

AC INFINITY

# pH METER PRO

## HYDROPONIC TESTER

USER MANUAL



## WELCOME

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### EMAIL

[support@acinfinity.com](mailto:support@acinfinity.com)

### WEB

[www.acinfinity.com](http://www.acinfinity.com)

### LOCATION

Los Angeles, CA

## MANUAL CODE PMP2305X1

### PRODUCT

pH Meter  
pH Meter PRO  
Hydroponic Meter PRO

### MODEL

AC-PHM3  
AC-PHM5  
AC-PHM7

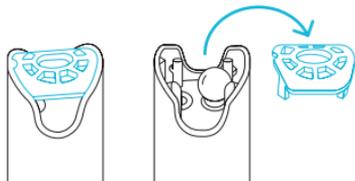
### UPC-A

819137024205  
819137023987  
819137024212

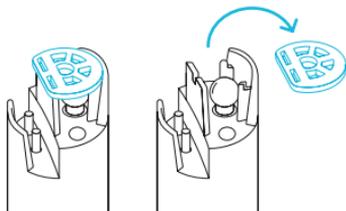
### NOTE

- Water droplets are added during the production of this product to maintain the probe's moisture. This is normal practice and is not indicative of a used product.
- Do NOT use this product under freezing cold conditions. Wait until your space warms to room temperature before using this product.
- This testing device is equipped with a sensor shield that protects the glass bulb from accidental collisions (see image below). You may remove this shield to clean the sensor and put it back when you are finished.

AC-PHM3 and AC-PHM5



AC-PHM7



# MANUAL INDEX

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# PRODUCT WARNING



TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Read all instructions before using this product.
2. Do not fully submerge this product underwater.
3. Do not remove the screw cap holding the sensor to this product when in use.
4. Do not operate this product while it is damaged, or if it malfunctions, has been dropped, or is damaged in any manner.
5. Wash hands thoroughly after handling calibration powders.
6. Do not consume calibration powders. Seek medical attention and rinse mouth in case of consumption. Keep powders out of reach from children and animals.

# KEY FEATURES

## PREMIUM DISPLAY

Backlit LCD screen with battery display and locking capabilities provides a sharp layout for convenient observation.

## EFFECTIVE CALIBRATION

Provided calibration solutions assist in precise pH measurements by regulating the meter in between uses.

## REPLACEABLE PROBES

Interchangeable probe allows for the quick and efficient replacement of the sensor to prolong your meter's lifespan.

## EXTENDED LIFESPAN

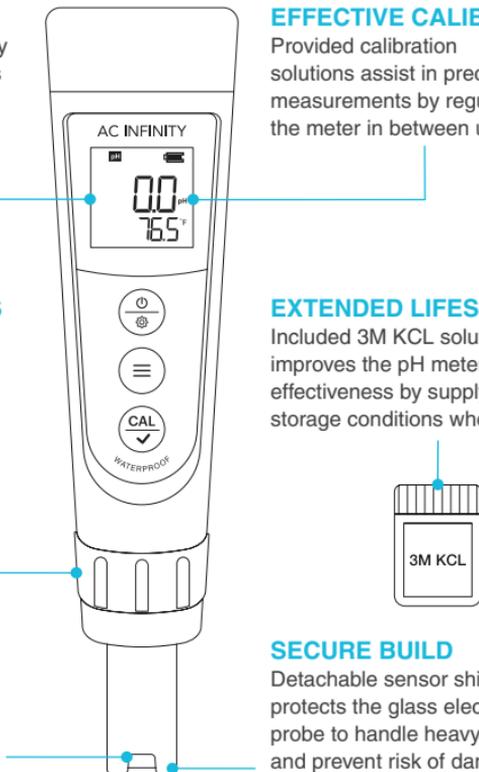
Included 3M KCL solution improves the pH meter's effectiveness by supplying ideal storage conditions when not in use.

## ENHANCED PRECISION

Lithium glass membrane sensor delivers exceptionally fast and precise pH readings with  $\pm 0.01$  accuracy.

## SECURE BUILD

Detachable sensor shield protects the glass electrode probe to handle heavy usage and prevent risk of damage.



