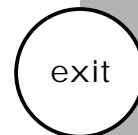


accumet®
RESEARCHAR50
Dual Channel pH/Ion/Conductivity Meter

Conductivity Setup (channel 1)

CONDUCTIVITY SETUP OPTIONS

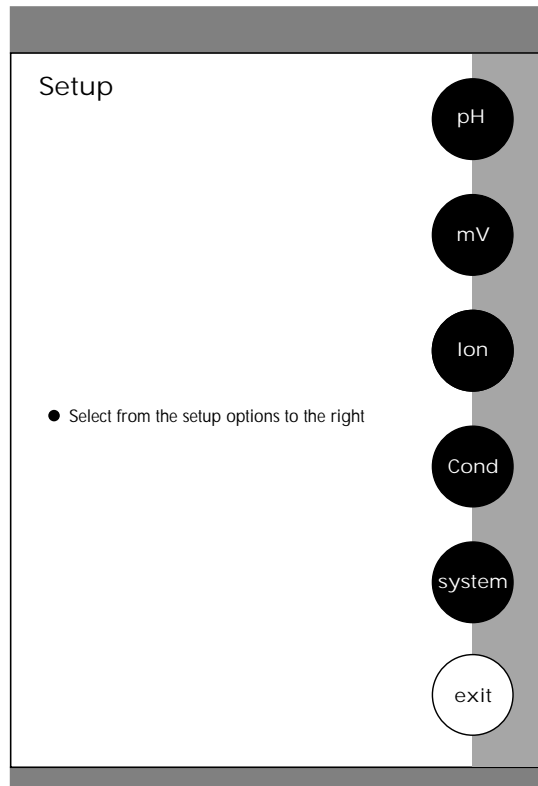
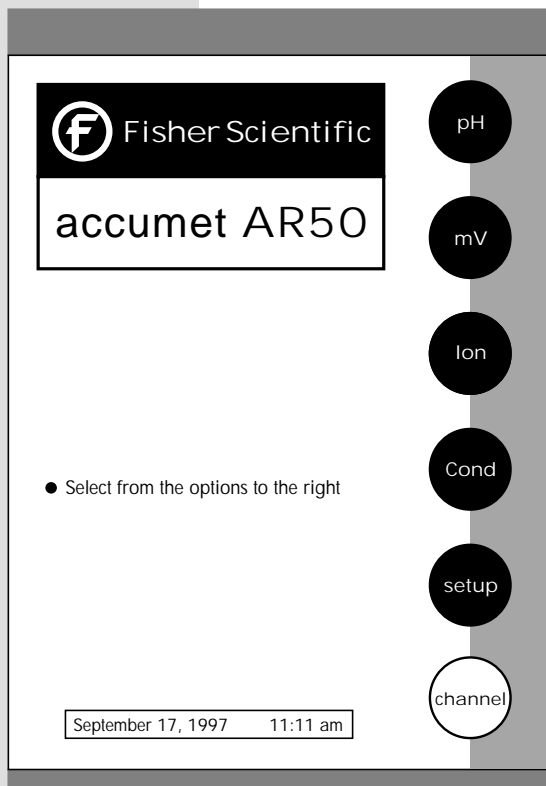
- Set Sample ID#
- Select Conductivity Units
- Select Cell Constant
- Set Default Temperature
- Select Reference Temperature
- Set Temperature Coefficient
- Perform Replatinize
- Set Alarm Limits
- Set Print Criteria
- Set Print Interval
- Set Data Storage Criteria
- Set Significant Digits
- Set Display Configuration
- View Stored Data



Fisher Scientific

The operating parameters of the conductivity mode can be set and controlled from the Conductivity Setup screen. The following sections will guide you through the various options available for the conductivity setup mode.

