



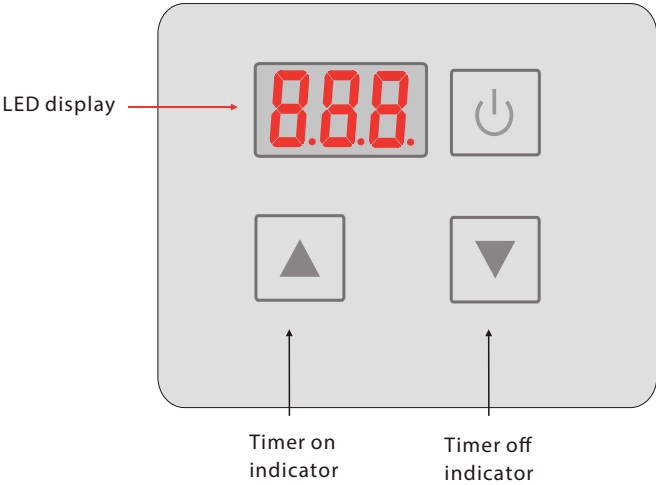
# OPERATING MANUAL




## ECONO RANGE

# USAGE AND OPERATIONS

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## 1. Function of wire controller





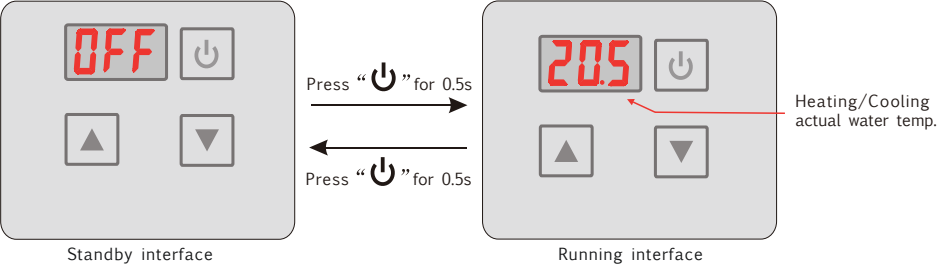
Key	Key name	Key function
	ON/OFF	Press this key to turn on/off the unit
	Up	Press this key to select the upward option or increase the parameter value.
	Down	Press this key to select the downward option or decrease the parameter value.

# USAGE AND OPERATIONS





## 2. Usage of wire controller

### 2.1 Turn ON/OFF the unit

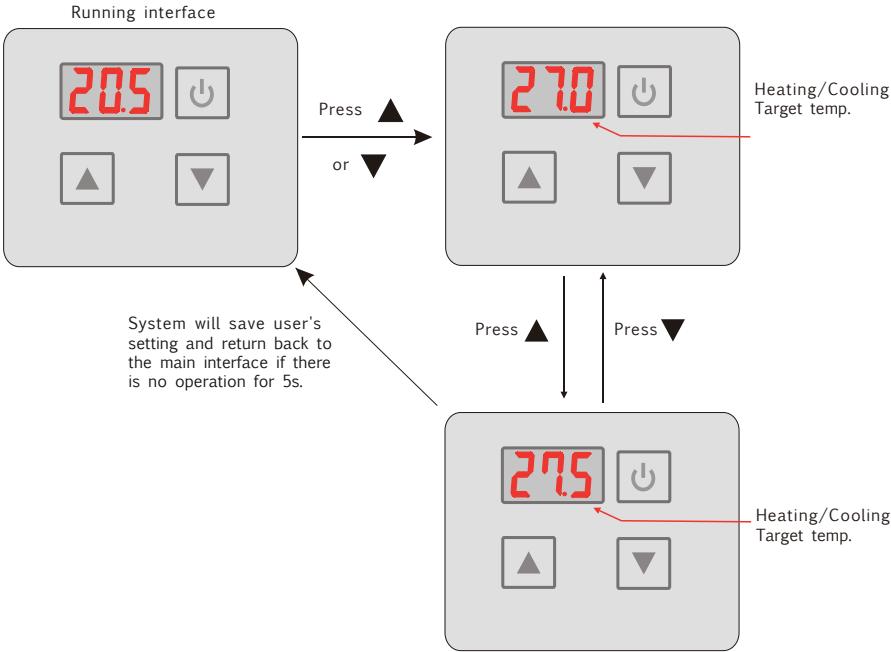
When the unit is off, press the key  0.5s to turn on the unit;  
When the unit is on, press the key  0.5s to turn off the unit;