\*AC-PHM5 Shown

# PRODUCT CONTENTS

## AC-PHM5



pH 10.01 CALIBRATION  
BUFFER SOLUTION  
(x1)



pH 10.01  
CALIBRATION VIAL  
(x1)

## AC-PHM7



12.88 mS CONDUCTIVITY  
CALIBRATION SOLUTION  
(x1)



1413 µS CONDUCTIVITY  
CALIBRATION SOLUTION  
(x1)



12.88 mS  
CALIBRATION VIAL  
(x1)



1413 µS  
CALIBRATION VIAL  
(x1)

## AC-PHM5 & AC-PHM7



pH  
METER  
(x1)



pH 4.00 CALIBRATION  
BUFFER SOLUTION  
(x1)



pH 7.00 CALIBRATION  
BUFFER SOLUTION  
(x1)



3M KCL SOAKING  
SOLUTION  
(x1)



pH 4.00  
CALIBRATION VIAL  
(x1)



pH 7.00  
CALIBRATION VIAL  
(x1)



TRAVEL  
LANYARD  
(x1)

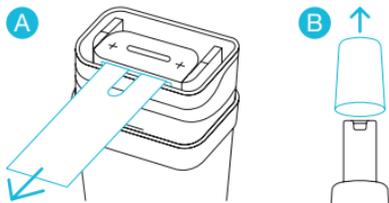
# POWERING AND SETUP

## FIRST TIME USE

### STEP 1

Pull off the battery insulation paper and remove the probe cap.

Your pH meter will come shipped with 3M KCL droplets in the probe cap. You may see this substance as white sediment, which can be rinsed off and will not affect its usability.



### STEP 2

Fill a cup with 8-16 oz. of distilled or deionized water for probe rinsing. Shake off excess water.



If unused for a month or longer, soak in 3M KCL for 30 minutes before use.

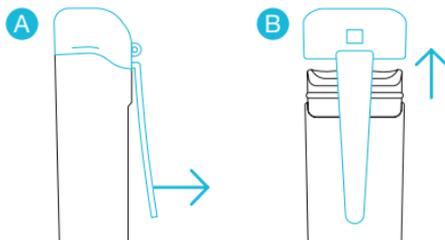


# POWERING AND SETUP

## BATTERY REPLACEMENT

### STEP 1

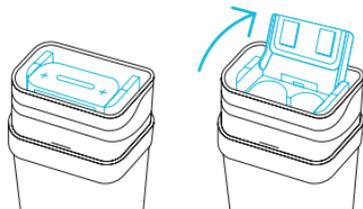
Remove the cap.



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### STEP 2

Pull the battery tab open.



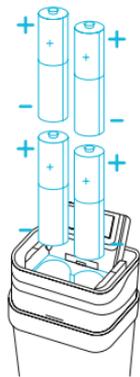
# POWERING AND SETUP

## BATTERY REPLACEMENT

### STEP 3

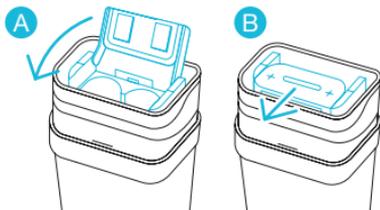
Insert the batteries as shown. The positive end (+) of each battery must face upwards.

**CAUTION:** Incorrectly inserted batteries may damage your pH meter and cause potential hazards.



### STEP 4

Push the battery tab down and forward to lock it. Place the cap back on.



### STEP 5

Press the power/setting button to power it on.



# PROGRAMMING



## 1. SMILE ICON

Indicates a stabilized reading when staying on the screen for 2 seconds or longer.

## 2. CALIBRATION ICONS

**L** = pH 4.00

**M** = pH 7.00

**H** = pH 10.01

## 3. POWER/SETTING BUTTON

Powers your pH meter ON/OFF or adjusts settings. Cancels calibration in CALIBRATION Mode. Enters Settings while your pH meter is OFF.

## 4. MODE BUTTON

Switches between pH and mV measurements in MEASUREMENT Mode. Adjusts parameters in SETTINGS.



## 5. CALIBRATION BUTTON

Enters CALIBRATION Mode, initiates the calibration, and confirms changes.

## 6. MEASUREMENT MODE

Displays the parameter indication.

## 7. PROBE MEASUREMENT

Displays the current pH, EC, TDS, and salinity readings the probe is detecting.

## 8. PROBE TEMPERATURE

Displays the current temperature that the probe is detecting.

\*AC-PHM5 Shown

# OTHER SETTINGS

## GENERAL SETTINGS

### POWER ON

Press the power/settings button.



### POWER OFF

Hold the power/settings button.



### ACCESS SETTINGS

While off, hold the power/settings button to enter SETTINGS.



### BACKLIGHT ON

In MEASUREMENT, press the power/settings button.



### SWITCH PARAMETER

In MEASUREMENT, press the mode button.



### CHANGE PARAMETER

In PARAMETER, press the mode button.



### ACCESS CALIBRATION MODE

Hold the calibration button.



### FINISH CALIBRATION

In CALIBRATION mode, press the calibration button.



### UNLOCK READING

In AUTO. HOLD, press the calibration button.



