AUTOAQUA

Smart AWC *touch*

Manual
Bedienungsanleitung
Mode d'emploi

Model

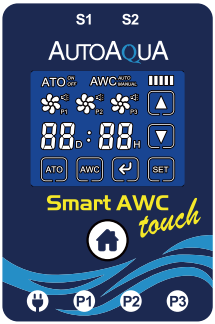
SAWC-200P

List of Parts

Item	Pictures	Description
Smart AWC touch Controller X 1		1. Controller with touch panel & Optical Level Sensor with wet side magnet X 2 **S1** : Black sensor **S2** : Blue sensor 2. Dry side magnet X 2 3. Max tank thickness : 1/2" (12.7mm)
Power Adapter X 1		Universal Power Supply
DC Pump X 3		1. Refill pump for ATO 2. Drain pump for AWC 3. Refill pump for AWC
Universal Tube Holder X 3		1. Mount for the water tube 2. For use on rimed and rimless tanks 3. Max tank thickness : 1/2" (12.7mm)
Siphon Breaker X 3		A connector to break the siphon
Water Tube 6M X 1		Used with DC pumps

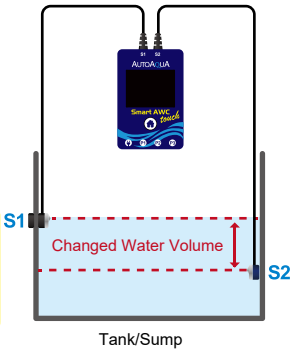
Installation

Smart AWC touch Controller



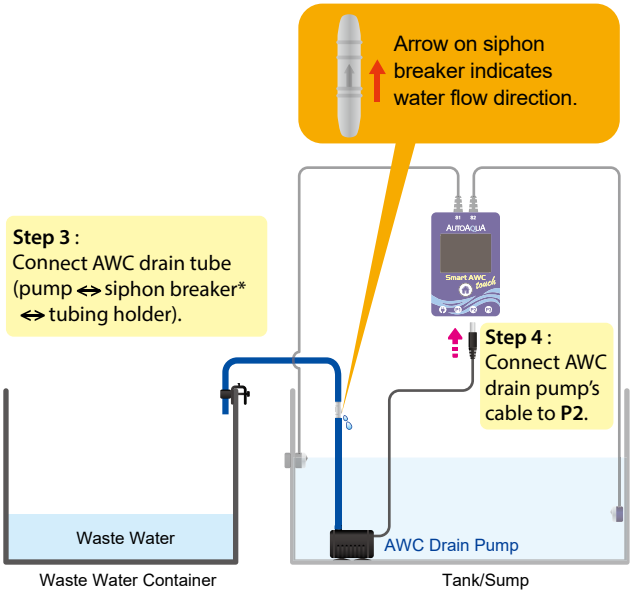
- S1 : ATO/AWC Sensor (Refill)
- S2 : AWC Sensor (Drain)
- : Power DC Jack
- P1 : ATO Refill Pump DC Jack
- P2 : AWC Drain Pump DC Jack
- P3 : AWC Refill Pump DC Jack

1. AWC (Automatic Water Change)



Step 1 :
Mount black sensor (**S1**) to normal water level - ATO water level.

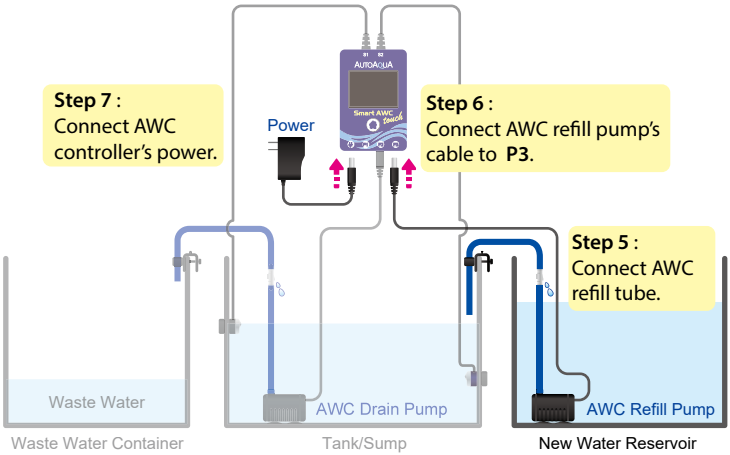
Step 2 :
Mount blue sensor (**S2**) to low water level.