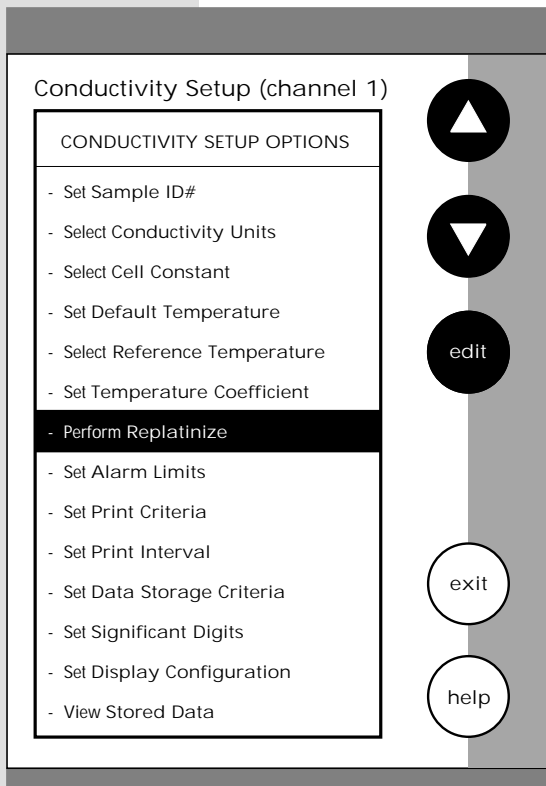
Access CONDUCTIVITY SETUP	106
Set SAMPLE ID#	108
Select CONDUCTIVITY UNITS	108
Select CELL CONSTANT	110
Set DEFAULT TEMPERATURE	111
Select REFERENCE TEMPERATURE	112
Set TEMPERATURE COEFFICIENT	114
Perform REPLATINIZE	116
Set ALARM LIMITS	118
Set PRINT CRITERIA	118
Set PRINT INTERVAL	118
Set DATA STORAGE CRITERIA	119
Set SIGNIFICANT DIGITS	120
Set DISPLAY CONFIGURATION	121
View STORED DATA	121

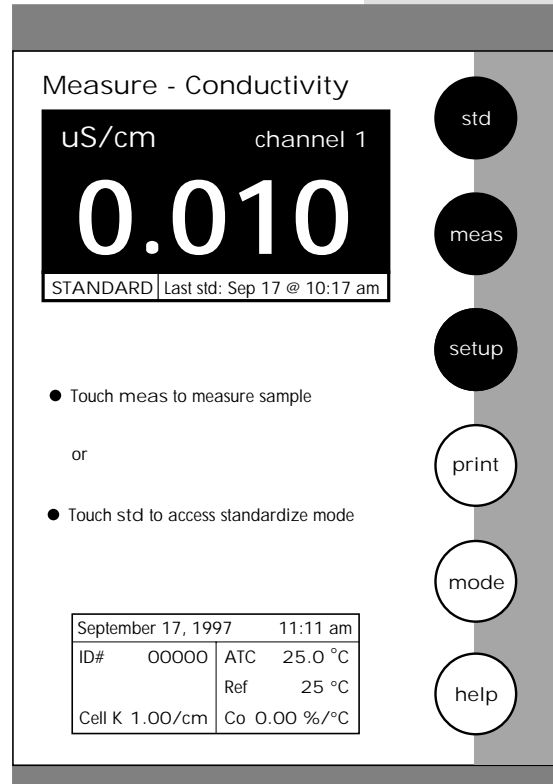
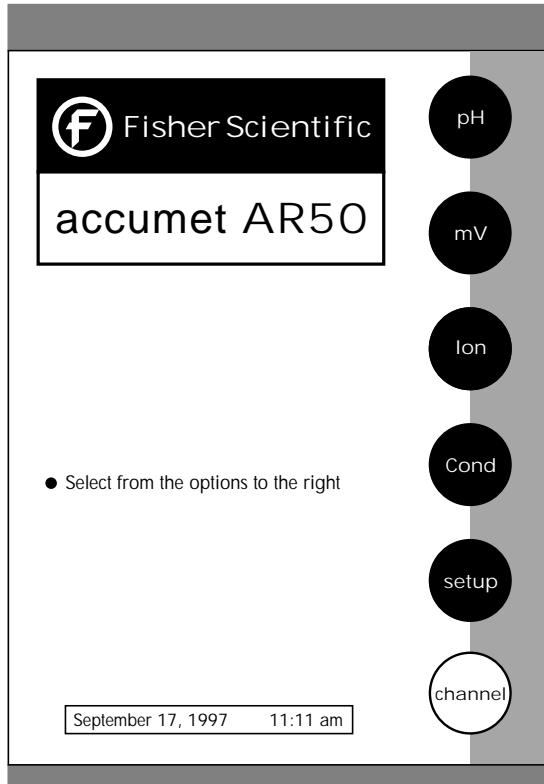


There are two ways to access the Conductivity Setup screen.