# OTHER SETTINGS

## PARAMETER SETTINGS

### 1. ENTER SETTINGS

Holding the power/settings button will enter settings while your pH meter is off.

HOLD +



### 2. CYCLE THROUGH SETTINGS

Pressing the mode button switches between P1-P2-P3, etc.

PRESS +



### 3. UNLOCK SETTINGS

Pressing the calibration button will enable you to adjust your current setting which will flash.

PRESS +



### 4. ADJUST SETTINGS

Pressing the mode button adjusts settings.

Pressing the calibration button confirms the settings change.

PRESS +



PRESS +



### 5. JUMP TO MEASUREMENT MODE

Holding the power/settings button returns you to the MEASUREMENT mode.

HOLD +



# OTHER SETTINGS

## PARAMETER SETTINGS — AC-PHM5

Category	Settings Adjustment	Settings	Factory Settings
P1	Selects pH Buffer Series	USA / NIST	USA
P2	Low Alarm Setting	0 - 14.00 pH	0
P3	High Alarm Setting	0 - 14.00 pH	14.00
P4	Automatic Hold	OFF / ON	OFF
P5	Sets Backlight Level	OFF / 1 / ON	1
P6	Selects Temperature Scale	°F / °C	°F
P7	Restores Factory Settings	No / Yes	No

### P1 STANDARD pH BUFFER SOLUTION

Switches between the two standard buffer solution options: USA series and NIST series.

---

### P2 ALARM FUNCTION

P3 Sets a low and/or high trigger point to let you know if the reading is outside your desired range. For example, you set your low and high alarms to  $\leq 3.20$  pH (P2) or  $\geq 8.60$  pH (P3), respectively. The alarm will activate and turn the screen red if the reading falls below or exceeds these trigger points. Low and high alarms may also be set independently.

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### P4 AUTOMATIC HOLD

Select "ON" to activate the AUTO-HOLD function. When the reading is stable for more than 10 seconds, it will automatically lock and the "HOLD" icon will appear. Press the calibration button to cancel the AUTO-HOLD ("HOLD" icon will go off).

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### P5 BACKLIGHT

"OFF" = turns off backlight; "ON" = turns on backlight; "1" = backlight lasts for 1 minute.

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### P6 TEMPERATURE SCALE

Toggles between C° and F° temperature scales.

---

### P7 DEFAULT SETTING

Select "YES" to restore your pH meter to its factory settings (erases all calibration records and sets all parameter settings to their default values). Use this function if your pH meter's calibration or measurement is not properly functioning. Calibrate your pH meter again after restoring its factory settings.

# OTHER SETTINGS

## PARAMETER SETTINGS — AC-PHM7

Category	Settings Adjustment	Settings	Factory Settings
P1	Selects pH Buffer Series	USA / NIST	USA
P2	Automatic Hold	OFF / ON	OFF
P3	Sets Backlight Level	OFF / 1 / ON	1
P4	Temperature Compensation Factor	0.00 - 4.00%	2.00%
P5	TDS Factor	0.40 - 1.00	0.71
P6	Salinity Unit	ppt / mg/L	ppt
P7	Selects Temperature Scale	°F / °C	°F
P8	Restores Factory Settings	No / Yes	No

### P1 STANDARD pH BUFFER SOLUTION

Switches between the two standard buffer solution options: USA series and NIST series.

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### P2 AUTOMATIC HOLD

Select "ON" to activate the AUTO-HOLD function. When the reading is stable for more than 10 seconds, it will automatically lock and the "HOLD" icon will appear. Press the calibration button to cancel the AUTO-HOLD ("HOLD" icon will go off).

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### P3 BACKLIGHT

"OFF" = turns off backlight; "ON" = turns on backlight; "1" = backlight lasts for 1 minute.

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### P5 TDS FACTOR

Press the calibration button in P5, adjust the TDS factor to your desired value by pressing or holding the mode button, and press the calibration button again to confirm the change.



### P8 DEFAULT SETTING

Select "YES" to restore your pH meter to its factory settings (erases all calibration records and sets all parameter settings to their default values). Use this function if your pH meter's calibration or measurement is not properly functioning. Calibrate your pH meter again after restoring its factory settings.

