



- A Controller
- B Tank
- C ON/OFF Button
- D PID Controller
- E Pump Circulator
- F Heater
- G Power Indicator

### Unpacking and Setup

1. Take "Controller" (1) out and set it into "Tank" (2) as Figure 1
2. Pour water into "Tank" until water level covers half height of "Tank".
3. Connect the power supply. Make sure the voltage is 110V 220V. You may see the "Power indicator" (4) become green.
4. Press "ON/OFF Button"(3), then you may see the "Power indicator" (4) become red. Wait for about 5 seconds; you can see from PID control panel the present temperature value (PV) in upper row and setting temperature value (SV) in lower row.
5. Press "Up Key" or "Down Key" to adjust SV value and then press "SET Key" to enter the value.
6. After finishing the work, please press "ON/OFF Button" (3) to turn off the power, and then the "Power indicator" (4) become green.

#### Warning:

If water level is under the bottom of "Heater" (6), you must pour water into "Tank" to cover the heater.

## Other Functions

Note: Before executing other functions, please follow "5. Setting lock" to release "LOCK" status. After executing other functions, please follow "5. Setting lock" to set "LOCK" status.

### 1. Setting point alarm:

(1) Setting upper-limit point for alarm: (When the difference between PV and SV is over upper-limit, the "Alarm Indicator" (ALM1) will sparkle)

(a) Press **↔** twice. You will see **RL H** in upper row and the setting point in lower row.

(b) Press "UP KEY" or "DOWN KEY" to set point, and press **SET** to enter the value. Press **SET** again to be back the PV/SV display.

(c) The initial value is 10.

(2) Setting lower-limit point for alarm: (When the difference between SV and PV is over lower-limit, the "Alarm Indicator" (ALM1) will sparkle)

(a) Press **↔** twice. You will see **RL L** in upper row and the setting point in lower row.

(b) Press "UP KEY" or "DOWN KEY" to set point, and press **SET** to enter the value. Press **SET** again to be back the PV/SV display.

(c) The initial value is 10.

### 2. Setting temperature unit:

(a) Press **SET** more than 3 sec.

(b) Press **↔** once. You will see **TEMP** in upper row and the setting value in lower row.

(c) Press "UP KEY" or "DOWN KEY" to set temperature unit "C" or "F", and then press **SET** to enter value. Press **SET** again to be back PV/SV display.

(d) The initial value is C.

### 3. Setting PV shift (offset) value: (If the PV value is not correct, you can use this function to adjust the PV value).

(a) Press **SET** less than 3 sec.

(b) Press **↔** six times. You will see **EPoF** in upper row and the setting value in lower row.

(c) Press "UP KEY" or "DOWN KEY" to set shift value, and press **SET** to enter the value. Press **SET** again to be back the PV/SV display.

(d) The initial value is 0.

### 4. Setting Auto-tuning function:

(a) Press "UP KEY" or "DOWN KEY" to set SV value to be auto-tuning.

(b) Press **SET** less than 3 sec.

(c) You will see **AT** in upper row and the setting value in lower row.

(d) Press "UP KEY" or "DOWN KEY" to choose "ON" to start or "OFF" to close auto-tuning function.

When auto-tuning function is on, you can see the "AT" indicator blanking. Once the auto-tuning function finish, the light of "AT" will extinguish.

(e) The initial value is OFF.

Note: (Auto-tuning function is that PID controller can depend on the ambient air temperature to find the best way to reach the setting temperature and let the setting temperature keep stable.)

### 5. Setting lock:

(a) Press **↔** four times. You will see **LoC** in upper row and the setting value in lower row.

(b) Press "UP KEY" or "DOWN KEY" to select locking status. **LoC** can lock all settings and **LoC?** can lock others than SV; When "OFF" is selected, the lock function will be off. After selecting, press **SET** to enter the value. Press **SET** again to be back the PV/SV display.

(c) If you press **↔** and **SET** simultaneously, the "Lock" status will be released.

(d) The initial value is **LoC?**

### 6. During setting value, you may press **SET** anytime to be back PV/SV display.