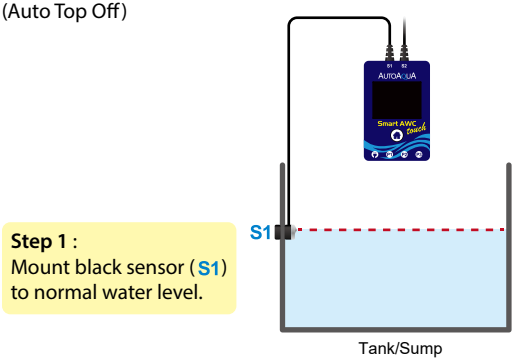
***Note :** Place siphon breaker inside the tank/sump but above the water level.

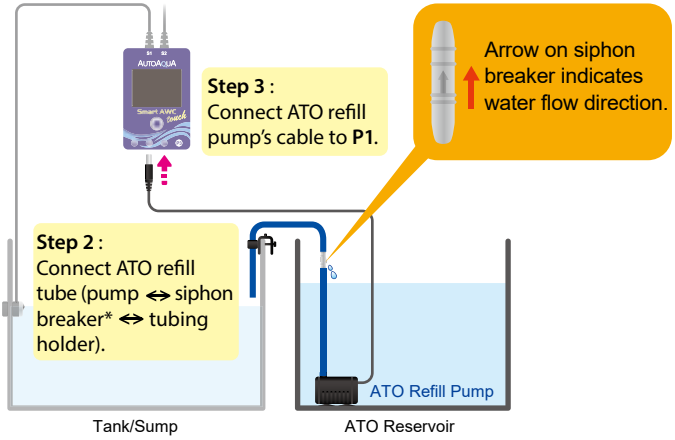
Air In : Siphon breaker allows air in to break the siphon when the pump turns off.

Water Out : Water drops out of the hole are normal when the pump is on.



2. ATO (Auto Top Off)





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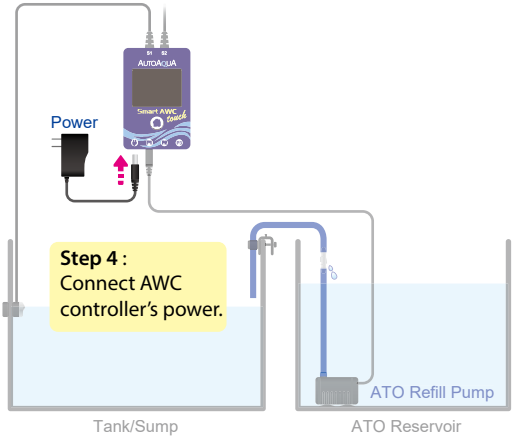

S1
S2
AUTOAQUA
Smart AWC
Touch
Power
Step 4 :
Connect AWC
controller's power.
ATO Refill Pump
Tank/Sump
ATO Reservoir

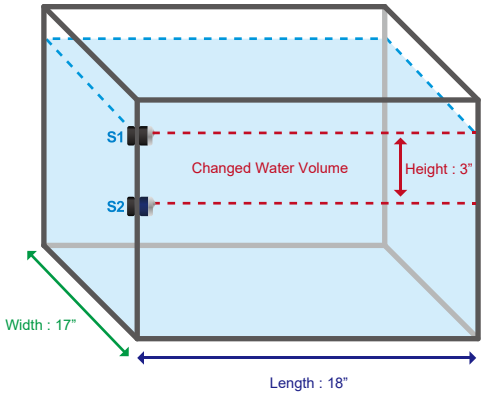
Calculating Water Volume to Be Changed

The volume can be calculated by multiplying the width and length of your tank and the distance between the pyramids of the two sensors. *

For example, a tank has 18 inches in length and 17 inches in width. If the distance between the two sensors is 3 inches, the water volume to be changed will be around 4 gallons.

18" (L) X 17" (W) X 3" (H) = 918 cubic inches (around 4 gallons)

* The water volume might be influenced by factors such as the speed of return pump. Slower refilling speed could reduce the variation. Please refer to the 3rd part of Programming section.

