

# Heater User Manual

## 1. Power/Reduction Button:

1.1 Press briefly to turn on.

1.2 Press and hold for 3 seconds to turn off.

1.3 Press and hold for 7 seconds to restore factory settings.

### 1. Default Settings:

1. The device is powered on, heating function is active, no mode is set, and the heating level is set to level 3.
2. The default airflow level is set to level 0.
3. Default daytime temperature threshold is 26°C, and nighttime temperature threshold is 22°C.
4. Default dead zone is 3°C.
5. Default temperature and humidity calibration value is 0°C.
6. Default countdown timer is set to 0 minutes.

## 1.4 Press briefly to decrease values in the following functions and modes:

1. **Heating Level Control:** 0-10, decrease by 1 level.
2. **Airflow Level Control:** 0-10, decrease by 1 level.
3. **Time (Countdown) Mode:** 00:00-24:00, decrease by 00:10; 00:00-00:10, decrease by 00:01.
4. **Temperature (Low-Temp Trigger) Mode:** 0-60°C / 40-144°F, decrease by 1°C.

## 2. Function Button: Used to switch between heating and fan (airflow) modes.

### 2.1 Press briefly to cycle between modes:

- **Heating Function** (icon blinks) → **Fan Function** (icon blinks).
- **Heating Function:** 10 heating levels; adjust by pressing the button briefly (0-1-2-3-4-5-6-7-8-9-10-0).
- **Fan Function:** 10 airflow levels; adjust by pressing the button briefly (0-1-2-3-4-5-6-7-8-9-10-0).

### 2.2 Press and hold to set the dead zone range:

- **Dead Zone Range:** ±1° to 20° (Example: If the dead zone is set to 3 and the temperature is set to 26°C, the device will stop working at 29°C and start working again at 23°C).

## 3. Mode Button: Used to switch between control modes: Countdown Mode / Temperature (Low-Temp Trigger) All-Day Mode / Temperature (Low-Temp Trigger)

Day Mode / Temperature (Low-Temp Trigger) Night Mode / Continuous Operation Mode.

### 3.1 Press briefly to switch between modes:

- **Continuous Operation Mode:** The device operates continuously at the selected airflow or heating level.
- **Countdown Mode:** Example, if set to 01:00, the device will operate at the selected airflow or heating level for 1 hour, and the “:” in the display will blink. After the countdown finishes, 00:00 will display.
- **Temperature (Low-Temp Trigger) All-Day Mode:** In this mode, the temperature setting area will show “888” and blink.
- **Temperature (Low-Temp Trigger) Day Mode:** In this mode, the temperature setting area will show “888” and blink.
- **Temperature (Low-Temp Trigger) Night Mode:** In this mode, the temperature setting area will show “888” and blink.

*Note: For the Day or Night Temperature Mode, the device will operate based on the respective daytime or nighttime settings. In All-Day Temperature Mode, the same temperature is used for both day and night.*

*Note: In Fan Mode, only Countdown Mode and Continuous Operation Mode are available.*

### 3.2 Press and hold to calibrate the temperature:

- **Temperature Calibration** (Calibration range: -20° to +20°).

**4. Increase Button:** Used to increase values in the following functions and modes:

#### 4.1 Press briefly to increase values (+):

- **Heating Level Control:** 0-10, increase by 1 level.
- **Airflow Level Control:** 0-10, increase by 1 level.
- **Time (Countdown) Mode:** 00:00-24:00, increase by 00:10; 00:00-00:10, increase by 00:01.
- **Temperature (Low-Temp Trigger) Mode:** 0-60°C / 40-144°F, increase by 1°C.

#### 4.2 Press and hold to toggle between Fahrenheit and Celsius:

- Press and hold the Increase button to switch between Fahrenheit and Celsius (no decimals).

### 5. RJ12 Interface:

#### 5.1 For standalone operation, connect the SF self-developed sensor:

- Displays the current temperature inside the tent in real-time.
- Shows the light status (Day/Night mode).

### **External Devices Introduction:**

1. **Temperature and Humidity Sensor:** When connected to the heater, the current temperature will be displayed on the heater's screen after about 3 seconds. If not connected, "--" will be shown. The light sensor detects light for Day mode and no light for Night mode.

### **6. Protection Mechanisms:**

1. **Overheating Warning (E1 + warning light on and alarm sounds, press any button to stop alarm):** If the internal temperature of the heater exceeds 212°F (100°C), the heating function will be turned off until the internal temperature drops below 140°F (60°C). The fan function will remain on during this emergency shutdown.
2. **Fan Malfunction Warning (E2 + warning light on and alarm sounds, press any button to stop alarm):** If the fan is malfunctioning, this warning will appear. Check your heater for potential issues.
3. **PTC Error Warning (E4 + warning light on and alarm sounds, press any button to stop alarm):** If the PTC heating element has an issue, check your heater for possible problems.
4. **Power Supply Error Warning (E5 + warning light on and alarm sounds, press any button to stop alarm):** If the power supply unit is malfunctioning, check your heater for possible issues.
5. **Ambient Overheat Warning (Temperature Sensor Location):** If the temperature sensor detects a temperature above 140°F (60°C), the display will blink. The heater function will be turned off until the temperature drops below 131°F (55°C). The fan function will remain on during this emergency shutdown.