



# ECheck Meter

# OPERATION MANUAL



## INTRODUCTION

Your purchase of this ECheck meter marks a step forward for you into the field of precision measurement. Although this meter is a complex and delicate instruments, its ruggedness will allow many years of use if proper operating techniques are observed and practiced.

Please read the following instructions carefully and always keep this manual within easy reach.

## 1. FEATURES

Micro-controller technology provides fast, accurate readings with great repeatability.

Large and easy to read Liquid Crystal Display.

Membrane keypad provides splash-proof case top and easy range change with a touch of the keys.

Low battery indicator provides early warning of weak batteries.

Automatic shut-off when unit is idle for above 10 minutes.

Uses durable long lasting components including a lightweight chemical resistant HDPP plastic casing.

## 2. CONTENT

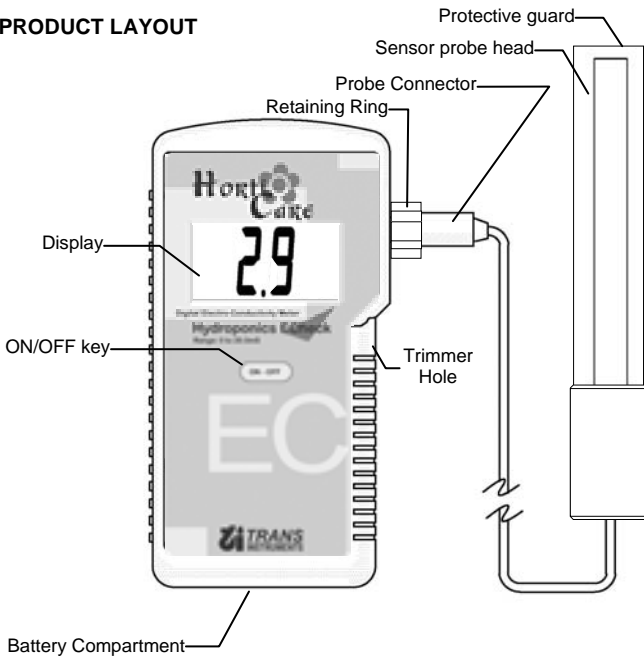
The following list of items were included in the all in one package:

1. Main Unit
2. Platinised platinum glass conductivity electrode with ATC
3. Rinsing solution 1.413mS
4. Calibration solution 1.413mS
5. Calibration screwdriver
6. Operation Manual
7. Carrying bag

### 3. SPECIFICATION

Display	3 ½ digits Liquid Crystal Display
Measuring Range	0.0 to 20.0mS
Resolution	0.1mS
Accuracy	±0.4mS
Temperature Compensation	Automatic 0 – 50°C (32°F – 122°F)
Operation temperature	0 – 50°C (32°F – 122°F)
Auto shutoff	Approximately 10 minute
Battery	DC 9V battery (1604 or equivalent)
Battery life	Approximately 100 hours continuous use
Size (L x W x H)	164 x 83 x 35mm (6.5 x 3.3 x 1.4 inch)
Weight	Approximately 350 gm

### 4. PRODUCT LAYOUT



### 5 CALIBRATION PROCEDURES

The platinised platinum probe after long term usage may worn out or stain. Therefore it is practical to re-calibrate the probe at regular intervals or prior to important measurements.

When the probe is replaced with a new one, it is necessary to recalibrate the instrument.

Calibration is performed as the following simple steps:

1. It is a good practice to use two bottles of calibration solutions for calibration. One for rinsing only and another for calibration. This is to prevent solution carry over and contamination of the standard solution.
2. Plug the probe connector to the unit and lock it by pushing the retaining ring in and turn clockwise to lock.
3. Switch on the Unit.
4. First rinse the probe head into distilled water, then rinse and stir in the Rinsing solution 1.413mS.
5. Now dip the probe head into the Calibration solution 1.413mS.
6. Wait a while for a stable reading.
7. Locate the trimmer hole (see product layout) and with the use of the provided screwdriver, tune the display to read 1.4.
8. Recheck by repeating step 3 to 6 till readings are repeatable.
9. Rinse probe in distilled water before storing away or proceeds with other testing.

## 6 MAKING MEASUREMENT

1. Press the ON/OFF key to switch on unit.
2. Plug the probe connector to the unit and lock it by pushing the retaining ring in and turn clockwise to lock.
3. Immerse fully the sensor probe head in measuring solution while gently shake the probe to get rid of bubbles trap in the cell.
4. Wait a while for the temperature compensation to take place and record the reading when it is stabilized. If the liquid has a higher temperature, a longer wait is required.
5. Take special care that the Conductivity probe is made of glass material. It may break when impact with hard surfaces.
6. When switching OFF then ON the unit. It is a good practice to wait for 10 seconds before switching the unit ON again.

## 7 TIPS ON MOBILE OPERATION


The carrying bag is designed to provide hands free operation of the unit. The bag can be hung over the head as shown while making field tests.

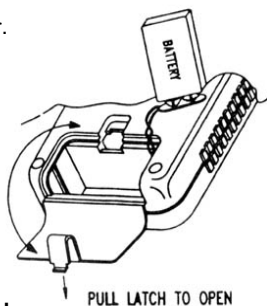


The bag can also be strapped over a waist belt via the loops on the bag.

## 8 MAINTENANCE

### Replacement of Battery

1. When the left corner of LCD display shows the  low battery symbol, it indicates a normal battery output of less than 6.5 to 7.5 volts. It is necessary to replace the battery. However, measurement may still be made for several hours after the symbol appears before the instrument becomes inaccurate.
2. Pull the latch of the battery cover at the rear bottom of the instrument away from the unit (as below diagram).
3. Detach the battery from the battery clip.
4. Replace with a new DC 9 volts battery (1604 or equivalent). Ensure the correct polarity is connected to the battery clip.
5. Close the cover.



### Maintaining the Probe

1. Along with regular rinsing after use procedure, it is a good practice to clean the probe sensor in alcohol solution every six to twelve months.
2. Dip the sensor probe head into alcohol for 2 to 3 minutes.
3. Remove the probe and shake dry.
4. Re-calibration is necessary after each cleaning. Follow the calibration procedures.
5. Do not attempt to scratch or scrub the surfaces of the internal cell as this will damage the cell constant and render the probe to give inaccurate readings even after calibration.

## 9 WARRANTY

Trans Instruments (Singapore) Pte. Ltd., warrants this product for a period of 12 months from date of purchase against all defects in material and workmanship.

This warranty does not apply to the abuse or misuse of the instrument. If repairs or adjustments are required, please return the defective product freight prepaid. Instrument within warranty will be repaired at no charge.

Make sure that the product is properly packed and insured against possible damage or loss in shipment.

Purchase invoice **MUST** be accompanied in returned product or else warranty is considered void.

Please obtain authorization from Trans Instruments (Singapore) Pte Ltd. Directly or through your local sales representatives prior to returning the product.

Trans Instruments staff can be contacted at the following email address or through our web-page contacts:

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