# CALIBRATION NOTES

- A.** The 1<sup>st</sup> point calibration must be 7.00 pH. Perform the 2<sup>nd</sup> and 3<sup>rd</sup> point calibrations (4.00, 10.01, 1.68, or 12.45) after the 1<sup>st</sup> point calibration is complete. DO NOT turn off your pH meter before you calibrate the 2<sup>nd</sup> and 3<sup>rd</sup> points. Otherwise you will need to restart the calibration process with 7.00 pH first.
- 
- B.** Er2 will appear when the calibration button is pressed while the calibration process is incomplete (smile icon does not appear on the screen).
- 
- C.** The included pH 4.00 and 7.00 buffer solutions can be used for up to 10 calibrations. After use, tightly close the bottle and store it at room temperature. pH 10.01 can only be used for up to 5 times as it will lose its accuracy much faster. Replace the solutions after their designated uses to help keep your pH measurements reliable.
- 
- D.** This pH meter will automatically recognize the pH buffer solution it is in. For details, refer to the following table:

Calibration	USA Series		NIST Series*	Indication	Recommended
1-Point	7.00 pH		6.86 pH	Ⓜ	Required Accuracy ≥ 0.1 pH
2-Point	Option A	1 <sup>st</sup> pt: 7.00 pH 2 <sup>nd</sup> pt: 4.00 pH or 1.68 pH	A 1 <sup>st</sup> pt: 6.86 pH 2 <sup>nd</sup> pt: 4.01 pH or 1.68 pH	Ⓛ Ⓜ	Range < 7.00 pH
	Option B	1 <sup>st</sup> pt: 7.00 pH 2 <sup>nd</sup> pt: 10.01 pH or 12.45 pH	B 1 <sup>st</sup> pt: 6.86 pH 2 <sup>nd</sup> pt: 9.18 pH or 12.45 pH	Ⓜ Ⓜ	Range > 7.00 pH
3-Point	1 <sup>st</sup> pt: 7.00 pH 2 <sup>nd</sup> pt: 4.00 pH or 1.68 pH 3 <sup>rd</sup> pt: 10.01 pH or 12.45 pH		1 <sup>st</sup> pt: 6.86 pH 2 <sup>nd</sup> pt: 4.01 pH or 1.68 pH 3 <sup>rd</sup> pt: 9.18 pH or 12.45 pH	Ⓛ Ⓜ Ⓜ	Range: 7.00 pH

\*NIST solutions sold separately

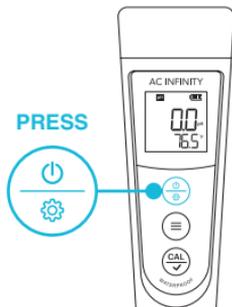
# pH READINGS

## CALIBRATION

### STEP 1

Press the power/settings button to turn your pH meter on.

Prepare the pH buffer solutions in their corresponding calibration vials to about half its volume.



### STEP 2

Rinse the probe in distilled water and shake off excess moisture.



# pH READINGS

## CALIBRATION

### STEP 3

Press and hold the calibration button to enter CALIBRATION mode.

The screen will turn green to signify the calibration process has started.



You may cancel the calibration and return to MEASUREMENT Mode by pressing the power/setting button.

### STEP 4

Rapidly stir the probe in the 7.00 pH buffer solution, then hold it still.



# pH READINGS

## CALIBRATION

### STEP 5

Wait for the smile icon to appear, then press the calibration button to finish the 1<sup>st</sup> point calibration.



Once the calibration is confirmed, the next solution will be indicated at the bottom right of the screen.

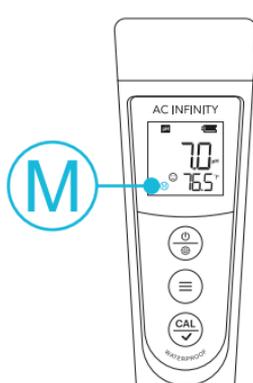


### STEP 6

Your pH meter will return to MEASUREMENT mode once the calibration process is complete.

"M" will display on the lower left corner, indicating a successful 1<sup>st</sup> point calibration (the middle point).

To continue calibration, **DO NOT** turn off your pH meter after you finish each calibration.



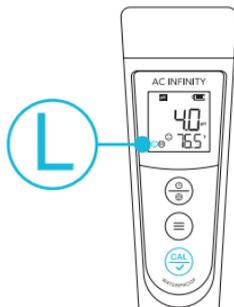
# pH READINGS

## CALIBRATION

### STEP 7

Repeat steps 2-5 to calibrate the 2<sup>nd</sup> point, using the 4.00 pH buffer solution instead.

"L" will display next to "M," indicating a successful 2<sup>nd</sup> point calibration (low and middle points).

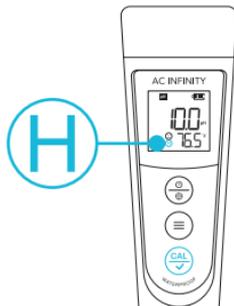


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### STEP 8

Repeat steps 2-5 to calibrate the 3<sup>rd</sup> point, using the 10.01 pH buffer solution instead.

