

# ANAHEIM SCIENTIFIC®

## User Manual

### Model P773

### Total Dissolved Solids (TDS) Meter



## Table of Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2</b>	<b>SAFETY SUMMARY .....</b>	<b>2</b>
<b>3</b>	<b>COMPLIANCE STATEMENTS .....</b>	<b>2</b>
<b>4</b>	<b>PRODUCT CONTENTS AND INSPECTION.....</b>	<b>3</b>
<b>5</b>	<b>DEVICE DESCRIPTION .....</b>	<b>4</b>
<b>6</b>	<b>OPERATING INSTRUCTIONS.....</b>	<b>4</b>
6.1	PREPARATION.....	4
6.2	CALIBRATION .....	4
6.3	MEASURING WITH THE CONDUCTIVITY METER.....	5
6.4	CHANGING THE BATTERY.....	5
6.5	ELECTRODE REPLACEMENT .....	5
<b>7</b>	<b>TECHNICAL SPECIFICATIONS .....</b>	<b>6</b>
<b>8</b>	<b>MAINTENANCE .....</b>	<b>7</b>
<b>9</b>	<b>SERVICE INFORMATION .....</b>	<b>7</b>
9.1	SERVICE, REPAIR, OR CALIBRATIONS.....	7
9.2	WARRANTY.....	8

## 1 Introduction

The P773 is a wide-range, pocket-sized total dissolved solids meter perfect for use in field environments such as:

- Hydroponics
- Fish farming
- Agriculture
- Swimming pools and spas
- Waste water systems
- Plating industry
- Food industry
- Pharmaceutical and Medical
- Cooling towers
- Chemical industry

Having a rugged, waterproof housing, and replaceable electrodes, this meter will give long durable service. With 10 ppm resolution and  $\pm 2\%$  FS accuracy, you will have high quality results at your fingertips. Automatic temperature compensation (ATC) adjusts for changes in total dissolved solids due to temperature.

## Features

- Resolution: 10 ppm
- High accuracy:  $\pm 2\%$  Full Scale
- Measures 0~19990 ppm
- Rugged waterproof housing (meets IP57 standards)
- Compact size fits easily into your pocket
- Automatic temperature compensation
- Replaceable electrodes (not covered under warranty)
- Large 21 x 18 mm LCD display
- Easy 1-point calibration with included calibration solution
- Comes ready-to-go with two long-life 3-V Lithium batteries

## 2 Safety Summary

Be sure the temperature and humidity are within the limits indicated in the Technical Specifications section of this manual.

Avoid making measurements in the presence of explosive gas, combustible gas, steam or excessive dust.

Do not install substitute parts or perform any unauthorized modifications to this instrument. Return the instrument to Anaheim Scientific for service and repair to ensure that safety features are maintained.

The following symbols are used in this manual:



This symbol on an instrument indicates that the user should refer to the operating instructions located in the manual.



The meter is in compliance to the CE mark standards

## 3 Compliance Statements

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This product is subject to Directive 2002/96/EC of the European Parliament and the Council of the European Union on waste electrical and electronic equipment (WEEE), and in jurisdictions adopting that Directive, is marked as being put on the market after August 13, 2005, and should not be disposed of as unsorted municipal waste. Please utilize your local WEEE collection facilities in the disposition of this product and otherwise observe all applicable requirements.

## 4 Product Contents and Inspection

This unit is tested prior to shipment. It is therefore ready for immediate use upon receipt. An initial physical inspection should be made to ensure that no damage has been sustained during shipment.

Inspect the packing box on receipt for any external damage. If any external damage is evident, remove the instrument and visually inspect its case and parts for any damage. If damage to the instrument is evident, a description of the damage should be noted on the carrier's receipt and signed by the driver or carrier agent. Save all shipping packaging for inspection. Forward a report of any damage to the agent through which the unit is procured.

Retain the original packing in case subsequent repackaging for return is required. Use of the original packing is essential.

After the mechanical inspection, verify the contents of the shipment. The items included in this package are:

- P773 TDS meter
- Instruction manual
- Calibration solution
- Two 3V Batteries (already installed)
- Calibration screwdriver
- Gift box



## 5 Device Description

- 1) Battery compartment cap
- 2) Main display
- 3) Power button
- 4) Electrode collar
- 5) Electrode module
- 6) Electrode
- 7) Protective cap



## 6 Operating Instructions



### 6.1 Preparation

1. Remove the protective cap from the meter to rinse the electrode with clean water and then wipe it dry. Do not touch or wipe the surface of the inner black sensor of the electrode. 
2. Open the battery compartment to take out the screwdriver.
3. Press the  button to turn the meter power on.

### 6.2 Calibration

1. Dip the electrode into the calibration solution. Stir gently and wait until the display is stabilized. Adjust the reading to 94 (940 ppm) at 25 °C by turning the trimmer (Span) located at left side of battery compartment with the calibration screwdriver.
2. Calibration is complete.
3. There is no need to calibrate before each usage. Calibration should be performed every two weeks or after 10 times of usage.

