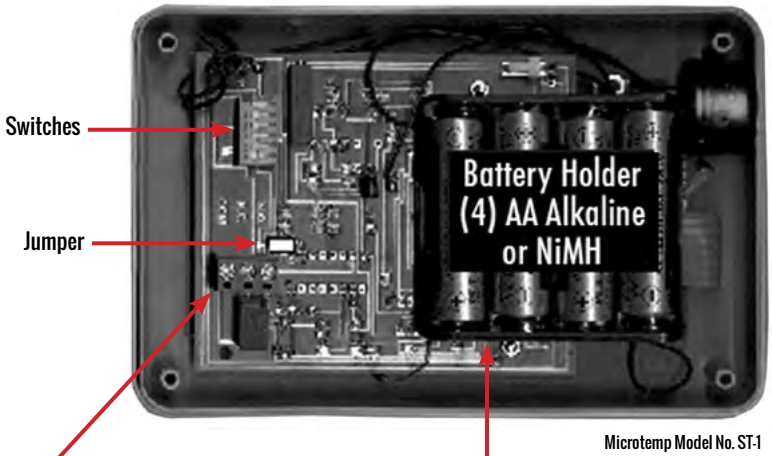
Microtemp Electronics - Solar / Battery Digital Thermometer and Alarm
Models ST-1

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.



Microtemp Model No. ST-1

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 upper right corner of display, batteries must be replaced as soon as possible. Alkaline batteries are supplied with the unit. When used outdoors, batteries must be NiMH to handle current from solar cells.

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

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.

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

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.

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

1. Turn on unit by placing the #1 DIP switch (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 circuit board
   Feed sensor through large hole on back and assemble case • Replace screws
3. Set DIP switches to fit your application.

Switch No. 1: Turns unit on or off.

Switch No. 2: Sets F or C scale.

Switch No. 3: Disables key pad to prevent tampering after alarm parameters are set. This switch must be in the UP position to set alarm.

Switch No. 4: Sets time delay. SEE DETAILS ON BACK

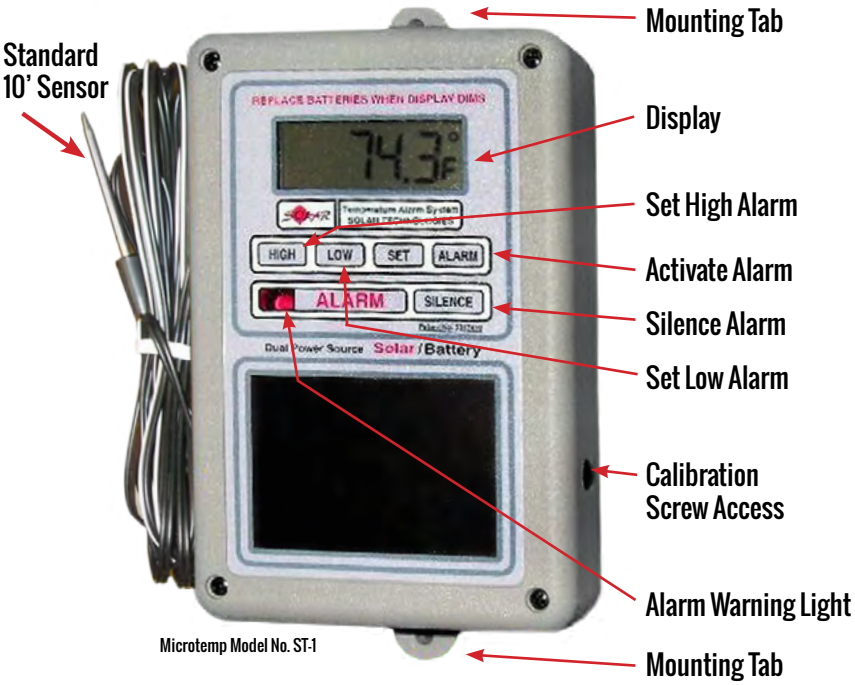
Switch No. 5: Enables a relay to activate a secondary alarm system or phone dialer. This is accessed by using the terminal board provided on the circuit board.

Switch No. 6: Not used.

1	2	3	4	5	6
ON	ON	ON	ON	ON	ON
On	F°	ACTIVE	NONE	ACTIVE	
POWER	SCALE	KEYPAD	TIME DELAY	RELAY	NOT USED
Off	C°	DISABLED	ONE HOUR	DISABLED	
OFF	OFF	OFF	OFF	OFF	OFF

4. After all DIP switches have been selected, set the alarm.
   SET HIGH ALARM: Press the HIGH button and set point will be displayed. To change set point, press and hold HIGH button then press SET button to set desired point. Press the SET button one at a time or to advance quickly hold the SET button for three seconds. Unit will display from - 40° to +122°. When desired temperature is reached, press and hold HIGH button, pressing the ALARM button once. **MAX must appear in the left side of display or high alarm is not on.**

   SET LOW ALARM: Repeat instructions for high alarm except using the LOW and SET buttons. To activate LOW alarm press and hold LOW button, pressing the ALARM button once. **MIN must appear in the left side of display or low alarm is not on.**



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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.

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.