"H" will display next to "L" and "M," indicating a successful 3<sup>rd</sup> point calibration (high, low, and middle points).



# pH READINGS

## MEASUREMENT

### STEP 1

Press the power/settings button to power your pH meter on.



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### STEP 2

Rinse the probe in distilled water and shake off excess moisture.



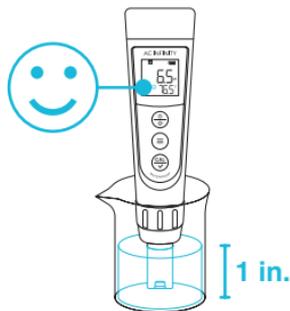
# pH READINGS

## MEASUREMENT

### STEP 3 — STANDARD

Submerge the probe at least 1 in. deep into your sample solution, then hold it still.

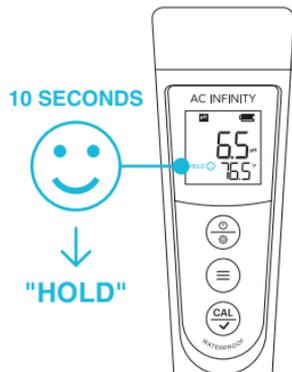
Record the readings after the reading is stabilized, indicated by the smile icon on the screen.



### STEP 3 — AUTO-HOLD

Submerge the probe at least 1 in. deep into your sample solution, then hold it still.

The reading will automatically lock when it's stable for more than 10 seconds while the AUTO-HOLD function is on. Refer to the "Parameter Settings" section for more information.



You may cancel AUTO-HOLD and return to MEASUREMENT Mode by pressing the calibration button.

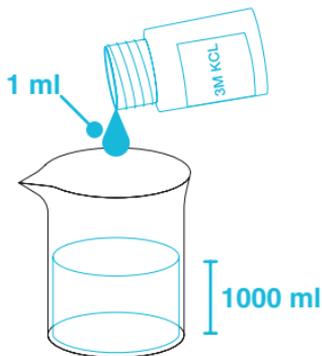
# pH READINGS

## MEASUREMENT

### PURE WATER MEASUREMENT

Readings will take longer to fully stabilize (~1-5 min.) when testing pure water like drinking water, RO water, and distilled water.

If your readings are not stabilizing, add a 1:1000 ratio of 3M KCL solution to your pure water (e.g. 1 ml KCL to 1000 ml water) to accelerate the stabilization while minimizing pH change.



# CONDUCTIVITY

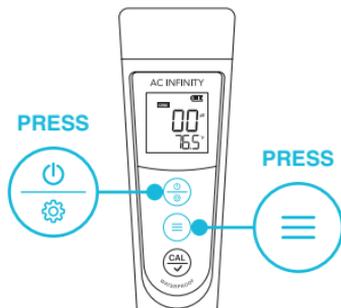
## CALIBRATION — AC-PHM7

### STEP 1

Prepare the conductivity buffer solutions in their corresponding calibration vials to about half its volume.

Press the power/settings button to turn your pH meter on.

Press the mode button to switch to conductivity (COND) measurement mode.



### STEP 2

Rinse the probe in distilled water and shake off excess moisture.



# CONDUCTIVITY

## CALIBRATION — AC-PHM7

### STEP 3

Hold the calibration button to enter CALIBRATION mode.

The screen will turn green to signify the calibration process has started.



You may cancel the calibration and return to MEASUREMENT Mode by pressing the power/setting button.

### STEP 4

Rapidly stir the probe in the 1413  $\mu\text{S}$  conductivity solution, then hold it still.

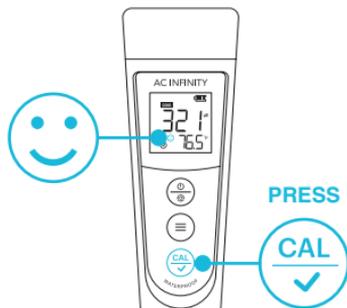


# CONDUCTIVITY

## CALIBRATION — AC-PHM7

### STEP 5

Wait for the smile icon to appear, then press the calibration button to finish the 1<sup>st</sup> point calibration.



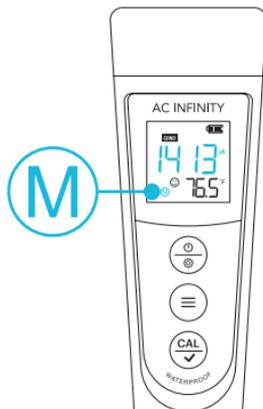
### STEP 6

Your pH meter will return to MEASUREMENT mode once the calibration process is complete.