### 6.3 Measuring with the Conductivity Meter

1. After calibration, rinse the electrode with clean water and wipe it dry. **Do not touch or wipe the surface of the inner black sensor of the electrode.** Dip the electrode into the sample solution to be measured. Stir gently and wait until a stable reading can be obtained. 
2. Read the measurement on the display. The reading should be multiplied by a factor of 10 to obtain the true conductivity value.
3. After measurement, rinse the electrode with clean water and replace the protective cap. **Do not touch or wipe the surface of the inner black sensor of the electrode.** 

### 6.4 Changing the battery

1. The installed Lithium CR2032 batteries have a typical life span of 100 hours. Replace the battery when the display begins to fade or flash.
2. Loosen the battery compartment cap.
3. Replace the old batteries with fresh Lithium CR2032 batteries, noting the polarity.
4. Replace the battery compartment cap tightly.
5. Recalibrate the meter after changing the batteries.

### 6.5 Electrode Replacement

1. As long as the electrode can be calibrated and remains responsive it is still useful. When either of these begin to fail, you will need to replace the electrode. (***This is not covered under the warranty***).
2. Unscrew the electrode collar and remove it completely.
3. Pull the electrode module out from the tester.
4. Plug in a new electrode module into the tester socket carefully.
5. Replace and tighten the electrode collar to make a good seal.
6. Make sure to calibrate the new electrode before usage.

## 7 Technical Specifications

Model	P773 Total Dissolved Solids Meter
Range	0 ~ 19990 ppm
Resolution	10 ppm
Accuracy	± 2% F.S.
ATC Range	5°C to 50 °C
Operating Environment	5 °C to 50 °C 0 to 90% R.H.
Storage Environment	0 °C to 50 °C 0 to 90% R.H.
Power	Two 3-V Lithium (CR2032) Batteries
Expected Battery Life	100 hours continuous
Display	3 Digit 21 x 18 mm LCD (.8 x .7")
Dimensions	33.5 mm x 170 mm (1.3 x 6.7")
Calibration	1 point manual, via trimmer (span)
Weight	85 g (3 oz)
Housing	ABS IP57

To ensure the most current version of this manual, please download the current version here: [http://anaheimscientific.com/images/manuals/P773\\_manual.pdf](http://anaheimscientific.com/images/manuals/P773_manual.pdf)

For current up-to-date product information, please visit [anaheimscientific.com](http://anaheimscientific.com)

## 8 Maintenance

This is a precision instrument. To guarantee its performances be sure to use it or keep it stored within the suitable environmental conditions given in the Technical Specifications. Be sure to turn it off after use. To store the instrument for an extended period of time, remove the batteries to avoid any damage to its inner components.

## 9 Service Information

### 9.1 Service, Repair, or Calibrations

The following are instructions regarding policies for servicing, repairing or calibrating Anaheim Scientific products. Turnaround time is usually less than ten (10) working days unless expedite service is requested and pre-arranged.

Send an email to [service@anaheimscientific.com](mailto:service@anaheimscientific.com) requesting an RMA number specifying your request for either service/repair and/or calibration with your product's model number.

Once you receive a reply from [service@anaheimscientific.com](mailto:service@anaheimscientific.com), you will be asked to ship prepaid to the address below. Package the unit carefully using filler or bubble wrap, and if possible, ship in original box. Ship each unit separately. (Anaheim Scientific is not responsible for any shipping damage that may occur.)

Include a packing list with each unit shipped stating what type of service is required and include the return shipping information: name, address and telephone number.

If the unit is in warranty, please provide the following: proof of purchase or copy of the original invoice.

If the unit is out of warranty, prepayment is required by Check, Money Order or Credit Card.

Return all merchandise to Anaheim Scientific with pre-paid shipping. The flat-rate repair charge for Non-Warranty Service does not include return shipping. Return shipping to locations in North American is included for Warranty Service. For overnight shipments and non-North American shipping fees please contact Anaheim Scientific



**Anaheim Scientific  
ATTN: Service/Repair  
22820 Savi Ranch Parkway  
Yorba Linda, CA 92887  
anaheimscientific.com  
714-921-9095**

## **9.2 Warranty**

Limited Two-Year Warranty. Anaheim Scientific warrants to the original purchaser that its products and the component parts thereof, will be free from defects in workmanship and materials for a period of two years from date of purchase.

Anaheim Scientific will, without charge, repair or replace, at its option, defective product or component parts. Returned product must be accompanied by proof of the purchase date in the form of a sales receipt.

To obtain warranty coverage in the U.S.A., this product must be registered by completing a warranty registration form on [anaheimscientific.com](http://anaheimscientific.com) within fifteen (15) days of purchase.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. The warranty is void if the serial number is altered, defaced or removed.

Anaheim Scientific shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages. So the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may have other rights, which vary from state-to-state.

**Anaheim Scientific  
22820 Savi Ranch Parkway  
Yorba Linda, CA 92887  
[anaheimscientific.com](http://anaheimscientific.com)  
714-921-9095**

**(Page intentionally left blank)**

**(Page intentionally left blank)**



22820 Savi Ranch Parkway  
Yorba Linda, CA 92887  
[www.anaheimscientific.com](http://www.anaheimscientific.com)

© 2012 Anaheim Scientific