From the Setup screen

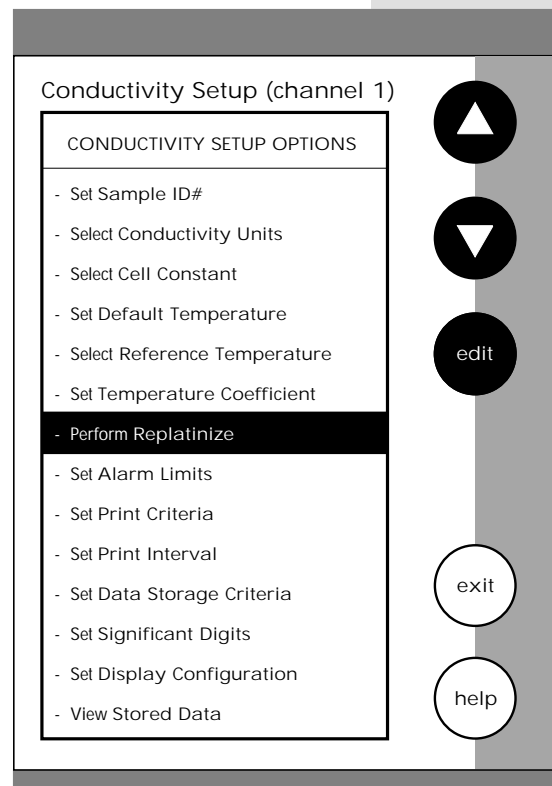
- 1** Touch setup on the main screen. Then touch Cond to access the Conductivity Setup screen.
- 2** Use the arrow keys to highlight the setup option that you would like to review.
- 3** Touch edit to access the screen for the selected option.





From the Conductivity Measure screen

- 1** Touch Cond on the main screen to access the conductivity mode. Touch setup on the Conductivity Measure screen. The conductivity setup screen is now displayed.
- 2** Use the arrow keys to highlight the setup option that you would like to review.
- 3** Touch edit to access the screen for the selected option.



To Set Sample ID#

When this option is active, each time you touch print on the Measure screen the Conductivity value along with the date/time/channel and the sample ID# will be sent to data storage. You can manually enter an alphanumeric identification number of up to 10 characters for any sample or you can have the meter sequentially number your samples beginning at the number of your choice. You may also choose to deactivate the sample ID#.

The Conductivity Sample ID# is set the same way as previously described in pH Setup. See page 50 for instructions.

To Select Conductivity Units

This screen allows you to select the units in which the meter will report the conductivity measurement of your sample. You can choose microSiemens/cm for conductivity or, ppt for Salinity or, ppm for total dissolved solids or, ohm•cm for resistivity. The current units are displayed on the screen.

- 1** Access the Select Conductivity Units from the Conductivity Setup screen. The current units are displayed on the screen.
- 2** Use the arrow keys to highlight the desired units.
- 3** Touch enter to accept these units and return to the Conductivity Setup screen.

OR

Touch exit to return to the Conductivity Setup screen, without making any changes.



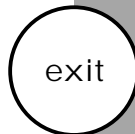
The salinity scale is a measure of all salts, not just sodium chloride in seawater.

Select Conductivity Units

Current UNIT	ppm
Conductivity	uS/cm
Salinity	ppt
Total Dissolved Solids	ppm
Resistivity	ohm · cm



- Use arrow keys to highlight desired unit and then touch enter to accept





Remember, HELP is always just a touch of the button away.

Select Cond Cell Constant

Current CONSTANT	10.0/cm
0.10/cm	
1.00/cm	
10.0/cm	

● Use arrow keys to highlight desired constant and then touch enter to accept

Navigation buttons: Up arrow, Down arrow, enter, exit, help

This screen allows you to select the appropriate cell constant of the conductivity cell that you are using. There are three cell constants to choose from. Each is used for a different range of conductivity. The following indicates the optimal conductivity range for the accumet conductivity cells.