"M" will display on the lower left corner, indicating a successful 1<sup>st</sup> point calibration (the middle point).

The solution will be displayed in the middle of the screen when it is detected.

To continue calibration, **DO NOT** turn off your pH meter after you finish each calibration.



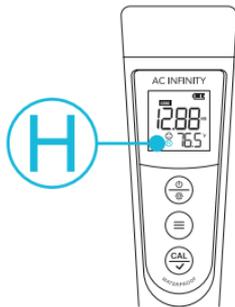
# CONDUCTIVITY

## CALIBRATION — AC-PHM7

### STEP 7

If your estimated sample conductivity level is greater than 2 mS or 2000  $\mu$ S, you may optionally repeat steps 2-5 to calibrate the 2<sup>nd</sup> point using the 12.88 mS conductivity solution instead.

"H" will appear next to "M," indicating a successful 2<sup>nd</sup> point calibration (low and middle points).



### CONDUCTIVITY CALIBRATION NOTES

This pH meter can calibrate with 84  $\mu$ S, 1413  $\mu$ S, and 12.88 mS conductivity calibration solutions. You may select the following calibration points:

Calibration Indication Icon	Calibration Standards	Measuring Range
Ⓐ	83 $\mu$ S	0-200 $\mu$ S
Ⓜ	1413 $\mu$ S	200-2000 $\mu$ S
Ⓗ	12.88 mS	2-20 mS (2000-20,000 $\mu$ S)

We recommend replacing the solutions after their designated uses to help keep your conductivity measurements reliable. DO NOT pour the used calibration solutions back into the solution bottles to prevent contamination.

# CONDUCTIVITY

## MEASUREMENT — AC-PHM7

### STEP 1

Press the power/settings button to power your pH meter on.

Rinse the probe in distilled water and shake off excess moisture.

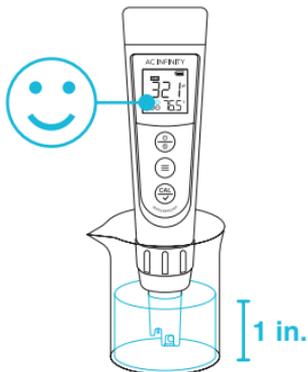


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### STEP 2 — STANDARD

Submerge the probe into your sample solution, then hold it still.

Record the readings after the reading is stabilized, indicated by the smile icon on the screen.



# CONDUCTIVITY

## MEASUREMENT — AC-PHM7

### STEP 2 — AUTO-HOLD

Submerge the probe into your sample solution, then hold it still.

The reading will automatically lock when it's stable for more than 10 seconds while the AUTO-HOLD function is on. Refer to the "Parameter Settings" section for more information.



You may cancel AUTO-HOLD and return to MEASUREMENT Mode by pressing the calibration button.

10 SECONDS



"HOLD"



### SWITCH PARAMETER

Press the mode button to switch from conductivity to TDS, salinity, or pH.

PRESS



# CONDUCTIVITY

## MEASUREMENT — AC-PHM7

### UNIT CONVERSION

- A.  $1000 \mu\text{S}/\text{cm} = 1 \text{ mS}/\text{cm} = 1 \text{ EC}$  (In CONDUCTIVITY mode, the unit will automatically turn from  $\mu\text{S}$  to  $\text{mS}$  if the reading is greater than  $1999 \mu\text{S}$ , meaning you will only see  $2.XX \text{ mS}$  instead of  $2XXX \mu\text{S}$ ).
- 
- B.  $1000 \text{ ppm} = 1 \text{ ppt}$  (in TDS mode, the unit will automatically turn from  $\text{ppm}$  to  $\text{ppt}$  if the reading is greater than  $999 \text{ ppm}$ , meaning you will only see  $1.XX \text{ ppt}$  instead of  $1XXX \text{ ppm}$ ).
- 
- C. The TDS values are converted from the conductivity values via a conversion factor, which ranges from  $0.40$  to  $1.00$ . Adjust the factor in parameter setting P5 based on the requirements in different industries. The factory default setting is  $0.71$ .
- 
- D. Salinity and conductivity are linearly related. The conversion factor is  $0.5$ .
- 
- E. Calibrating conductivity will also automatically calibrate TDS and salinity.
- 
- F. Conversion example: if the conductivity measurement is  $1000 \mu\text{S}/\text{cm}$ , then the default TDS measurement will be  $710 \text{ ppm}$  (under the default  $0.71$  conversion factor), and the salinity measurement will be  $0.5 \text{ ppt}$ . If the TDS conversion rate is changed to  $0.5$ , then the TDS measurement will be  $500 \text{ ppm}$ .

