

Operation Manual
 **AQUA MEDIC**
mV Controller

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

With this instrument, you are able to measure and control the redoxpotential of your aquarium continuously.

1. Theory .

The redoxpotential or oxidation-reduction potential (ORP) is an electrical value, that is a parameter for the oxidation and reduction processes in the water. The redoxpotential is of special interest in the aquarium:

- to check the water quality in a seawater aquarium. The ideal range is between 300 and 400 mV. It can be raised by injecting ozone into the protein skimmer to the desired value. The higher the values are, the higher is the percentage of oxidation – the „ cleaner „, is the water.

- to control anaerobic denitrifying filters. Here the redox potential is used to check the activity . The ideal range for these filters is between

- 50 and – 300 mV .

The Redoxpotential is also used as a control parameter with other processes . In swimming pools, the chlorination can be controlled by the redoxpotential. The minimum value for disinfection is + 700 mV.

2. Delivery :

The  **AQUA MEDIC** redoxpotentialcontroller MV 2001 C has to be supplied with a Redoxelectrode.

We recommend to use the  **AQUA MEDIC** Redoxelektrode mV – 06 –200 . The ozoniser can be connected to the main plug.

3. Starting

1. plug in the 220 V-/50 cycles, if not noted otherwise.
2. Connect the mV electrode
3. Switch (3) to „M“ (measuring)

The redoxpotentialcontroller needs no additional calibration. However , it takes about 24h until the value shown in the display is constant. If used constantly, the electrode should be immersed all the time.

4. Controlling

Adjustment of the set point :

- turn knob 3 to „ set „
- Adjust knob 4 (set point adjustment) to the desired value
- Turn switch 3 back to „ M „, (Measuring). The unit is now ready to use. As soon as the actual mV- value drops below the adjusted set point, the plug (6) is activated and the ozoniser is switched on.

5. Troubles


- The unit shows wrong values – clean the electrode.
- Redoxpotentialelectrodes have only a limited lifespan – depending on the use, between 1 and 3 years .

Technical Data:

Display:	0.5 LED, 3-1/2 digits
Masuring range:	mV – 1000 bis + 1.000
resolution:	1 mV
accuracy:	*/. 1mV (+1 digit)
relay contact:	5 amps. at 240 V (1000 W)
working temperature:	0 – 50° C
Humidity:	belows 80%
control range:	-500 bis +500 mV, digitally adjustable others on request
control accuracy:	*/. 5 mV (+1 digit)
power connection:	220 V, 50 Hz, if not noted otherwise
dimensions:	150 x 85 x 40 mm
weight:	550 g

6. Operation manual for the **AQUA MEDIC** Redoxpotential electrode

The redox electrode is not included, however it is necessary for the function of the unit.

The  **AQUA MEDIC** mV electrode with a plastic shaft, is especially made for the determination of the redoxpotential in water. It is used in aquariums, the chemical industry, medicine and research laboratories.

6.1. technical Data :

measuring range:	-1000 - +1000 mV
sample temperature:	5 – 60 ° C , (short term)
connection:	BNC – plug
material:	plastic shaft , platinum

6.2. Measuring/ maintenance

- During the measuring, the platinum top has to be submerged in the sample liquid.
a new electrode, or an electrode, that has not been in use for a longer time, has to be submerged for at least 24 hours.

Warranty

On the controller, we guarantee 12 months on material defects. On the electrode we warrant 6 months, but maximum 12 months, after leaving our factory. Further claims are excluded.

The warranty is proved by the original invoice.