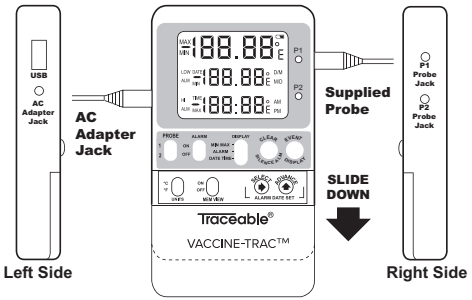
SPECIFICATIONS

Range:	–50.00 to 70.00°C
	(–58.00 to 158.00°F)
Accuracy:	±0.25°C
Resolution:	0.01°
Sampling Rate:	5 seconds
Memory Capacity:	525,600 points
USB Download Rate:	55 readings per second
Battery:	2 AAA (1.5V)



Probe labeled P1 must be plugged into the probe jack labeled "P1".

Probe is calibrated for P1 jack only and must be used in probe position 1.

Note: All serial numbers (s/n#) must match between probe and unit.

PROBES SUPPLIED: 1 bottle probe designed for use in vaccine refrigerators/freezers. Bottle probes are filled with a nontoxic glycol solution that is GRAS (Generally Recognized As Safe) by the FDA (Food and Drug Administration) eliminating concerns about incidental contact with food or drinking water. Solution-filled bottles simulate temperatures of other stored liquids. Plastic holder, hook and loop tape and a magnetic strip are provided to mount the bottle inside a refrigerator/freezer. Included micro-thin probe cable permits refrigerator/freezer doors to close on it. (Do not immerse bottle probes in liquid).

VIEWING TIME-OF-DAY/DATE

To view the time-of-day/date, slide the DISPLAY switch to the DATE/TIME position.

SETTING THE TIME-OF-DAY/DATE

1. Slide the DISPLAY switch to the DATE/TIME position, the unit will display the time-of-day and date. Adjustable parameters are Year->Month->Day->Hour->Minute->12/24 hour format.
2. Press the SELECT button to enter the setting mode.
3. Subsequently press the SELECT button to select which parameter to adjust. The selected parameter will flash once selected.
4. Press the ADVANCE button to increment the selected parameter.
5. Hold the ADVANCE button to continuously "roll" the selected parameter.
6. Press EVENT DISPLAY button to toggle between Month/Day (M/D) and Day/Month (D/M) modes.

If no button is pressed for 15 seconds while in the setting mode, the unit will exit the setting mode. Changing the position of the DISPLAY switch while in the setting mode will save the current settings.

SELECTING UNIT OF MEASURE

To select desired unit of temperature measure (°C or °F), slide UNITS switch to corresponding position.

SELECTING THE TEMPERATURE PROBE CHANNEL

Slide the PROBE switch to either position "1" or position "2" to select the corresponding probe channel P1 or P2.

All temperature readings displayed will correspond with the selected probe channel.

Note: Both probe channels are sampled and monitored continuously regardless of the selected probe channel.

MINIMUM AND MAXIMUM MEMORY

The minimum temperature stored in memory is the minimum temperature measured since the last clear of MIN/MAX memory. The maximum temperature stored in memory is the maximum temperature measured since the last clear of MIN/MAX memory.

Minimum and maximum temperature values are stored individually for each probe channel P1 and P2. Both channels are monitored continuously regardless of the selected probe channel.

Important Note: Minimum and maximum temperature values are NOT programmable.

VIEWING MIN/MAX MEMORY

1. Slide PROBE switch to select temperature probe channel to be displayed.
2. Slide DISPLAY switch to the MIN/MAX position.
3. The unit will display the current, minimum, and maximum temperatures for the selected probe channel.
4. Press the EVENT DISPLAY button to display the minimum temperature with the corresponding date and time of occurrence.
5. Press the EVENT DISPLAY button a second time to display the maximum temperature with the corresponding date and time of occurrence.
6. Press the EVENT DISPLAY button to return to the current temperature display.

No button press for 15 seconds while viewing the minimum or maximum event data will trigger the thermometer to return to the current temperature display.

