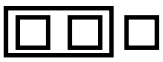
Microtemp Electronics - Solar / Battery Digital Thermometer and Alarm
Model ST-1B and Model ST-1C

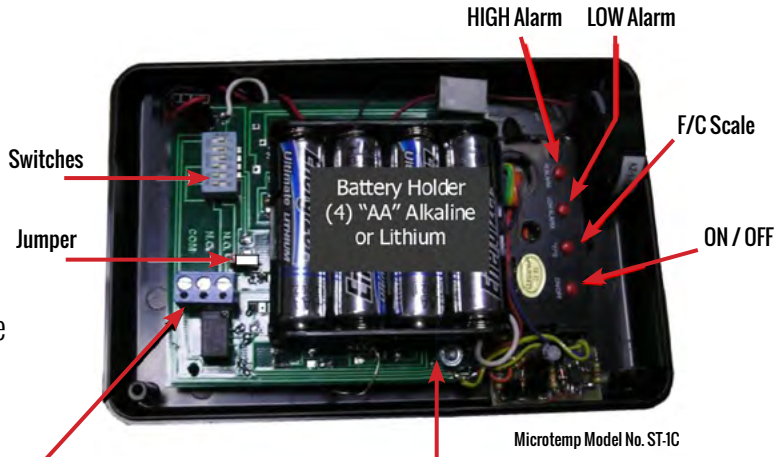


Jumper in this position will allow a 60 minute delay when the #3 dip switch is in the "OFF" position.

Jumper in this position will allow a 110 minute delay when the #3 dip switch is in the "OFF" position.

This unit is factory set for a 60 minute time delay. Time delay can be changed to 110 minutes by changing the position of the jumper as described above.

CALIBRATION: Unit is factory calibrated. Accuracy is equal to + or - 1° Celsius



Microtemp Model No. ST-1C

Phone Dialer Terminal Block

Normally open and normally closed dry contacts are available for dialers or secondary alarm systems. The #2 DIP switch **MUST** be in the up position for this option to operate.

Batteries

When low battery symbol appears in the display, batteries **MUST** be replaced. Alkaline batteries are supplied with the unit. When used outdoors, batteries must be NiMH to handle current from solar cells.

WARRANTY:

Good for one year from date of purchase. Covers labor and material only. This unit cannot cause a refrigeration failure and is not liable for product loss. If unit becomes defective, contact manufacturer for replacement or repairs as soon as possible.

Alarm settings must be reset whenever batteries are replaced or F/C switch is pressed.

Troubleshooting Tips

- **Constant -45°C or -55°F on Display:** Open circuit to sensor due to broken wires, unplugged sensor cable on circuit board, or defective sensor. If repairs cannot be made, replace sensor assembly.
- **--- On display:** Shorted circuit to sensor may be due to a pinched or crimped cable, or defective sensor. Repair cable or replace sensor assembly.
- **Alarm does not go off:** Make sure alarm is activated. HIGH or LOW must be visible at left in display. Batteries may have dislodged during shipment. Change batteries when battery icon appears on display. WEAK BATTERIES MUST BE REPLACED.
- **Unit does not activate when DIP switch 1 is turned on:** Check batteries. Push ON/OFF button on back of display.

INSTALLATION AND OPERATING INSTRUCTIONS **Note: All settings should be made before mounting alarm**

1. Turn on unit by placing the #1 and #4 DIP switches (on back) in the UP position.
2. Sensor can exit alarm from the side or the back. To move sensor to the back exit: Remove four front screws / Unplug sensor from circuit board / Carefully remove sensor and lock from side hole / Insert hole plug (provided) / Discard cord lock, then plug sensor back into sensor through large hole on back and assemble case / Replace screws
3. Set DIP switches to fit your application. See DIP diagrams next page.

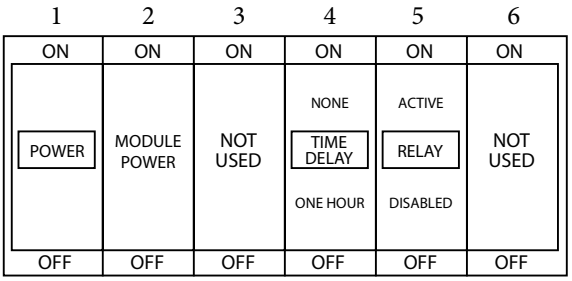
No. 1: Positive power switch for circuit board.

