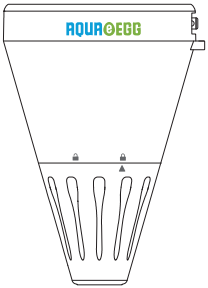
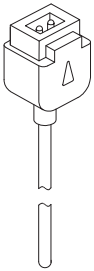
AQUAeEGG

Water Test Automated
Quick Start Guide

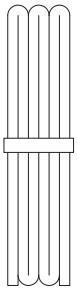
What’s Included



Aqua-eegg Device



Charging Cable



Tether

1. Get the App

Download the AquaIOT App for your smart phone by scanning this QR code or search AquaIOT in the App store.

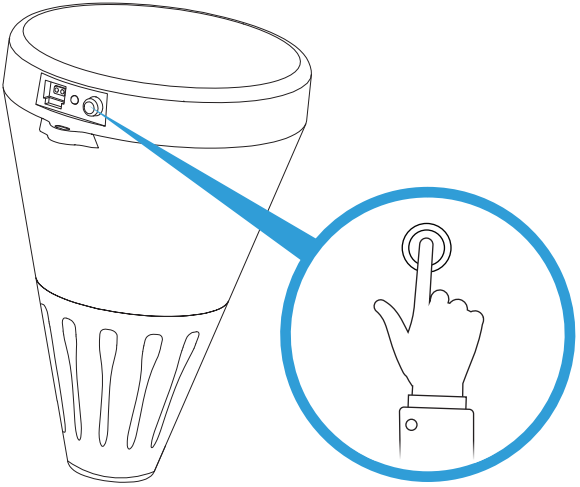
Download it from
APP STORE

Download it from
GOOGLE PLAY

2.Turn on your Aqua-eegg

Take the Aqua-eegg out of the box and press the switch button as shown in the figure. After the button is pressed, the indicator light will flash five times in green.

NOTE: The Aqua-eegg will perform a self-check after it is started, and it takes 90s before it can communicate properly with the mobile phone Bluetooth.



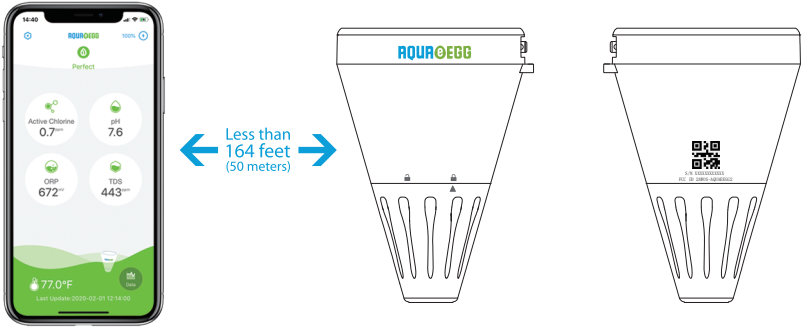
3. Pair up Aqua-eegg with your phone

a. For first time use, you need pair Aqua-eegg to your phone. Make sure your phone is within 164 feet (50 meters) from the Aqua-eegg, and enable Bluetooth, allow the App to obtain positioning permissions and synchronize the local time for regular tests.

b. Start the AquaIOT App on the phone. Scan the QR code on the Aqua-eegg and add the device for the first time. The App will automatically search for and connect to the Aqua-eegg. If the connection is successful, the message "Conneted successfully" will be displayed on the screen. That means the pair up process succeeds. Otherwise restart the App and repeat the steps above to connect.

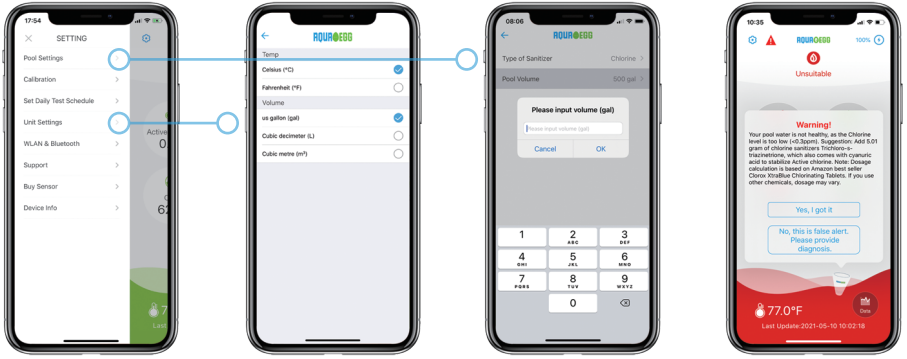
c. After the connection is successful, Aqua-eegg wil automatically synchronize with the mobile phone time. It will test every exact hour from 9:00am and 5:00pm by default. To make the test more stable, manual testing is not possible at other times.