### 2.2 Setting temperature

In the running interface, press  or  then the current mode target-temperature flashes, then press  to increase the temp. value or press  to decrease it. Press "⏻" will not save setting parameter but back to the main interface;

Attention: If there is not operation for 5s, the system would remember parameter setting and back to the main interface.



# USAGE AND OPERATIONS

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## 2.3 Keyboard lock

To avoid mis-operations, please lock the controller after parameter settings.

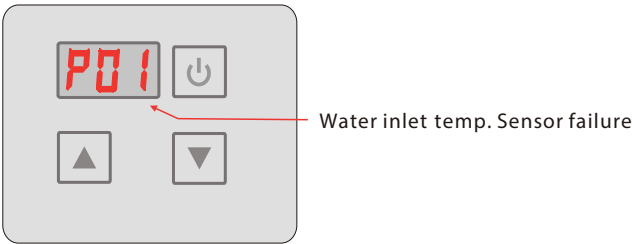
At the main interface, pressing “⏻” for 5 seconds, when hearing one sound the keyboard is locked;;  
When the keyboard is locked, pressing “⏻” for 5 seconds, when haring one the keyboard lock is open.

NOTES : When the unit is in alarming state, the key lock can be removed automatically.

## 2.4 Malfunction display

There will be malfunction code showing on the controller screen when relative malfunction occurs.  
You can refer to the malfunction table to find out the failure cause and solutions.

For example:



## 3. Parameter table

Code	Meaning	Default	Remarks
r03	Set-point of auto mode target temp.	27 °C	Adjustable

# USAGE AND OPERATIONS

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4. Malfunction Table  
The common failure cause and solution.

Malfunction	Display	Causes	Solution
Water inlet temp. Sensor failure	P01	The water inlet temp. Sensor is open or short circuit	Check or change the water inlet temp. Sensor
Water outlet temp. Sensor failure	P02	The water outlet temp. sensor is open or short circuit	Check or change the water outlet temp. Sensor
Ambient temp. Sensor failure	P04	The ambient temp. sensor is open or short circuit	Check or change the ambient temp. Sensor
Pipe temp. Sensor failure	P05	The pipe temp. sensor is open or short circuit	Check or change the pipe temp. Sensor
Evaporator temp. Sensor failure	P07	The evaporator temp. Sensor is open or short circuit	Check or change the evaporator temp. Sensor
High pressure protect	E01	The exhaust pressure is high , high pressure switch action	Check high pressure switch and cooling return circuit
Low pressure protect	E02	The suction pressure is low, Low pressure switch action	Check low pressure switch and cooling return circuit
Flow switch failure	E03	No water or little water in water system	Check the flow volume ,water pump is failure or not
Temp. is too much different between water-inlet and outlet	E06	Water flow volume not enough, Water system pressure difference is small	Check the flow volume,water system is jammed or not
Antifreezing under cooling mode	E07	Water flow volume not enough	Check the flow volume,water system is jammed or not
The primary anti-freezing protection start.	E19	Ambient temperature is too low	
The second anti-freezing protection start	E29	Ambient temperature is too low	
Communication failure	E08	Communication failure between remote wire controller and main board	Check the wire connection between remote wire controller and main board

# IMPORTANT INFO

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## MAINTENANCE AND INSPECTION

