line LCD with Backlight for clear readability in various lighting conditions.
- **Pan Size:** 3.54 inches (90 mm) stainless steel weighing pan.
- **Power:** Operates via an included AC Adapter.
- **Construction:** Durable metal base, plastic top housing, removable stainless steel pan, and a glass draftshield.
- **Connectivity:** Features USB and RS232 ports for easy communication with external devices.
- **Additional Features:** Integrated weigh-below-hook, security bracket, calibration lock, and an in-use cover.

4. SETUP

Follow these steps to set up your Ohaus PX224/E balance:

1. **Unpacking:** Carefully remove the balance and all accessories from the packaging. Retain the packaging for future transport or storage.
2. **Placement:** Place the balance on a firm, level, and stable surface, free from vibrations, drafts, and rapid temperature changes. Ensure adequate space around the balance for operation and maintenance.
3. **Leveling:** Adjust the leveling feet until the air bubble in the level indicator is centered. This ensures accurate weighing results.
4. **Draftshield Assembly:** Assemble the glass draftshield components around the weighing pan. Ensure all panels are securely in place to protect the weighing area from air currents.
5. **Weighing Pan Installation:** Carefully place the stainless steel weighing pan onto the pan support.
6. **Power Connection:** Connect the supplied AC adapter to the power input port on the rear of the balance, then plug the adapter into a suitable electrical outlet.
7. **Initial Power On:** Press the **ON/OFF** button to power on the balance. Allow the balance to warm up for at least 30 minutes for optimal stability and accuracy.



Figure 4.1: The Ohaus PX224/E Pioneer Analytical Electronic Balance, showing its complete assembly with the glass draftshield and weighing pan.

5. OPERATING INSTRUCTIONS

5.1 Basic Weighing

1. Ensure the balance is level and has completed its warm-up period.

2. Press the **Zero** button to set the display to zero before placing any sample.
3. Carefully place the item to be weighed onto the center of the weighing pan.
4. Wait for the stability indicator (usually a star or circle) to appear on the display, indicating a stable reading.
5. Read the weight displayed on the LCD.



Figure 5.1: The balance displaying a stable weight reading with a calibration weight placed on the weighing pan.

5.2 Taring (Subtracting Container Weight)

Taring allows you to weigh only the contents of a container, ignoring the container's weight.

1. Place the empty container (beaker, flask, etc.) onto the weighing pan.
2. Press the **Tare** button. The display will return to zero, effectively subtracting the container's weight.
3. Add the substance to be weighed into the container. The display will show only the net weight of the substance.
4. Remove both the container and substance from the pan. The display will show a negative value equal to the tared weight. Press **Zero** again to clear the tare.

5.3 Changing Weighing Units

To cycle through available weighing units:

- Press the **Unit** button. Each press will cycle to the next available weighing unit (e.g., g, mg, kg, ct).
- The selected unit will be displayed on the screen.

5.4 Using the Static Removal Bar

The PX224/E features a static removal bar to dissipate static electricity, which can affect weighing accuracy, especially with non-conductive samples or in dry environments.

- Before weighing, or if static interference is suspected, gently touch the static removal bar with your hand or the sample container for a few seconds.
- This action helps to ground static charges, leading to more stable and accurate readings.



Figure 5.2: A hand demonstrating the use of the static removal bar to dissipate static electricity.

6. CALIBRATION

The Ohaus PX224/E balance requires external calibration. Regular calibration is crucial to maintain the accuracy and precision of your balance. Refer to the on-screen prompts and the full Ohaus user manual for detailed calibration procedures using certified calibration weights.

- **When to Calibrate:**

- Before first use.
 - After relocating the balance.
 - After significant temperature changes.
 - Periodically, as required by your quality system or application.
- **Calibration Weights:** Use certified calibration weights appropriate for the balance's capacity and readability.
 - **Calibration Lock:** The balance includes a calibration lock feature to prevent unauthorized calibration adjustments.

7. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your balance.

- **Cleaning:**
 - Always disconnect the balance from power before cleaning.
 - Clean the exterior of the balance with a soft, damp cloth and a mild detergent. Do not use abrasive cleaners or solvents.
 - The stainless steel weighing pan can be removed for thorough cleaning.
 - Ensure no liquids enter the balance housing.
- **Storage:** If storing the balance for an extended period, ensure it is clean, dry, and stored in its original packaging or a protective container in a stable environment.
- **Inspection:** Periodically inspect the power cord for damage and ensure all components are securely in place.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Ohaus PX224/E balance.

Problem	Possible Cause	Solution
Balance does not turn on.	No power supply; faulty AC adapter; power outlet issue.	Check power cord connection. Ensure AC adapter is properly connected. Try a different power outlet.
Unstable readings.	Vibrations; air currents; static electricity; balance not level; warm-up time insufficient.	Place balance on a stable surface. Close draftshield doors. Use static removal bar. Level the balance. Allow sufficient warm-up time.
Inaccurate readings.	Needs calibration; environmental factors; dirty pan.	Perform external calibration. Ensure stable environment. Clean weighing pan.
Display shows "Error" message.	Overload; internal malfunction.	Remove excess weight. Power cycle the balance. If error persists, contact Ohaus support.

For more detailed troubleshooting or issues not listed here, please refer to the comprehensive Ohaus PX Series user manual or contact Ohaus customer support.

9. SPECIFICATIONS

Key technical specifications for the Ohaus PX224/E Pioneer Analytical Electronic Balance:

Specification	Value
Model Number	30429847 (PX224/E)
Maximum Capacity	220 g
Readability	0.0001 g
Pan Size	3.54 inches (90 mm)
Display Type	2-Line LCD with Backlight
Power Source	AC Adapter (Included)
Product Dimensions (L x W x H)	21 x 16 x 21 inches
Item Weight	10 Pounds
Connectivity	USB, RS232
Construction	Metal base, plastic top housing, stainless steel pan, glass draftshield
Recommended Uses	Laboratory, Industrial, Education

10. WARRANTY AND SUPPORT

Ohaus products are manufactured under strict quality control and are warranted against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Ohaus website.

For technical support, service, or to inquire about replacement parts, please contact Ohaus customer service or your local authorized Ohaus dealer. Have your model number (PX224/E) and serial number ready when contacting support.

Ohaus Official Website: www.ohaus.com

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