NOTE: After successful pair up, you could choose one of the two communication modes: Bluetooth or WLAN. If the Aqua-eegg is set to Bluetooth communication mode, please make sure to connect it by App after the Aqua-eegg is restarted, then the test can be conducted normally.



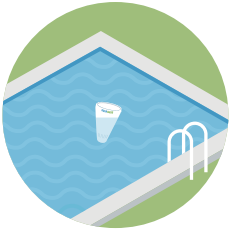
4. Enter Pool Volume to Get Chemical Recommendations

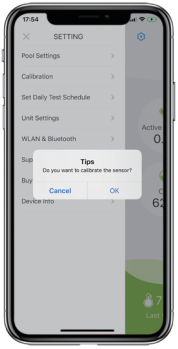
You need to enter the amount of water in your pool in our app settings interface so that the App can provide recommendations for chemical dosage.

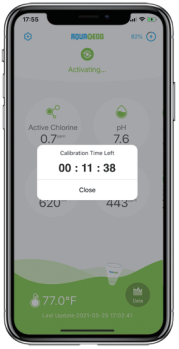


5. Calibrate Aqua-eegg Sensor

When using it for the first time or after a long period of inactivity, please calibrate the Aqua-eegg sensor. Before run the calibration, please follow the previous steps to turn on the Aqua-eegg sensor, release it to the water, and setup the connection with App. Then click the "calibration" button on the App. The calibration will automatically start. The calibration process will take about twelve minutes to finish. Please refer to the figure below.







1 2 3

6. Aqua-eegg Communication Modes

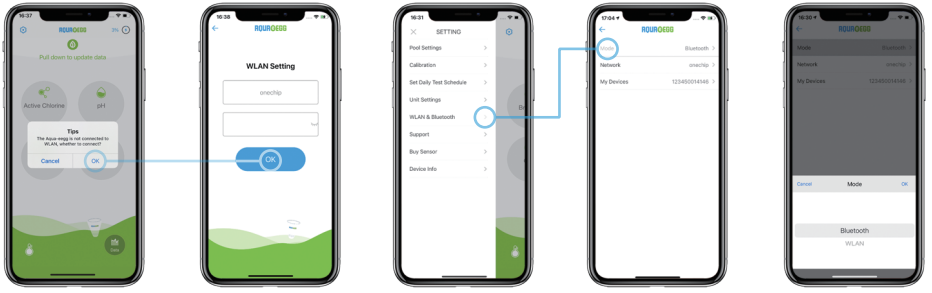
a. There are two communication modes for the Aqua-eegg. Bluetooth communication and WLAN communication. The App will pop up a prompt box to select WLAN or not when the device is used for the first time. If WLAN is chosen, the Aqua-eegg will be set to WLAN communication mode. Otherwise, the Aqua-eegg will stay with the default setting of Bluetooth communication mode. User can switch the communication mode in the App setting interface.

b. In both communication modes, the test date is reported on the App. However in Bluetooth mode, your cell phone has to be within 164 feet/50 meter range from the Aqua-eegg in order to get the test data; In WLAN mode, the test data can be obtained remotely as long as the Auqa-eegg is within the coverage of the WLAN signal, and the mobile phone is connected to the Internet via wireless network or cellular network. Alse in Bluetooth mode, the Aqua-eegg can be configured through the App; while in WLAN mode,Aqua-eegg setting cannot be configured, onnly test data is reported.