1. Check the water supply device and the realse often. You should avoid the condition of no water or air entering into system, as this will influence unit's performance and reliability. You should clear the pool / spa filter regularly to avoid damage to the unit as a result of the dirty of clogged filter.
2. The area around the unit should be dry, clean and well ventilated. Clean the side heating exchanger regularly to maintain good heat exchange as conserve energy.
3. The operation pressure of the refrigerant system should only be serviced by a certified technician.
4. Check the power supply and cable connection often. Should the unit begin to operate abnormally, switch it off and contact qualified technician.
5. Discharge all water in the water pump and water system, so that freezing of the water in the pump of water system does not occur. You should discharge the water at the bottom of the water pump if the unit will not be used for extended period of time. You should check the unit thoroughly and fill the system with water fully before using it for the firt time after.

## DO I NEED A THERMAL BLANKET?

We recommend the use of a heat retaining blanket at all times that your swimming pool is not in use.

In most cases, when calculating the suitable heat pump size, the calculation is based on the use of a heat retaining blanket.

Heat loss in a pool is caused by evaporation. Therefore, if you don't prevent the evaporation with a heat retaining blanket you will not be able to maintain a constant temperature in the swimming pool.

A good example to think of, is driving your car with the air-conditioning on, and all the windows are down.

## WHY IS THERE WATER DRIPPING FROM UNDER THE HEAT PUMP?

When the heat pump is running (in the heating mode), condensation build-up on the evaporating coils will cause water dripping under the heat pump. This is a normal occurrence and is not a sign of leaking pipes.

A simple test is to actually taste your swimming pool water and the water dripping from under the heat pump - this will indicate that the water under the heat pump is not swimming pool water.

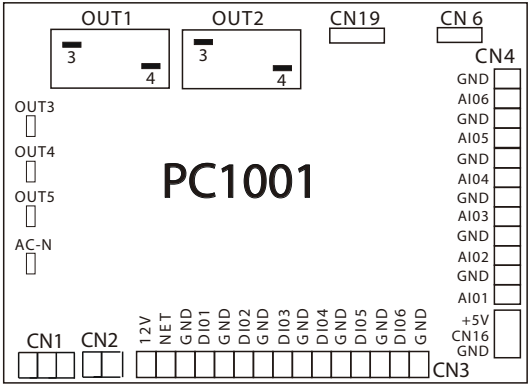
## DO I NEED A HEAT PUMP COVER?

It is normally not necessary to cover your heat pump if it's used on a regular basis. We however recommend that if your heat pump is not used for long periods of time, i.e. holiday homes, we recommend that a cover is fitted to protect the heat pump against the elements.

Heat pump covers are available for the different models. These can be ordered directly from Aquaheat.

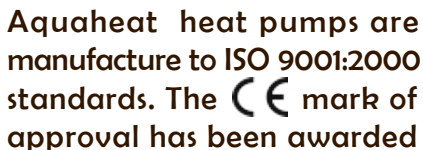
# APPENDIX

## 4. Connection of the PCB illustration



### Connections explanation :

No.	Symbol	Meaning
1	OUT1	Compressor of system1 ( 220-230VAC )
2	OUT2	Water pump ( 220-230VAC )
3	OUT3	4way valve ( 220-230VAC )
4	OUT4	Fan motor ( 220-230VAC )
5	OUT5	No use
6	AC-N	Neutral wire
7	NET GND 12V	Wire controller
8	DI01 GND	On/Off Switch(input)
9	DI02 GND	Flow switch (input)
10	DI03 GND	Low pressure switch
11	DI04 GND	High pressure switch
12	DI05 GND	No use
13	DI06 GND	No use
14	AI01 GND	Suction temp.(input)
15	AI02 GND	Water in temp.(input)
16	AI03 GND	Water out temp.(input)
17	AI04 GND	Coil Temp. ( input)
18	AI05 GND	Ambient temp.(input)
19	AI06 GND	Ajustable fan speed/Exhaust temperature
20	CN1	Primary transformer
21	CN2	Secondary transformer
22	CN6	No use
23	CN19	No use
24	5V CN16 GND	No use



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## NOTES

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