Cell Constant	Optimal Conductivity Range	
	<u>2-cell</u>	<u>4-cell</u>
0.1	0.5 to 200 μ S/cm	Not Available
1.0	0.01 to 2 mS/cm	0.01 to 20 mS/cm
10.0	1 to 200 mS/cm	1 to 200 mS/cm

To Select Cell Constant

- 1** Access the Select Cell Constant screen from the Conductivity Setup screen. The current cell constant is displayed on the screen.
 - 2** Use the arrow keys to highlight the cell constant that corresponds to the cell constant of your conductivity probe.
 - 3** Touch enter to accept the cell constant and return to the Conductivity Setup screen.
- OR
- Touch exit to return to the Conductivity Setup screen, without making any changes.

To Set Default Temperature

Conductivity is a temperature dependent measurement. This option allows you to select a default temperature that the meter will use along with the temperature coefficient to calculate a temperature corrected conductivity measurement. If an ATC probe is used any value entered as a default temperature will be overridden in favor of the actual measured temperature of the solution provided to the meter by the ATC probe.

The Conductivity Default temperature is set the same way as previously described in pH Setup. See page 62 for instructions.

Select Cond Reference Temp

Current TEMPERATURE	25 °C
15 °C	
20 °C	
25 °C	

● Use arrow keys to highlight desired constant and then touch enter to accept

▲

▼

enter

F

exit

help

To Select Reference Temperature

This screen allows you to select the reference temperature to be used in the determination of the conductivity of your sample.

- 1** Access the Select Reference Temperature screen from the Conductivity Setup screen. The current Reference Temperature is displayed.
- 2** Touch C or F to select the desired temperature units for the reference temperature.
- 3** Use the arrow keys to highlight the desired reference temperature.
- 4** Touch enter to accept the reference temperature and return to the Conductivity Setup screen.

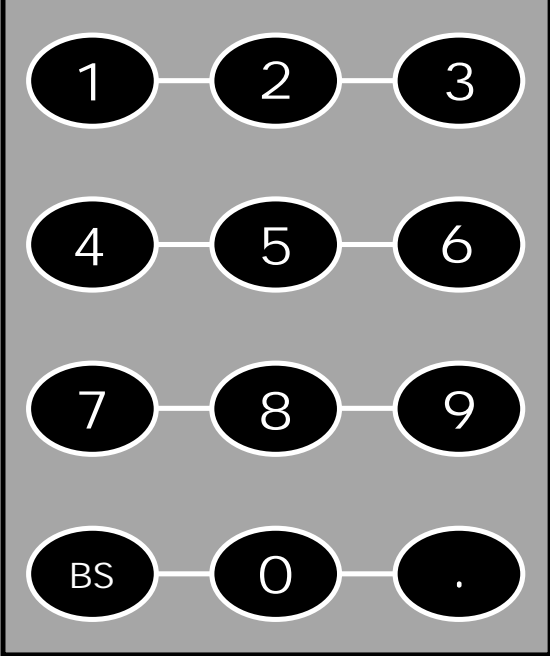
OR

Touch exit to return to the Conductivity Setup screen, without making any changes.

Note: The units of all temperature parameters must match. The meter will automatically modify units of Default Temperature, Reference Temperature and the Temperature Coefficient to match the last choice made on any of these 3 screens. If Kelvin is desired, it must be selected in either the Default Temperature screen or the Temperature Coefficient screen.

