

Bante Instruments Bante902P

Bante 902P Portable pH Conductivity Meter User Manual

Model: Bante902P

1. INTRODUCTION

The Bante 902P is a high-precision portable multi-parameter meter designed for accurate measurement of pH, ORP (Oxidation Reduction Potential), conductivity, TDS (Total Dissolved Solids), salinity, resistivity, and temperature. This versatile instrument is ideal for various applications requiring precise liquid analysis, offering robust performance and user-friendly features.

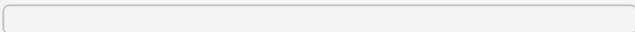


Figure 1: The Bante 902P Portable pH Conductivity Meter with its accompanying pH, conductivity, and temperature probes.

2. KEY FEATURES

- High-precision portable pH conductivity meter for measuring pH, ORP, conductivity, TDS, salinity, and resistivity.
- 1 to 5 points calibration with automatic recognition for USA, NIST, DIN buffers and conductivity standards.
- Automatic electrode diagnosis displays zero-point offset, slope, and cell constant.
- Automatic temperature compensation ensures accurate readings across the entire range.
- Auto-read function senses and locks the measurement endpoint for stable results.
- Calibration due alarm reminds users to calibrate the meter regularly.
- Setup menu with 15 options including pH buffer group, calibration points, resolution, conductivity cell constant (K=0.1, 1, 10), reference temperature (20/25°C), TDS conversion factor, linear and pure water compensations, seawater and practical salinity measurement modes, stability criteria, and auto-power off.
- Expanded memory stores up to 500 data sets.
- USB communication interface for easy data transfer to a PC or connection to a power adapter.
- Communication software capable of receiving measurement data, recording measurements at predefined time intervals, and creating Excel files.



Figure 2: Visual representation of the Bante 902P's meter features, including multi-point calibration, auto-recognition, automatic diagnosis, and USB communication.

3. WHAT'S IN THE BOX

Upon opening the package, verify that all components are present and undamaged:

- Bante 902P Meter
- pH Electrode
- Conductivity Electrode
- Temperature Probe
- Standard Solutions (pH buffer reagents, conductivity standard solutions)
- Carrying Case
- Electrode Clip
- USB Cable (for communication and power)

Note: ORP electrodes are sold separately.

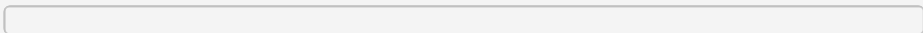


Figure 3: The Bante 902P meter and its accessories neatly organized within the protective carrying case.

4. SETUP

4.1 Battery Installation

The Bante 902P operates on 3 x AA batteries. To install or replace batteries:

1. Locate the battery compartment cover on the back of the meter.
2. Slide the cover open in the direction indicated by the arrow.
3. Insert 3 AA batteries, ensuring correct polarity (+/-) as marked inside the compartment.
4. Close the battery compartment cover securely.

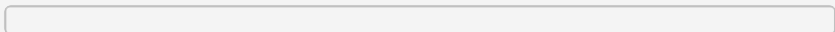


Figure 4: Rear view of the Bante 902P with the battery compartment open, illustrating the placement of 3 AA batteries.

4.2 Probe Connection

Connect the appropriate probes to the meter's input sockets:

- **BNC Socket:** For pH or ORP electrode connection.
- **Jack Socket:** For temperature probe connection.
- **6-pin DIN Socket:** For conductivity electrode connection.
- **USB Communication Interface:** For data transfer or power connection.

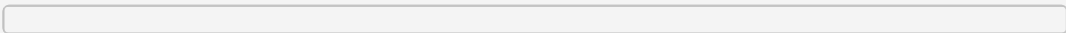


Figure 5: Detailed view of the Bante 902P's connector ports for various probes and USB communication.

5. OPERATION

5.1 Basic Measurement

To perform a basic measurement:

1. Ensure the correct probe is connected and calibrated.
2. Turn on the meter.
3. Press the **Mode** button to select the desired measurement mode (pH, Conductivity, ORP, etc.).
4. Immerse the probe into the sample solution.
5. Wait for the reading to stabilize. The auto-read function will sense and lock the measurement endpoint.
6. Press **MEAS** to freeze or release the measured value.



Figure 6: The Bante 902P's display showing different operational screens for measurement, calibration, and system setup.