# CONDUCTIVITY

## MEASUREMENT — AC-PHM7

### TEMPERATURE COMPENSATION FACTOR

The default setting of the temp. compensation factor is 2.0% / °C. You can adjust this factor based on test solution and experimental data in parameter setting P4. Refer to the "Parameter Settings" section for more information.

The following table lists some common examples of setting up the temp. compensation factor.

Solution	Temperature Compensation Factor
NaCl	2.12% / °C
5% NaOH	1.72% / °C
Dilute ammonia	1.88% / °C
10% Hydrochloric acid	1.32% / °C
5% Sulfuric acid	0.96% / °C

# MAINTENANCE

## PROBE CLEANING

### RINSING THE PROBE

Thoroughly rinse off the probe with 8-16 oz. of distilled or deionized water before and after each test to ensure accurate readings.



### REMOVING TOUGH CONTAMINANTS

Detach the sensor shield and soak the probe in a cleaning solution or detergent water for about 30 minutes.

Use a soft brush to remove the contaminants.

Soak the probe in 3M KCL solution for at least 1 hour. Rinse it off, then recalibrate your pH meter before using it.



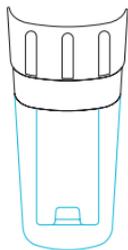
\*AC-PHM5 probe shown

# MAINTENANCE

## PROBE STORAGE

### REGULAR USAGE (DAILY OR WEEKLY)

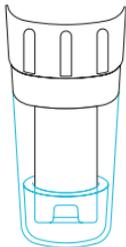
Make sure the probe cap stays moist by closing the probe when not in use.



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### LONG-TERM STORAGE

Add 3M KCL solution or pH 4.00 buffer solution up to one quarter of the probe cap. Close the probe cap tightly to store the probe in it.



If the probe is dried out, or if the probe's response is much slower than usual, soak the probe in 3M KCL soaking solution for about 2 hours to restore its sensitivity.

# MAINTENANCE

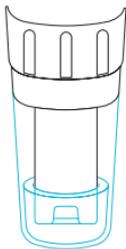
## PROBE STORAGE

### PROPER STORAGE

NEVER store the probe in pure water like tap, RO, distilled, or deionized water. Doing so may damage the probe.

If stored in this matter, immediately soak the probe in 3M KCL solution overnight, then re-calibrate it before using your pH meter.

Pure water must only be used to rinse the probe.



# MAINTENANCE

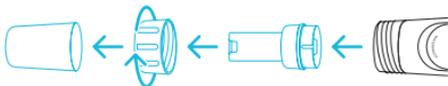
## REPLACING THE PROBE

### PRODUCT LIFESPAN

The lifespan of your pH meter's probe is 1-3 years. This will depend on how often it is used and how well-maintained it is. If you need to replace your probe, follow the directions below.

#### STEP 1

Remove the cap and probe ring before unplugging the probe.



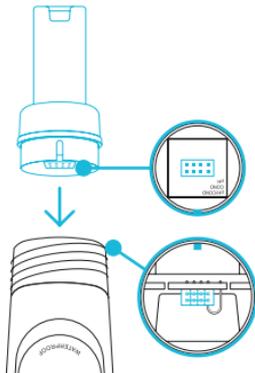
**CAUTION: DO NOT** twist the probe off. Doing so may bend the pins that plug into the probe base.

#### STEP 2

Replace the probe and probe ring, making sure the pins and port properly align.

Soak the probe in 3M KCL at the fill line in the cap for 5-15 minutes.

Perform a calibration before use.