NOTE:

1. If the Aqua-eegg is set to Bluetooth communication mode, after it is restarted, please make sure that it is connected with the App successfully before the test can be conducted (In the WLAN communication mode, the test can be conducted normally without reconnecting through App)

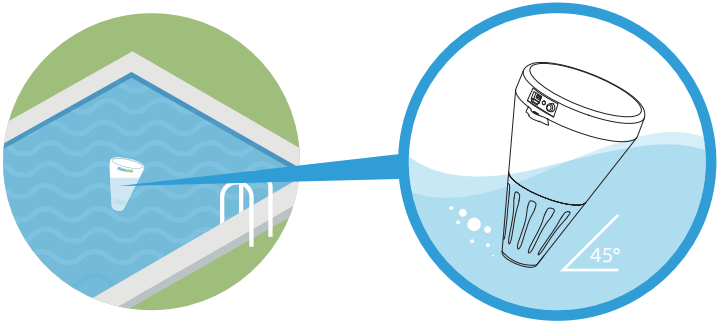
2. If the Aqua-eeg is set to WLAN mode, only supports the use the 2.4G frequency band. Please make sure that the mobile phone is currently connected to the WLAN network in the 2.4G frequency band, otherwise Aqua-eegg cannot be connected.



7. Put the Aqua-eegg into the water

Before putting the Aqua-eegg into the water, you need to confirm that the device is turned on.

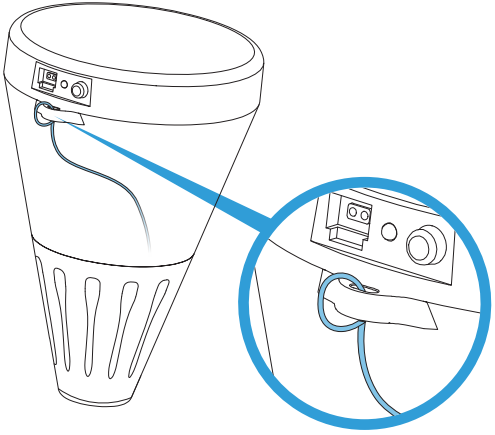
To avoid bubbles accumulated at the bottom, tilt the Aqua-eegg at 45° (as shown in the picture), slowly put it into the pool, and shake the Aqua-eegg gently in the water several times to release the bubbles.



8. Tie a fixed rope (optional)

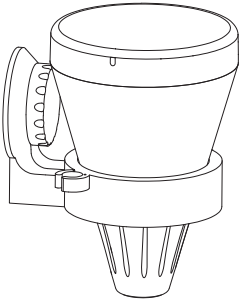
a. Get the lashing rope through the hole shown in the Aqua-eegg. Please make sure it is fastened;

b. Tie the other end of the rope to a fixed object by the pool to prevent the Aqua-eegg from floating away. When needed, the Aqua-eegg can be pulled back by the rope.



An optional holding fixture can be purchased on www.Aquaiot.tech to attach Aqua-eegg to the pool wall to prevent it from drifting around.

NOTE: The holding fixture is not suitable for pool wall is uneven.

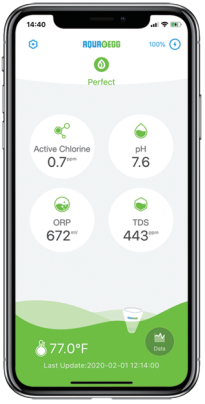


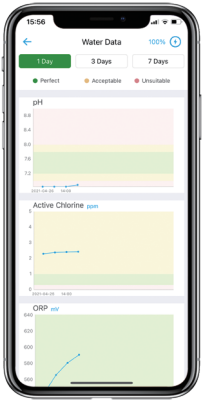
You’re Done!

Congratulations! Your Aqua-eegg has been set up and ready to go.

Srcoll down the screen the App displays the water quality data of the hourly automatic tests between 9: 00am and 5: 00pm by default. This time period can be Configured in the App.

To query the historical data, click Data icon at the bottom right corner of the screen.





Water Quality Guide

For water quality of swimming pool

The water quality situation	AC (Active Chlorine)	pH（Acidity and alkalinity）	ORP（Oxidation-Reduction Potential）	TDS（Total dissolved solids）
Perfect	0.3≤AC≤1ppm	7.2≤pH≤7.8	≥550mV	0≤TDS≤2000ppm
Acceptable	1≤AC<2	7.0≤pH<7.2 7.8<pH≤8.0	500≤ORP<550mV	2000<TDS≤2500ppm
Unsuitable	<0.3, or >2.0	<7.0, or >8.0	<500mV	>2500ppm

NOTE: This data table is partially based on some publications about water quality. It only serves as a reference. Please consult your pool technician for your specific types of pool before action. AQUAIOT INC. is not responsible for how you use the measured data.