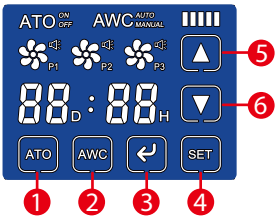


Auto Water Change Process

1. Old water in the tank/sump is pumped out until the water level reaches **S2**.
2. There is a 3-minute pause before refilling new water.*
3. New water is refilled into the tank/sump until the water level reaches **S1**.

*Users can skip the pause in AWC MANUAL mode by touching ↵ .

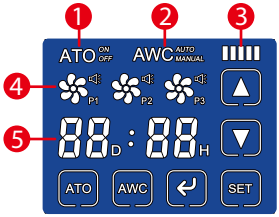
Icons & Buttons for Setting



No.	Icon/Button	Function
1	ATO	Turn ATO on or off
2	AWC	Choose AWC mode : MANUAL / AUTO or turn AWC off
3	↵	1. Start the AWC process 2. Pause / resume the AWC process 3. Dismiss alarm
4	SET	Choose the setting item in the AWC MANUAL / AUTO mode
5	▲	Increase time / speed
6	▼	Decrease time / speed
7	⌂	1. Wake up the LCD display 2. Dismiss alarm 3. Return to AWC setting page* 4. Resume the process 5. Reset (hold at least for 8 seconds)

*During water change process, pressing ⌂ button will stop the process and return to the previous AWC MANUAL / AUTO setting status. Also, ATO will be forced to be turned off if its previous status is on and at the same time the controller will give a five-second audible and visual alert (ATO flashing OFF).

Display Indication



1 Status of ATO

ATO ON : ATO is on.

ATO OFF : ATO is off.

2 Status of AWC

AWC : AWC is off.

AWC MANUAL : AWC is in MANUAL mode.

AWC AUTO : AWC is in AUTO mode.

3 Speed (For AWC Refill Pump) *

: Speed 5

: Speed 4

: Speed 3

: Speed 2

: Speed 1

***For further details, please refer to the 3rd part of Programming section.**

4 Status of Pump

P1 : ATO refill pump is connected.

P2 : AWC drain pump is connected.

P3 : AWC refill pump is connected.

showing : The pump is off.

rotating : The pump is on.

flashing : The pump is paused.

flashing : QST alarm*

***For further details please refer to page 11.**

5 Status of Timer (For AWC AUTO Mode)

Timer's colon flashing : The timer is running.

Timer's numbers, D and H flashing : The timer is paused.

Timer's D flashing : DAY is being set.

Timer's H flashing : HOUR is being set.

Alarm and Reminder

Status	Meaning	Action
 flashes with an audible alert.	No or bad connection (pump)	Connect the pump cable.
	Pump malfunctions.	Replace pump.
 flashes with an audible alert.	Quick Security Technology (QST) alarm	*Verifying the Root Cause* 1. Water empty : Refill the reservoirs. 2. Bubble noise : Keep the sensors away from the outlet of tubing or bubbles. 3. Algae : Clean up the algae from the sensor. *Dismissing the Alarm* 1. Touch  or  . 2. Reset.
 flashes with an audible alert.	The pump is paused for over 10 minutes.	Touch  or  to resume the process.
 . The timer flashes with an audible alert	The timer has been paused for over 10 minutes.	Touch or to resume the process.
 flashes with an audible alert.	The interval of water change is shorter than the duration of water change process.	*Dismissing the Alarm* Touch  or  . *Suggested Actions* 1. Extend the water change interval. 2. Reduce the water volume to be changed. 3. Increase the refilling speed if the refilling speed is set to be slow.
 flashes with an audible alert.	When AWC is delayed 48 times or more than 48 times.	

Quick Security Technology (QST)

Smart AWC touch uses QST for real-time protection against any failure situation.* The controller will give an audible and visual alert when any one of the following situations occurs.

For ATO: Any refilling time is 3 times longer than the first refilling time.

For example, if the first refilling time is 10 sec, the controller will give an alert when any refilling time is over 30 sec.

For AWC: Any draining time or refilling time is 3 times longer than the first one.

For example, if the first draining or refilling time is 20 sec, the controller will give an alert when any draining or refilling time is over 60 sec.