Set Cond Temperature Coeff

Current COEFF	0.00 %/°C
---------------	-----------



● Touch clear to delete current coefficient

● Use numeric keypad to input the new coefficient and then touch enter to accept

enter

F

K

clear

exit

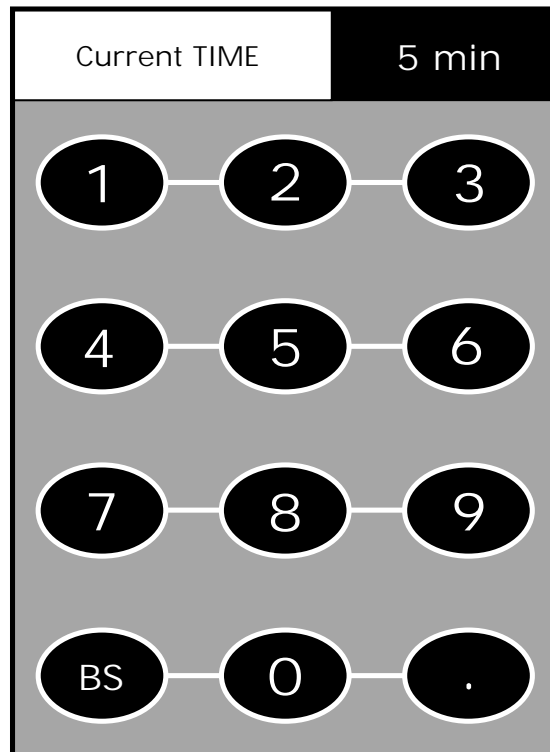
help

The temperature coefficient is a value that reflects the degree to which the sample's conductivity is effected by temperature changes. The meter will use the set temperature coefficient along with the measured temperature provided by the ATC probe to calculate what the conductivity would be at the selected reference temperature. If no ATC probe is being used, the meter will use the set default temperature in the calculation.

To Set Temperature Coefficient

- 1** Access the Set Temperature Coefficient screen from the Conductivity Setup screen. The current Temperature Coefficient is displayed on the screen.
 - 2** Touch clear to delete the current temperature coefficient.
 - 3** Touch C, F, or K to select the desired temperature units for the temperature coefficient.
 - 4** Use the keypad to enter the desired temperature coefficient.
 - 5** Touch enter to accept the temperature coefficient and return to the Conductivity Setup screen.
- OR
- Touch exit to return to the Conductivity Setup screen, without making any changes.

Replatinize



Replatinize

You are about to replatinize an electrode

Place the electrode in the replatinizing solution and then touch START to begin. Touch EXIT to cancel now.

Replatinizing Electrode

5:00

Replatinization is the process of replacing the platinum on the surfaces of the 2 cell conductivity probes that may flake or wear off over time. The platinum on the surface of the probe is used to increase the surface area of the measuring surface resulting in decreased polarization error. Replatinization is a relatively quick procedure to perform, taking no more than 5 minutes in most cases. This meter is capable of performing replatinization from 1 to 30 minutes. Although replatinization is not a long process, the replatinization solution is costly. If you are not certain that replatinization will improve the performance of your accumet conductivity probe, please call the technical support hotline at 1-800-943-2006.

To Perform Replatinization

- 1** Access the Perform Replatinize screen from the Conductivity Setup screen. The current replatinization time is displayed on the screen.
 - 2** Touch clear to delete the current replatinization time.
 - 3** Use the keypad to enter the desired replatinization time.
 - 4** Touch enter to accept the replatinization time.
 - 5** Touch START on the display screen to begin the process of replatinization. At this time a countdown timer will appear on the display screen to let you know how much time is remaining in the replatinization procedure. At anytime after you have initiated the replatinization, you can touch STOP to abort the procedure and return to the Conductivity Setup screen.
- OR
- Touch exit on the display screen to cancel the replatinization process and return to the Conductivity Setup screen.
- OR
- Touch EXIT to return to the Conductivity Setup screen, without performing replatinization.



4-cell conductivity probes do not require replatinization.

To Set Alarm Limits

This option allows you to set alarm limits for the Conductivity measuring mode. If the conductivity value of the measurement is outside of the boundaries set by the upper and lower limits, an audible alarm and/or a visual warning will appear to let you know that your sample measurement was outside of the set limits.

The Conductivity Alarm Limits are set the same way as previously described in pH Setup. See page 66 for instructions.

To Set Print Criteria

This screen allows you to select which criteria are printed with the measurement when you print the data or send it to a computer. The status of the current print criteria is displayed on the screen. The criteria option is active if "ON" appears to the right of the option. It is inactive if "OFF" appears to the right of the option. Any active criteria will be printed on demand.

The Conductivity Print Criteria are set the same way as previously described in pH Setup. See page 68 for instructions.

