



ECscan10H Pocket Conductivity Tester

# Instruction Manual

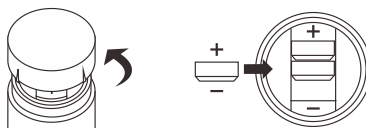
## Introduction

Thank you for selecting the ECscan10H pocket conductivity tester. This manual provides a step-by-step guide to help you operate the meter, please carefully read the following instructions before use.

## Inserting the Batteries

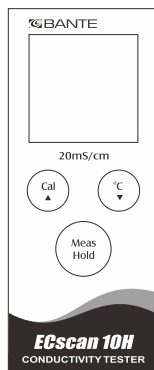
Take out the G13A button cell batteries from the packaging. Follow the steps below to insert batteries into the battery compartment.

- Remove the battery compartment lid.
- Insert the three batteries into the battery compartment, note polarity.
- Replace the battery compartment lid and turn clockwise until it is tight.



## Keypad

ECscan10H pocket conductivity tester has a succinct membrane keypad, names and symbols describe the each function key controls.

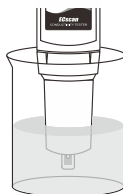


INDEX:

KEY	FUNCTION
MEAS/HOLD	<ul style="list-style-type: none"> <li>• Power the tester ON/OFF.</li> <li>• Freezes the measured value on the display, press the key again to resume measuring.</li> <li>• In the calibration mode, confirms the setting value or exits calibration mode.</li> </ul>
CAL ▲	<ul style="list-style-type: none"> <li>• Press and hold the key to enter the calibration mode.</li> <li>• Press the key again to increase the setting value.</li> </ul>
°C ▼	<ul style="list-style-type: none"> <li>• In the measurement mode, shows current temperature.</li> <li>• In the calibration mode, decrease the setting value.</li> </ul>

## Prior to Use

- Remove the electrode protective cap from the tester.
- Soak the electrode for a few minutes in tap water to remove dirt and oil stains on the electrode.



## Power On/Off

- Press MEAS key to turn on the tester, the display shows measured value.
- Press and hold the MEAS key for 5 seconds, the tester will turn off.
- If you do not press any key for 8 minutes, the tester will automatically turn off to conserve energy.

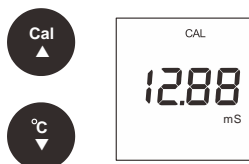
## Calibration

ECscan10H pocket conductivity tester allows 1 point calibration. To ensure accurate measurement, we recommend that calibrating the meter regularly. The tester acceptable calibration ranges from 10 to 18mS/cm. Ensure that you use fresh conductivity standard solution during the calibration. DO NOT reuse calibration solutions as it may be contaminated and affect the calibration and accuracy of measurement.

1. Rinse the conductivity electrode with distilled water, then rinse with a small amount of calibration solution.
2. Dip the electrode into the calibration solution (e.g., 12.88mS/cm), stir the tester gently. Make sure there are no air bubble trapped in the slot of the sensor.
3. Press and hold the CAL key, the tester enters the calibration mode.



4. Press ▲ or ▼ key to set the calibration value.



- ① Press ▲ or ▼ key once, the setting value will gradually increase or decrease. Press and hold the ▲ or ▼ key, the setting value will quickly increase or decrease.

5. Ensure the displayed value matches your calibration standard, press MEAS key to confirm. The calibration value will automatically flash 3 times, the tester returns to measurement mode. Calibration is completed.



#### EXIT THE CALIBRATION:

During the calibration process, if you want to exit calibration mode, DO NOT press MEAS key in the step 5. Press ▲ or ▼ key until the display shows "---", then press MEAS key to exit.

### Conductivity Measurement

- Rinse the conductivity electrode thoroughly with distilled water.
- Dip the electrode into the sample solution. Stir the tester gently.
- Wait for the reading to stabilize, record the measured value on the display.

### Temperature Measurement

In the conductivity measurement mode, press °C key, the display shows current temperature value. Press °C key again, the tester returns to conductivity measurement mode.



### Hold Function

- During the measurement, press HOLD key, the tester will immediately freeze current displayed value, "HOLD" indicator appears on the display.
- Press the key again to release the measured reading, you can continue to take measurement.



### Electrode Care and Maintenance

- After each use, the electrode should be rinsed thoroughly in deionised water.
- If there is a build-up of solids inside the measurement area of the cell, these should be removed very carefully with a cotton bud soaked in solvent, taking care not to touch the metal parts of the inner cell.

## Electrode Replacement

When the tester fails to calibrate or gives fluctuating readings for calibration standards, you need to replace the electrode module.

1. Twist the electrode collar counter clockwise, pull the old electrode module away from the tester.



2. Align the slot on the new electrode module, gently push the module into the tester.



3. Twist the electrode collar clockwise until it is tight. Installation is completed.

## Troubleshooting

LCD DISPLAY	CAUSE	CORRECTIVE ACTION
---	Electrode dried out	Soak the conductivity electrode in tap water for 10 minutes
	Measured value is out of range	Check the electrode whether clogged, dirty or broken
Err	Incorrect calibration solutions	Using the fresh conductivity standard solutions for calibration
	Setting value does not match calibration solution	Reset the calibration value
	Electrode is broken	Replace the electrode module

## Specifications

Model	ECscan10H
Range	0.1~19.99mS/cm
Accuracy	±1% F.S
Calibration Points	1 point
Calibration Solutions	12.88mS/cm
Temperature Compensation	0~50°C
Temperature Coefficient	2%/°C
Cell Constant	K=1
Normalization Temperature	25°C
Hold Function	Manual
Power Off	Manual or Automatic (8 minutes after last key pressed)
Sensor Type	Order Code: ECSCAN-C1-100K
Operating Temperature	0~60°C, 32~140°F
Power Requirements	3×1.5V "G13A" Batteries
Dimensions	185(L)×40(Dia.)mm
Weight	100g

## Addendum: How to prepare the conductivity standard solution 12.88mS/cm

1. Place 8 to 9 grams of AR potassium chloride in a 50mL beaker and dry in an oven for 3 to 5 hours at 105°C, then cool to room temperature in desiccator.
2. Accurately weigh out 7.45g of KCL, and dissolve in 1000mL de-ionised water.
3. Stir the solution until the reagent has thoroughly mixed. Preparation is completed.

## Hazardous Substance Statement

Bante Instruments Limited is committed to the reduction and eventual elimination of all hazardous substances in both the manufacturing process and finished products we supply. We have an active manufacturing and procurement program to minimize and eliminate the use of harmful heavy metals such as cadmium, lead, mercury and the like. New technologies and design parameters are also promoting these efforts and we expect to have little or no such materials in our product in the coming years. We welcome our customer suggestions on how to speed up these efforts.



## Warranty

The warranty period for tester is one year from the date of shipment. Above warranty does not cover sensor and calibration solutions. Out of warranty products will be repaired on a charged basis. The warranty on your meter shall not apply to defects resulting from:

- Improper or inadequate maintenance by customer.
- Unauthorized modification or misuse.
- Operation outside of the environment specifications of the products.

For more information, please contact the nearest authorized distributor.



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