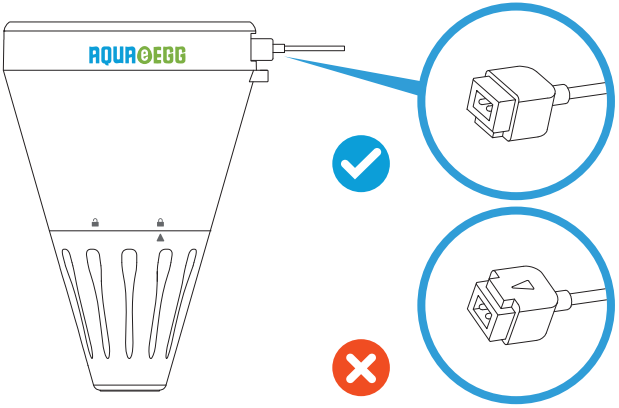
Light state definition

NO.	Different States	Light Modes
1	Turn on the power switch	The green light blinks on and off every 1s for 5 times
2	Aqua-eegg is normal but WLAN is not connected	Red light is on for 3s if it is configured in WLAN mode; There is no light on in Bluetooth mode
3	low power	Red and green flash alternately, on for 1s, off for 9s
4	Over-the-Air Technology (OTA) upgrade	The green light is always on until the OTA upgrade is completed
5	Charging with charging cable	The red light is always on during charging, and the green light turns on when fully charged

Charge your Aqua-eegg

Charge Aqua-eegg by connecting the charging cable with USB power port. Note that the arrow on the charging cable should face down (as shown in the figure below; the indicator light stays red during charging, and the light is turned to green when fully charged. Aqua-eegg can be charged in either ON or OFF state.)

NOTE: Aqua-eegg has a solar charger on board that can harness the solar energy automatically. So when used in the sun, there is no need to frequently charge the Aqua-eegg manually.

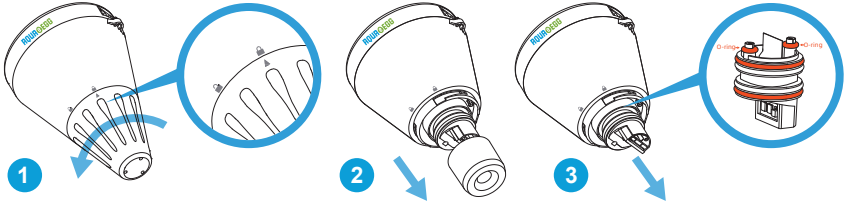


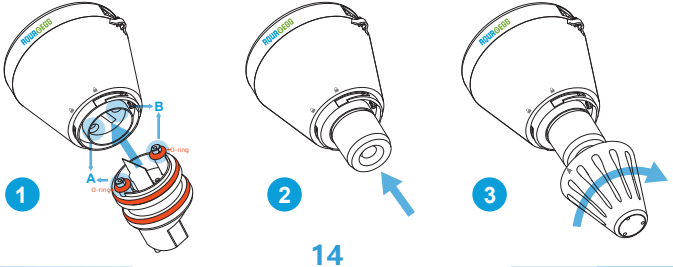
Replace Sensor

a. Rotate the lower part of the Aqua-eegg counterclockwise and remove it, and pull out the sensor in the direction of the arrow as shown in the figure.

b. Take out the new sensor from the box and make sure that the O-ring is in the correct position, as shown in the figure below. If there is no O-ring, please do not use it.

c. Insert the sensor module into Aqua-eegg. Please note that the A and B ports of the sensor match to the Aqua-eegg body one by one, otherwise it cannot be installed. Then turn the lower housing clockwise until it is tightened. (As shown in the third picture on the second row.)





Quick Tips:

1. Please do NOT put Aqua-eegg close to inlet/outlet of pool or other electronics such as pump, heater, or cleaning robot. Find a calm area for Aqua-eegg to avoid water turbulence to interfere testing.

2. Aqua-eegg is a monitor, not a test meter, as it tests hourly automatically.

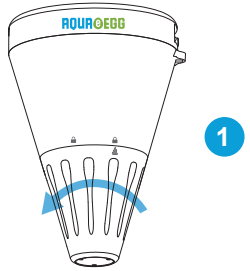
3. The sensor cover and the charging port plug MUST be in place for accurate reading.