No. 2: This switch enables a relay to activate a secondary alarm system or phone dialer. This is accessed by using the terminal board provided on the circuit board.

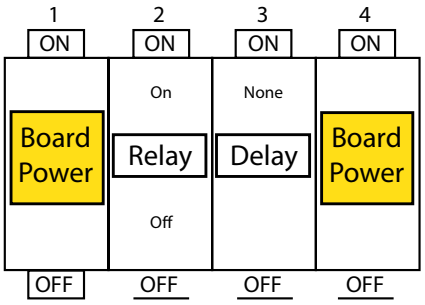
No. 3: Sets time delay. UP is 10 second delay, DOWN is 55 minute delay. See instructions.

No. 4: Is negative power switch for circuit board.

NOTE: After an alarm condition , this unit will automatically reset when the temperature has been normal for two minutes.



Model ST-1B

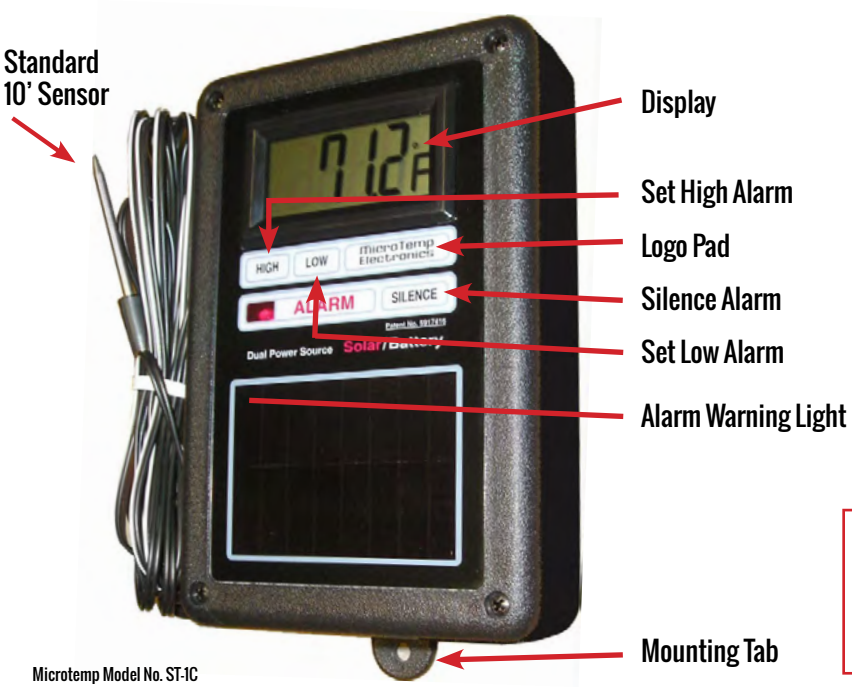


Model ST-1C

4. After all DIP switches have been selected, set the alarm. Alarm can be set from face plate or on back of display module. **F/C must be selected FIRST before setting alarm parameters.** NOTE: There is an unmarked switch under the right side of the LOGO on the face plate that must be pushed when selecting LOW or HIGH alarm settings. Alarm settings can be set using the buttons on the back of display module. **Unmarked switch helps prevent unauthorized tampering.**

SET HIGH ALARM: On the faceplate, press and hold the HIGH button and the logo button together. Display will show the setting for HIGH. After one second, numbers will advance rapidly. When display reaches desired set point, release buttons. After releasing both buttons, display will return to temperature reading after two seconds. HIGH will appear at left of display.

Alarm MUST be mounted in a well lit area, illuminated most of the day. This unit requires light to operate or the batteries will not last. Alarm should be mounted in an area that can be seen or heard at all times.



Microtemp Model No. ST-1C

HIGH alarm setting **MUST** be set no closer than 5° higher than normal operating temperatures. Example: Cooler operates at 35°, set alarm to 40°. Freezer operates at -10°, set alarm to 0°. Any closer settings will make the alarm a nuisance and the batteries will expire quickly. LOW alarm setting should be 5° lower than normal operating temperature. If above conditions are met, normal battery life is 2 years or more.

NOTE: When the F/C switch is pushed, all alarm settings are erased. HIGH and LOW alarm points MUST be reset after changing temperature scale or batteries.