



**Operation manual**  
*pH-controller*

With the purchase of this digital pH controller, you have decided to work with a quality instrument. It has been especially developed for aquarium use.

With this unit, you are able to measure and control the pH value of your aquarium water.

## 1. Theory

The pH value is an electrical value, that is a parameter for the acidity of water. In the aquarium, the pH value, together with the carbonate buffer system is of special interest.

- in a freshwater aquarium the pH value is responsible for the percentage of free CO<sub>2</sub>, that is used by the green plants for photosynthesis. Fertilisation with CO<sub>2</sub> has been well established for freshwater aquariums as the base for a good plant growth. With the pH controller the pH value can be adjusted to a given set point and kept constant by adding CO<sub>2</sub> automatically.

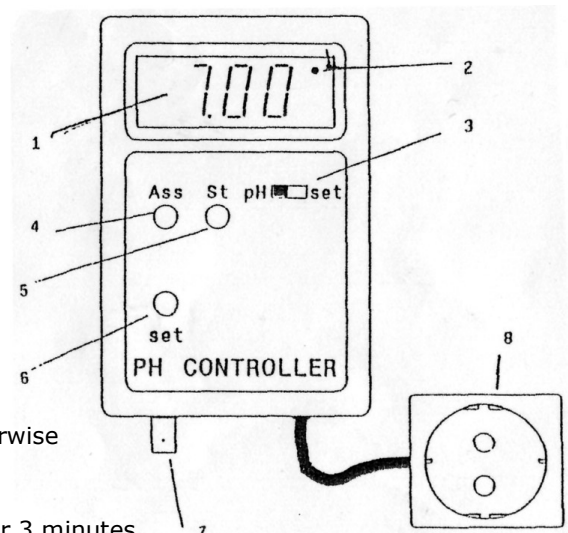
- in a seawater aquarium, the pH value and the CO<sub>2</sub> - addition are used in combination with a calcium reactor. The addition of CO<sub>2</sub> into the calcium reactor is controlled with the pH controller.

## 2 . Delivery

The **AB Aqua Medic GmbH** pH controller needs a separate pH electrode and the corresponding calibration liquids to start working. The solenoid valve can be connected to the main plug.

Description of the front panel

1. display
2. display/relay on/off
3. set/measuring switch
4. calibration knob, pH 7
5. calibration knob, pH 4
6. set point adjustment
7. connection for electrode ( BNC-plug)
8. 220 V- plug for solenoid valve



## 3. Starting and calibration

1. plug in the main plug, 220 V/ 50 cycles, if not noted otherwise
2. connect the pH- elektrode (7)
3. switch (3) to „ph“ (measuring)
4. insert the elektrode into the buffering solution pH 7. After 3 minutes, turn the knob (4), until the display shows pH 7. (use a small screw driver)
5. flush the elektrode with distilled water
6. insert the electrode in buffer solution pH 4 (or pH 9, depending on the desired range) After 3 minutes, turn the knob until the display shows pH 4 (or 9).

The controller is now calibrated and ready to use.

To ensure a trouble free use, the unit should be recalibrated every 4 weeks. Measuring and controlling with a pH controller is only as exact as the calibration. The electrode shall be emerged into the water, that the top part remains dry. Best is the use of the AQUA MEDIC Electrode holder (article no: 230.00).

## 4. controlling

Adjustment of the set point:

- turn knob 3 to „set“
- Adjust knob 6 ( set point adjustment) to the desired set value.

Turn switch 3 back to „ph“ ( measuring). The unit is now ready to use. As soon as the actual pH value rises over the adjusted value, the plug (8) with the solenoid valve is activated.

## 5. troubles

- The unit shows wrong values on the display - recalibrate the electrode
- The electrode cannot be recalibrated. -- check the electrode optically for breakage (diaphragma), glass electrodes for glass breakage and the electrolyte level of refillable electrodes. Take care of the operation manual of the corresponding electrodes.

If the electrode cannot be recalibrated, it has to be renewed.

PH - elektrodes have only a limited life span, depending on the kind of use between 1 and 3 years.

## 6. Technical Data

Display:	0.5 " LED, 3-1/2 digits
measuring range:	pH 0 - 14
resolution :	0,01 pH
accuracy:	+ <sub>-</sub> 0,01 pH ( +1 digit) after calibration
relay contact:	5 amps. at 240 V (1000 W)
working temperature:	0-50 °C
humidity:	below 80%
control range:	pH 3,5 to pH 10,5, digitally adjustable
control accuracy:	+ <sub>-</sub> 0,05 pH (+1digit)
Power connection:	220V, 50 Hz, if not noted otherwise
Dimensions:	150 x 85 x 40 mm
Weight:	550 g

## 7. warranty

Should any defect in material or workmanship be found within 12 months of the date of purchase AB Aqua Medic GmbH undertakes to repair or, at our option, replace the defective part free of charge – always provided the product has been installed correctly, is used for the purpose that was intended by us, is used in accordance with the operating instructions and is returned to us carriage paid. The warranty term is not applicable on the all consumable products.

Proof of Purchase is required by presentation of an original invoice or receipt indicating the dealer's name, the model number and date of purchase, or a Guarantee Card if appropriate. This warranty may not apply if any model or production number has been altered, deleted or removed, unauthorised persons or organisations have executed repairs, modifications or alterations, or damage is caused by accident, misuse or neglect.

We regret we are unable to accept any liability for any consequential loss.

Please note that the product is not defective under the terms of this warranty where the product, or any of its component parts, was not originally designed and / or manufactured for the market in which it is used.

These statements do not affect your statutory rights as a customer.

If your AB Aqua Medic GmbH product does not appear to be working correctly or appears to be defective please contact your dealer in the first instance.

Before calling your dealer please ensure you have read and understood the operating instructions. If you have any questions your dealer cannot answer please contact us

Our policy is one of continual technical improvement and we reserve the right to modify and adjust the specification of our products without prior notification.

**AB AQUA MEDIC GmbH - Gewerbepark 24 - 49143 Bissendorf/Germany**

- Technical changes reserved -