# TROUBLESHOOTING GUIDE

ISSUE	REASON	HOW TO FIX
Cannot Calibrate	Incorrect calibration order	Power on your pH meter, calibrate pH 7 first, then pH 4. After pH 4, if you want to calibrate pH 7 again, reboot your pH meter.
	Poor quality standard solutions	Replace with clean standard calibration solutions made by reputable manufacturers.
	Contaminated sensor	Use a soft brush to clean the probe with probe cleaning solution or detergent water.
	Aged probe	Replace the probe.
	Dried-out probe	Soak the probe in the 3M KCL soaking solution for at least 15 minutes.
	Probe is not fully submerged solution	Make sure the probe is fully immersed at least 1 in. deep into the solution.
	Air bubbles around the sensor	Stir in the solution to remove bubbles.
Reading is always slowly changing, won't stabilize	Contaminated sensor	Use a soft brush to clean the probe with probe cleaning solution or detergent water.
	Clogged junction	Use a soft brush to clean the probe with cleaning solution or detergent water, then soak it in 3M KCL soaking solution overnight.
	Aged probe	Replace the probe.
	Testing pH of low ionic strength solutions like tap/drinking/RO/distilled water	Wait 1-5 minutes to reach a fully stabilized reading, if still not stabilizing, then soak in 3M KCL soaking solution overnight.
Displays similar readings in any solution or always displays 7.0 pH	Broken probe	If you don't see any damage to the probe, contact AC Infinity customer support. If there is visible damage, replace your pH meter.
Reading keeps jumping	Probe is not fully submerged solution	Make sure the probe is fully immersed at least 1 in. deep into the solution.
	Air bubbles around the sensor	Stir in the solution to remove bubbles.
	Probe is not properly connected or the pin connector is broken.	Check the probe's connector, make sure it's connected and not broken. Align the probe correctly before plugging in. Do not force it. Ensure that the connector is not exposed.
Calibration is successful, but reading is not accurate	Aged probe	Replace the probe.
	Air bubbles around the sensor	Stir in the solution to remove bubbles.
	Clogged junction	Use a soft brush to clean the probe with cleaning solution or detergent water, then soak it in 3M KCL soaking solution overnight.
	Comparison with other testers, test strips, or drop tests	To compare with other pH meters, make sure to calibrate all testers in the same pH 7 solution, then test pH 4. Test strips or drop tests' accuracy is not comparable to pH meters.

# FAQ

**Q:** Why is moisture in my new pH meter?

**A:** New pH meters are stored in a special solution to maintain the integrity of the electrode and its glass membrane. This glass membrane must be kept moist in order for the pH meter to function properly.

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**Q:** Why did my pH meter turn off?

**A:** Your pH meter will automatically turn off after 8 minutes of inactivity.

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**Q:** How often should I calibrate the pH/conductivity?

**A:** Your meter's accuracy depends on several factors like the environment it's used in and how often it is used. We recommend calibrating your pH meter once a month, after testing a series of samples, or if readings don't appear accurate.

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**Q:** What is the difference between conductivity, TDS, and salinity?

**A:** Conductivity is a measure of a solution's ability to conduct electricity, while TDS (total dissolved solids) and salinity are measures of a solution's concentration of dissolved solids and salt, respectively.

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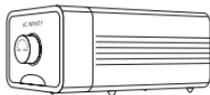
**Q:** What is the difference between USA and NIST in the settings?

**A:** The USA and NIST settings differ in the buffer solutions used for calibration. The USA settings use three buffer solutions with pH values of 4.00, 7.00, and 10.00 while NIST uses the pH values of 4.01, 6.86, and 9.18.

# AC INFINITY PRODUCTS

## Air Pump

An adjustable air pumping system designed to benefit hydroponic systems by enriching oxygen levels for enhanced plant growth. Built with a durable shell and multi-layered internal muffler, this air pump securely delivers one way-oxygenation while remaining ultra-quiet with minimal vibration.



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## Water Pump

A submersible pump designed to circulate and deliver water to plant roots for enhanced yields in hydroponic settings. Featuring a high-performance motor and interchangeable nozzles, this water pump is capable of quietly and efficiently enhancing water flow for multiple irrigation systems.



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## Self-Watering Fabric Pot Base

A set of potted plant stands designed to eliminate the need for active irrigation by automatically drawing water to fabric pots through adjustable wick lines. Features a heavy-duty drip tray to capture runoff water and support planters up to 100 pounds as well as a water gauge to display hydration levels.



# WARRANTY

This warranty program is our commitment to you, the product sold by AC Infinity will be free from defects in manufacturing for a period of two years from the date of purchase. If a product is found to have a defect in material or workmanship, we will take the appropriate actions defined in this warranty to resolve any issues.

The warranty program applies to any order, purchase, receipt, or use of any products sold by AC Infinity or our authorized dealerships. The program covers products that have become defective, malfunctioned, or expressively if the product becomes unusable. The warranty program goes into effect on the date of purchase. The program will expire two years from the date of purchase. If your product becomes defective during that period, AC Infinity will replace your product with a new one or issue you a full refund.

The warranty program does not cover abuse or misuse. This includes physical damage, submersion of the product in water, incorrect installation such as wrong voltage input, and misuse for any reason other than intended purposes. AC Infinity is not responsible for consequential loss or incidental damages of any nature caused by the product. We will not warrant damage from normal wear such as scratches and dings.

Contact our dealers department at [dealers@acinfinity.com](mailto:dealers@acinfinity.com) or (626) 838-4656 for more information about our dealers and distributors program. Contact our customer service department at [support@acinfinity.com](mailto:support@acinfinity.com) or 626-923-6399 for product and warranty assistance. Our business hours are Monday through Friday, 9:00 am to 5:00 pm PST.



**If you have any issues with this product, contact us and we'll happily resolve your problem or issue a full refund!**

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