

# Water\_Bath

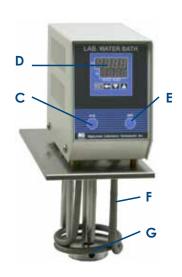
## **Instruction Manual**











- Controller
- **B** Tank
- C ON/OFF Button
- PID Controller
- **E** Pump Circulator
- F HeaterG Power I
  - 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.

#### Warnina:

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 abd SV is over upper-limit, the "Alarm Indicator" (ALM1) will sparkle)
  - (a) Press twice. You will see Rt HH 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 again to be back the PV/SV display.
  - (c) The inital value is 10.
- (2) Setting lower-limit point for alarm: (When the difference between SV abd PV is over lower-limit, the "Alarm Indicator" (ALM1) will sparkle)
  - (a) Press twice. You will see Rt it 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 inital value is 10.
- 2. Setting temperature unit:
  - (a) Press set more than 3 sec.
  - (b) Press once. You will see Epun 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 inital 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 inital 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 St 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 inital 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 rour times. You will see Lot in upper row and the setting value in lower row.
  - (b) Press "UP KEY" or "DOWN KEY" to select locking status. Lot: can lock all settings and Lote can lock others than SV; When "oFF" is selected, the lock function will be off. After selecting, press 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 LoE2.
- 6. During setting value, you may press set anytime to be back PV/SV display.