To Set Print Interval

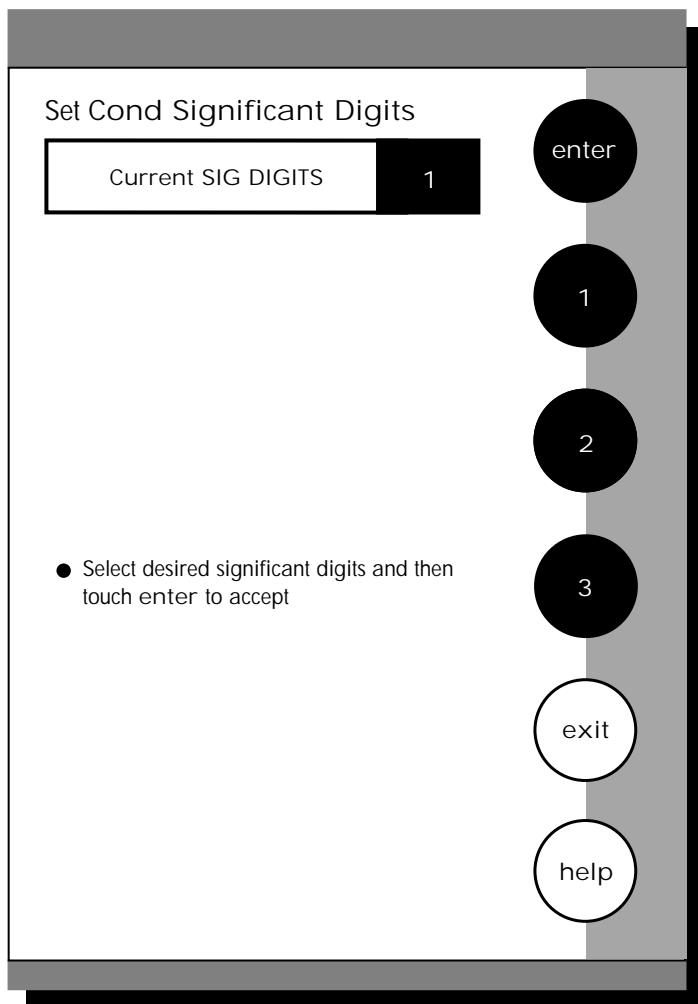
You have three options for setting the print interval: manual printing, stable reading printing, and timed interval printing.

The Conductivity Print Interval is set the same way as previously described in pH Setup. See page 70 for instructions.

To Set Data Storage Criteria

This screen allows you to select what criteria are stored in the meter's memory with the measurement when you save the data. The status of the current data storage criteria is displayed on the screen. The criteria option is active if "ON" appears to the right of the option. It is inactive if "OFF" appears to the right of the option. All storage criteria will be stored in the meter's memory with the measurement. However, only active items will appear on the View Stored Data screens. Changing the status of the storage criteria to active from inactive will allow the criteria to be displayed on the View Stored Data screen with the previously stored data.

The Conductivity Data Storage Criteria are set the same way as previously described in pH Setup. See page 72 for instructions.

*Example of 1 significant digit*

uS/cm

100

Example of 2 significant digits

uS/cm

110

Example of 3 significant digits

uS/cm

113

This option allows you to select the number of significant figures that will be used when reporting your conductivity measurement. You have the choice of one, two or three significant digits.

To Set Significant Digits

- 1** Access the Set Significant Digits screen from the Conductivity Setup screen. The current Significant digits are displayed on the screen.
 - 2** Touch 1, 2, or 3 to select the desired significant digits.
 - 3** Touch enter to accept the number of significant digits and return to the Conductivity Setup screen.
- OR
- Touch exit to return to the Conductivity Setup screen, without making any changes.

To Set Display Configuration

This function will allow you to choose what information you would like to be displayed on the Conductivity Measure screen, particularly the information contained in the data box at the bottom of that screen.

The Conductivity Display Configuration is set the same way as previously described in pH Setup. See page 76 for instructions.

To View Stored Data

This meter has memory capacity for up to 250 data points. The View Stored Data screen allows you to sort and look at specific data points. The stored data can be sorted by sample identification number, date or operator identification number.

The Conductivity Stored Data is accessed the same way as previously described in pH Setup. See page 78 for instructions.