5.2 Calibration

Regular calibration is crucial for accurate measurements. The Bante 902P supports 1 to 5 points calibration with automatic buffer recognition.

1. Prepare the required standard buffer solutions (USA, NIST, DIN for pH; specific standards for conductivity).
2. Press **CAL** to enter calibration mode.
3. Follow the on-screen prompts to immerse the electrode in the specified buffer solutions.
4. The meter will automatically recognize the buffer and calibrate.
5. Repeat for all desired calibration points.
6. Press **ENTER** to confirm and save the calibration.

5.3 Data Management

The meter can store up to 500 data sets and communicate with a PC.

- Press **M+** to store the current reading.
- Press **MR** to retrieve stored data.
- Connect the meter to a PC using the USB cable.
- Use the provided communication software to transfer data, record measurements at predefined intervals, and export to Excel files.



Figure 7: The Bante 902P connected via USB to a computer, demonstrating its data communication capabilities with dedicated software.

6. MAINTENANCE

- **Electrode Care:** Always rinse electrodes with distilled or deionized water after each use. Store pH electrodes in appropriate storage solution, not dry.
- **Cleaning:** Wipe the meter's exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display to ensure continuous operation.
- **Storage:** When not in use for extended periods, remove batteries and store the meter and probes in the carrying case.

in a cool, dry place.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity; replace with new AA batteries.
Unstable readings.	Dirty electrode; air bubbles; insufficient sample volume; electrode nearing end of life.	Clean electrode; gently tap to remove bubbles; ensure adequate sample; replace electrode if necessary.
Calibration failure.	Expired or contaminated buffer solutions; dirty electrode; incorrect buffer selection.	Use fresh buffer solutions; clean electrode; verify buffer settings in menu.
No data transfer via USB.	Incorrect cable; driver issue; software not running.	Ensure correct USB cable; install necessary drivers; open communication software.

8. SPECIFICATIONS

Parameter	Range	Resolution	Accuracy
pH	-2.000 to 20.000 pH	0.001 / 0.01 / 0.1 pH, selectable	±0.002 pH
	Calibration: 1 to 5 points		
	pH Buffer Options: USA / NIST / DIN / 2 custom buffers		
	Temperature Compensation: 0 to 100°C / 32 to 212°F, manual or automatic		
ORP	-1999.9 to 1999.9 mV	0.1 / 1 mV, selectable	±0.2 mV
	Calibration: 1 point		
Conductivity	0 to 2000 µS/cm, 200 mS/cm	0.001, 0.01, 0.1, 1, automatic	±0.5% F.S.
	Calibration: 1 to 5 points		
	Calibration Solutions: 10 µS/cm, 84 µS/cm, 1413 µS/cm, 12.88 mS/cm, 111.8 mS/cm		
	Temperature Coefficient: Linear (0.0 to 10.0%/°C) / pure water compensation		
	Cell Constant: K=0.1 / 1 / 10 / Custom		
TDS	0 to 2000 ppm, 200 ppt (TDS factor = 1)	0.01, 0.1, 1, automatic	±1% F.S.
	TDS Conversion Factor: 0.1 to 1.0 (default 0.5)		

Parameter	Range	Resolution	Accuracy
Salinity	0.00 to 80.00 ppt / 0.00 to 42.00 psu	0.01	±1% F.S.
Resistivity	0.00 to 20.00 MΩ	0.01	±1% F.S.
Temperature	0 to 105°C / 32 to 221°F	0.1°C / °F	±0.5°C / ±0.9°F
	Calibration: 1 point		
Other Specifications	Data Storage: 500 sets		
	Auto-Power Off: 10 / 20 / 30 minutes after last key pressed		
	Power Supply: 3 × 1.5V AA batteries or 5V DC power adapter		
	Dimensions: 170 × 85 × 30 mm / 6.7 × 3.4 × 1.2 in.		Weight: 300 g / 10.5 oz.

Figure 8: Overview of the Bante 902P's measurement parameters, ranges, and accuracies.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Bante Instruments directly. Refer to the product packaging or the official Bante Instruments website for the most current contact details and warranty terms.

Manufacturer: Bante Instruments
Website: www.bante-instruments.com

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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.

Submit question

Open the live page

<https://manuals.plus/asin/B09C8FBCCC>

More documents and user manuals: <https://manuals.plus/>