*1. No security time control for the first refilling and draining.
2. The minimum security time for ATO refilling is 10 sec, while the minimum security time for AWC draining or refilling is 20 sec.

How to Reset?

Reset : Holding for at least 8 sec is the only way to clear the QST memory (the first draining time and the first refilling time).
After reset, please unplug and replug the power cable.

Power Outage Security Measures

1. ATO will be turned off automatically (ATO flashing OFF) after restoration of power as if its previous status is on. It will be turned back on after 15 minutes automatically. Users could also turn it back on manually.

2. When the power outage occurs during the draining or refilling process, the process will be delayed for 15 minutes after restoration of power and then resume.

3. When the power outage occurs during the countdown to water change (the timer will pause during power outage)*, the timer will retain the record and resume after power outage.

* Since the timer is not running during a power outage, the next water change process will be delayed. For example, if a water change process is set to be started at 3 p.m., however, a power outage occurs during the countdown and lasts for one hour, the next water change process will be started at 4 p.m.

Programming

1. AWC MANUAL Mode (One-time AWC)

In this mode, users have to manually start the AWC process.

1) Touch 

to choose AWC MANUAL mode.

2) Touch 

to set the refilling speed if needed.

*** Please refer to Refilling Speed Setting.**

3) Touch 
to start water change process.*

*When water change is done, AWC flashes for 3 minutes with 5 beeps at last.

2. AWC AUTO Mode (Periodic AWC)

Water change in AUTO mode will perform in two different ways when ATO is off and on.

When ATO is off, it performs periodic AWC. Users set the timer to decide the water change interval.* The minimum water change interval is one hour while the maximum one is 99 days and 23 hours. Water change process will be started after the completion of each countdown.

When ATO is on, AWC does not perform in fixed intervals. Users set up timer to decide how many times AWC is expected to perform in a period. For example, if users would like to do water change 24 times per day, the timer is set for one hour. Water change process will be started after the next ATO event. Also, water change process will be done as many times in a row as it is delayed. For example, if you have set AWC every 1 hour and the ATO tops up every 3 hours, then after 3 hours the ATO will top up and directly afterwards the AWC will perform 3 AWC cycles.

1) Touch 

to choose AWC AUTO mode.

2) Touch 

to set the refilling speed if needed.

***Please refer to Refilling Speed Setting.**

3) Touch 

again to enter DAY SETTING of timer.

4) Touch 

again to enter HOUR SETTING of timer.

5) Touch 
to start water change cycles.*

*1. It is recommended to do water change in MANUAL mode to estimate the duration of water change process before doing water change in AUTO mode.

2. The water change interval must be longer than the duration of water change process. If the duration of water change process is longer than the water change interval, it will trigger 0000 or 1111 alarm, and the next countdown will not be started. It is recommended for users to extend the interval or shorten the duration of water change process.

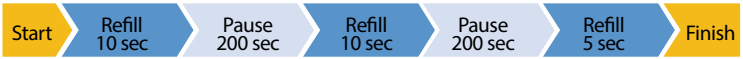
3. When water change is done, AWC flashes for 3 minutes.

3. AWC Refilling Speed Setting

The refilling speed will select different lengths of refilling time. The slower the speed is, the longer the refilling process is.

Speed 5	no pause during the refilling process	Low Average Speed
Speed 4	refill 20 sec and pause 200 sec repeatedly	
Speed 3	refill 10 sec and pause 200 sec repeatedly	
Speed 2	refill 5 sec and pause 200 sec repeatedly	
Speed 1	refill 2 sec and pause 200 sec repeatedly	

For example, one refilling process takes 25 sec. At Speed 3, the pump will refill 10 sec and pause 200 sec repeatedly until the completion of the refilling.



Benefits of AWC Refilling Speed Setting

Slower refilling of AWC water helps minimize temperature and chemistry changes so as to reduce stress on aquarium inhabitants. Also, it reduces the variation in water volume to be changed.

Specifications

1. Power Input : 100-240VAC 50-60HZ
2. DC Pump :
   - Head : 6.5 ft (200 cm)
   - Flow Rate : 74 gph (280 lph)
3. Max Tank Thickness : 1/2" (12.7mm)