

# Aqua Controller ATC-500 Instruction

ATC-500 is a multifunctional Aqua Controller with the optimizing design to control temperature, lighting, oxygen supplying, filtering and alarming. It could be extensively used in aquarium, especially for the economic aquatic of most demanding aquarium setup in hotel, restaurant, showcase etc. It offers not only the reliable performance, but also the easy installation, operation and maintenance.

## Features:

One-way temperature control      Temperature/Time display      Two-way timing control  
Auto/Manual mode      One-way program cycling control      Alarm and alarm cancel

## Technical Parameters:

Resolution: 0.1      Accuracy:  $\pm 1$       Temperature measuring range: 0 ~50  
Temperature controlling range: 0 ~50      Return difference range: 0 ~15  
Alarm when exceeding temperature limit: 0 ~50  
Power supply: 220VAC - 15% ~ 220VAC + 10%  
Relay output: heater stick: 7A/220V and 3A/220V for others

## Setting & Display Parameters:

Parts and Function:

Parts	Function 1	Function 2
	Increase 1 unit	Choose setting item
▼	Reduce 1 unit	Choose setting item
OK	sec/min/hour choice when setting time	
Auto/Manual	Press and hold for at least 3 sec to switch auto/manual mode	Ps: in automatic mode, the manual setting program will only operates one cycle.
Timer1 on/off	On/off timer1	
Timer2 on/off	On/off timer2	
Time/Temperature	Time and temperature mode switch	
Set (operating/setting mode switch)	Enter setting mode in pressing and hold at least 3 sec. Enter manager menu in the same way with "Set"+"OK" keys.	Operating parameters could be changed, and system will return to menu after changes have been saved.
Cycling	On / off cycle output	

The parameter changes will be save automatically. The system will return operating mode if no operation be made within 10 sec. in setting mode.

Menu Instruction:

Code	Function	Setting Range	Remark	Defaults
F01	Turn on cycling program	0 - 24	Input 0 keeps the cycling off.	0
F02	Turn off cycling program	0 - 24	Input 0 keeps the cycling on.	0
F03	Time to turn on timer 1	00.00 - 23.59	Shut down output when setting the on/off time at the same point	00.00
F04	Time to turn off timer 1	00.00 - 23.59	...	00.00
F05	Firstly turn on timer 2	00.00 - 23.59	...	00.00
F06	Firstly turn off timer 2	00.00 - 23.59	...	00.00
F07	Second time to turn on timer 2.	00.00 - 23.59	...	00.00
F08	Second time to turn on timer 2.	00.00 - 23.59	...	00.00
F09	Time setting	00.00 - 23.59		00.00

## ◆Manager Menu Instruction:

Code	Function	Setting Range	Remark	Default
F10	Return difference	0 ~ 15		10
F11	Upper temperature	1 ~ 50	Control Upper temperature setting	40
F12	Lower temperature	0 ~ 49	Control Lower temperature setting	10
F13	Alarm when exceeding temperature limit	0 ~ 50	Input 0 to close the alarm when exceeding temperature limit	0
F14	Alarm on/off	00/01	00 alarm on; 01 alarm off	01

## ◆Indicator Light:

Parts	Light on	Light off
Auto/Manual	Working	Closed
Timer 1	On	Off
Timer 2	On	Off
Cycling	On	Off
Heating	Heating	Stop heating

## ◆Operation Instruction:

### ◆Temperature Control:

◇Temperature control adopt single return difference mode, when monitored temperature ▼ setting lower temperature, system begin heating, when monitored temperature ▼ upper temperature + temperature limit of alarm, stop heating. In time display mode, the temperature control program is still operating as set.

◇Press ▲or▼ key to display the present setting temperature, and change the defined value by pressing the ▲or▼ key.

### ◆Timer Control:

If the set timetable doesn't intercross, the system will operate as the timeline.

If the set timetables intercross, overlap or cover from each other, the system will operate the command pointed to the very clock. So we strongly recommended the user to set the timer properly against the timeline to avoid the failure of function operating.

### ◆Cycling Control:

If neither the set on/off is "0", the cycling program will operate according to the defined on/off time.

If defined cycling on time is "0", the cycling program keeps closed. If the defined cycling off time is "0", the cycling program keeps open.

## ◆Alarm:

### ◆Alarm When Exceeding Temperature Limit:

If the monitored temperature ▼ upper temperature + temperature limit of alarm or monitored temperature ▼ lower temperature + temperature limit of alarm, system give the audible (buzz) and the visual (indicator light flashes) alarm. (Refer to Manager Menu) Input 0°C in F13 to cancel alarm.

### ◆Alarm Cancellation:

(Refer to Manager Menu) Input 00 in F14 to cancel the audible alarm, however the fault code is still displayed.

### ◆Error Code:

HHHH: Exceed the upper defined value      LLLL: Under the lower defined value  
EEEE: Sensor tip failure

## ◆Safe Regulation:

**Dangers:** Cut off the power supply when connecting the wires, forbid connect terminal with power.

The grounding terminal of heavy current instruments such as heater and cycle pump must be reliable connect with land.

**Warning:** Forbid overload relay.

**Notice:** Power supply must consist with the labeled power value on units.

If power supply interruption, cycle controlling will start taking count from cycle off after refurbishing power supply. System still runs according to the set program .