Aqua Master Tools P160 Pro

User Manual

Aqua Master Tools Combo Pen P160 Pro

Model: P160 Pro

Introduction

The Aqua Master Tools Combo Pen P160 Pro is a versatile and robust instrument designed for precise measurement of pH, Electrical Conductivity (EC), Parts Per Million (PPM), Total Dissolved Solids (TDS), and temperature in various liquid solutions. Its advanced features, including analogue EC calibration, ensure accurate readings across different temperatures. This manual provides comprehensive instructions for the setup, operation, maintenance, and troubleshooting of your P160 Pro Combo Pen.

Package Contents

This image displays the complete package contents of the Aqua Master Tools Combo Pen P160 Pro. It includes the P160 Pro meter itself, a protective storage box, 25ml bottles of pH 7.00 and pH 4.01 calibration solutions, a 25ml bottle of 14.13 EC calibration solution, a small screwdriver for calibration adjustments, and the user manual.

- 1 x Combo Pen P160 Pro
- 1 x Storage box
- 1 x Calibration solution pH 7.00 (25ml)
- 1 x Calibration solution pH 4.01 (25ml)
- 1 x Calibration solution 14.13 (25ml)
- 1 x Screwdriver for calibration
- 1 x User manual (EN - DE)

Setup

1. **Unpacking:** Carefully remove the Combo Pen P160 Pro and all accessories from the storage box.
2. **Battery Installation:** The meter is delivered with batteries installed and fully calibrated. If replacement is needed, refer to the Maintenance section.
3. **Initial Rinse:** Before first use, rinse the electrode thoroughly with distilled or deionized water. Do not touch the electrode glass.

4. **Storage Solution:** Ensure the electrode cap contains storage solution to keep the electrode hydrated. If dry, rehydrate the electrode as described in the Maintenance section.



This image provides an exploded view of the P160 Pro Combo Pen, illustrating its main components: the meter body with display and buttons, the replaceable electrode, and the protective cap. This view is helpful for understanding how to properly handle and maintain the device, particularly when replacing the electrode or ensuring the cap is correctly secured with storage solution.

Operating Instructions



This image shows a close-up front view of the Aqua Master Tools P160 Pro meter. It highlights the digital display, which shows pH, EC, and temperature readings, and the three control buttons: Power (waterproof), MODE, and C/F CAL. Understanding the layout of these buttons is crucial for operating the device and switching between measurement parameters.

1. **Power On/Off:** Press the **"waterproof"** button (power symbol) to turn the meter on or off.
2. **Measurement:**
   - Remove the protective cap from the electrode.
   - Immerse the electrode into the solution to be measured, ensuring the sensor is fully submerged.
   - Gently stir the solution to remove air bubbles and allow the reading to stabilize.
   - Read the pH, EC, PPM, TDS, and temperature values displayed on the screen.
3. **Switching Parameters:** Press the **"MODE"** button to cycle through pH, EC, PPM, and TDS readings. The temperature is always displayed.
4. **Temperature Unit:** Press the **"C/F CAL"** button briefly to switch between Celsius (°C) and Fahrenheit (°F) temperature units.
5. **After Use:** After each measurement, rinse the electrode with distilled or deionized water and replace the protective cap, ensuring it contains storage solution.

Calibration

Regular calibration ensures the accuracy of your Combo Pen P160 Pro. It is recommended to calibrate pH weekly and EC monthly, or more frequently if high accuracy is critical or after prolonged storage.

pH Calibration

1. Prepare pH 7.00 and pH 4.01 (or pH 10.01 if measuring high pH) calibration solutions. Ensure solutions are at room temperature.
2. Turn on the meter and switch to pH mode.
3. Rinse the electrode with distilled water and blot dry.
4. Immerse the electrode into the pH 7.00 buffer solution.
5. Press and hold the **"C/F CAL"** button until "CAL" appears on the display. The meter will automatically recognize the buffer and calibrate. Wait for the reading to stabilize and "END" to appear, then return to measurement mode.
6. Rinse the electrode with distilled water and blot dry.
7. Immerse the electrode into the pH 4.01 buffer solution.
8. Press and hold the **"C/F CAL"** button again. The meter will automatically recognize and calibrate. Wait for "END" to appear.

9. Your pH calibration is now complete.

EC Calibration

The P160 Pro features analogue EC calibration, making it less sensitive to calibration solution temperature.

1. Prepare the 14.13 mS/cm (or 12.88 mS/cm) EC calibration solution.
2. Turn on the meter and switch to EC mode.
3. Rinse the electrode with distilled water and blot dry.
4. Immerse the electrode into the EC calibration solution.
5. Press and hold the **"C/F CAL"** button until "CAL" appears. The meter will automatically recognize the buffer and calibrate. Wait for the reading to stabilize and "END" to appear.
6. Your EC calibration is now complete.

Maintenance

Electrode Care

- Always keep the electrode cap filled with storage solution (or pH 4.01 buffer if storage solution is unavailable) to prevent the electrode from drying out. Never store in distilled water.
- If the electrode dries out, soak it in storage solution for at least 30 minutes to rehydrate before use or calibration.
- Rinse the electrode with distilled water after each use.
- Clean the electrode regularly (e.g., monthly) by soaking it in an electrode cleaning solution for 15-30 minutes, then rinse thoroughly.

Electrode Replacement

The electrode of the P160 Pro is replaceable. If the electrode is damaged or no longer calibrates correctly after cleaning, it may need replacement.

1. Unscrew the old electrode from the meter body.
2. Carefully screw on the new electrode, ensuring a secure fit.
3. Calibrate the new electrode before first use.

Battery Replacement

When the battery indicator appears on the display, it's time to replace the batteries.

1. Open the battery compartment cover.
2. Replace the old batteries with new ones, ensuring correct polarity.
3. Close the battery compartment cover securely.

Troubleshooting

Problem	Possible Cause	Solution
Inaccurate readings	Electrode not calibrated; dirty electrode; electrode dry; expired calibration solution.	Calibrate the meter; clean the electrode; rehydrate electrode; use fresh calibration solutions.
Meter does not turn on	Dead batteries; loose battery connection.	Replace batteries; ensure batteries are correctly inserted.

Problem	Possible Cause	Solution
Slow response time	Electrode dry or fouled.	Rehydrate or clean the electrode.
"Err" or "---" on display	Measurement out of range; electrode issue.	Ensure solution is within meter's range; clean/rehydrate electrode; replace electrode if necessary.

Specifications

Parameter	Value
Model	P160 Pro
Product Dimensions	8.66 x 1.57 x 1.57 inches
Manufacturer	Aqua Master Tools
ASIN	B0BSFY9RR5
Measurement Range pH	0.0 - 14.0 pH
Measurement Range EC	0.0 - 19.9 mS/cm
Measurement Range PPM/TDS	0 - 19990 ppm
Measurement Range Temp	0.0 - 50.0 °C (32.0 - 122.0 °F)
Accuracy pH	±0.1 pH
Accuracy EC/PPM/TDS	±2% F.S.
Accuracy Temp	±1.0 °C (±2.0 °F)
Automatic Temperature Compensation (ATC)	Yes
Power Supply	Batteries (included)

Warranty and Support

For warranty information and technical support, please refer to the contact details provided with your purchase or visit the official Aqua Master Tools website. Keep your proof of purchase for warranty claims.
Note: The electrode is a consumable part and typically has a limited warranty period compared to the main meter body.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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