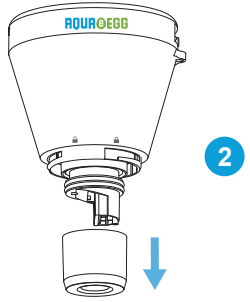
4. When your phone is disconnected with Aqua-eegg, it still tests water according to the default time point. Once the connection is restored, Aqua-eegg will send the data to the phone, which can be viewed in AquaIOT's "Data" page.

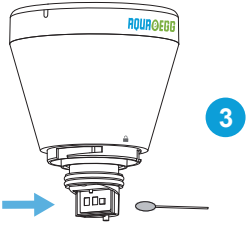
5. When App gives an alarm and reminds that the sensor needs to be cleaned, you can refer to the following method. As shown on the right, please open the sensor mesh cover from the bottom, clean the surface with a cotton swab dipped in water.

6. When the Aqua-eegg's power bar on the APP screen is low, you need to recharge the Aqua-eegg device. Fetch the Aqua-eegg from the water, and use paper towel to wipe the surface and let it dry.

7. When Aqua-eegg is used for the first time or used after being idle for a long time, Aqua-eegg needs to be calibrated at the App client, which takes about 12 minutes. Please refer to page 7 on calibration procedure.







Product Specification

Product Specification	
Wireless communication	Bluetooth4.2 (Bluetooth Low Energy) , WLAN （2.4G）
Wireless range	164 feet/50 meters (outdoor)
Dimensions(HxD)	ϕ0.36inch , Height 0.53inch
Test Environment	Swimming pool and Hot Tubs(mainly for pool using chlorine/bromine chemicals.Please note that salt pool may reduce lifetime of sensor due to severe reosion)
Safe Environment	Sunshade, room temperature, keep ventilation, dry.

Characteristics	Range	Precision
Active Chlorine/Bromine(ppm)	0-3.5/0-7	±0.3 or 10%
pH	6-9	±0.3
TDS(ppm)	0-3000	±10%
ORP(mV)	0-1000	±10%
T(°F)	52-122	2

Important Safety and Compliance Information

To reduce the risk of injury and damage, keep these safety precautions in mind when setting up, using and maintaining AquaIOT.

- Read all operating and safety instructions before operating Aqua-eegg.
- Retain this user's manual for future reference.
- Do NOT use this device to test hot water. The operation temperature range is 50~113 deg.F.
- Do NOT drop this product from a high place. If the product is found cracked, it cannot be placed in water.
- Although Aqua-eegg is a fun device, it should not be used as a toy. Do NOT throw the product into water.
- Do NOT place Aqua-eegg into water without sensor.
- Wipe the charging port on the Aqua-eegg to dry before charging.
- To ensure the test accuracy, the sensor needs to be replaced every six months (the specific time depends on the operational environment).
- Do NOT step on, drop, or knock on this product.
- Do NOT disassemble or modify this product and the sensor.
- Do NOT perform operations not described in this manual.
- DO NOT use Aqua-eegg to test liquids other than pool water, as liquids like coffee, beer, and beverage would contaminate the sensor.
- To avoid the possibility of accidental ingestion, keep the product away from young children.
- Please do not use Aqua-eegg to test liquids other than pool water, as liquids like coffee, beer, and beverage would contaminate the sensor.

This product is an engineering design of radio station equipment with small radio wave data communication system. Aqua-eegg operates in the 2.4GHz band. It may affect other devices using the same frequency for communication. Before using this product, please confirm whether you have used other radio stations nearby. In the event of radio interference between this product and "other radio stations", please change the place of use or stop using other devices.

For purchase, please visit the company website: www.aquaiot.tech, Under normal use according to the user's manual, if there is a failure during the warranty period, please send email to aquabotinc@gmail.com, and the company will reply to you regarding the return process.

We do not provide sensor modules for free that need to be replaced due to normal aging. Please purchase them at dealer's website or company's website.

Regardless of whether it is during the warranty period, AquaIOT is not responsible for any damage or injury caused by using the product. AquaIOT only bears the compensation up to the product payment limit.

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help. To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator on your body Use only the supplied antenna.

Regardless of whether it is during the warranty period, Aqua-eegg is not responsible for any damage or injury caused by using the product. Aqua-eegg only bears the compensation up to the product payment limit.