CLEARING MIN/MAX MEMORY

1. Slide the PROBE switch to select the temperature probe channel to be cleared.
2. Slide the DISPLAY switch to the MIN/MAX position.
3. Press the CLEAR SILENCE ALM button to clear the current minimum and maximum temperature readings.

SETTING ALARM LIMITS

1. Slide the DISPLAY switch to the ALARM position. Then slide the PROBE switch to select the probe channel (P1 or P2) for which alarms will be set. Alarm high and low limits can be set individually for each probe channel.

Each digit of the alarm value is set individually:
Low Alarm Sign (Positive/Negative) -> Low Alarm Hundreds/Tens -> Low Alarm Ones -> Low Alarm Tenths -> High Alarm Sign (Positive/Negative) -> High Alarm Hundreds/Tens -> High Alarm Ones -> High Alarm Tenths.

2. Press the SELECT button to enter the setting mode. The LOW ALM symbol will flash.
3. Press the SELECT button to select the digit to adjust. Each subsequent press of the SELECT button will move to the next digit. The digit will flash while selected.
4. Press ADVANCE button to increment selected digit.

Note: The negative sign will flash if the sign is negative; no symbol will flash if the sign is positive. Press the ADVANCE button to toggle the sign while it is selected.

If no button is pressed for 15 seconds while in the setting mode, the thermometer will exit the setting mode.

Changing the position of the DISPLAY switch while in the setting mode will save the current settings.

VIEWING THE ALARM LIMITS

1. Slide the PROBE switch to select the probe channel alarm limits to be displayed.
2. Slide the DISPLAY switch to the ALARM position.

ENABLING/DISABLING ALARMS

1. Slide the ALARM switch to the ON or OFF position to enable or disable the alarms.
2. Alarms are enabled for both probe channels P1 and P2 while the switch is set to ON. Alarms are disabled for both probe channels P1 and P2 while the switch is set to OFF.
3. The alarms cannot be configured to enable individual channels P1 or P2 only.

ALARM EVENT HANDLING

An alarm event will trigger if the alarm is enabled and a temperature reading is recorded below the low alarm set point or above the high alarm set point.

When an alarm event triggers, the thermometer buzzer will sound and the LED for the alarming temperature channel will flash (P1 or P2). If the alarming probe channel is selected, the LCD symbol will flash signaling which set point was breached (HI ALM or LO ALM).

An active alarm may be cleared by either pressing the CLEAR SILENCE ALM button or disabling the alarm functionality by sliding the ALARM switch to the OFF position.

Once an alarm is cleared, it will not re-trigger until after the temperature returns to within the alarm limits.

Note: If an alarm event is triggered and returns to within the alarm limits before being cleared, the alarm event will remain active until it is cleared.

VIEWING ALARM EVENT MEMORY

1. Slide the PROBE switch to select the probe channel alarm data to be displayed.
2. Slide the DISPLAY switch to the ALARM position. The current temperature, low alarm limit, and high alarm limit will display.
3. Press the EVENT DISPLAY button. The unit will display the alarm limit, date, and time of the most recent alarm out-of-range condition. The symbol ALM OUT will display to signal the date and time displayed when the temperature was out of tolerance.
4. Press the EVENT DISPLAY button a second time. The unit will display the alarm limit, date, and time of the most recent alarm event returning to within the alarm limits. The symbol ALM IN will display to signal the date and time displayed when the temperature returned to within tolerance.
5. Press the EVENT DISPLAY button to return to the current temperature display.

No button press for 15 seconds while viewing the alarm events will trigger the thermometer to return to the current temperature display.

Note: If no alarm event has occurred for the selected probe channel, the thermometer will display "LLL.LL" on each line.

DATA LOGGING OPERATION

Thermometer will continuously log temperature readings for both probe channels into permanent memory at user-specified intervals. The total memory capacity is 525,600 data points. Each data point contains the temperature reading for P1, the temperature reading for P2, and the date and time of occurrence.

Note: All stored data is in Celsius (°C) and MM/DD/YYYY date format.

Note: DO NOT leave the USB Flash Drive inserted in the unit while data logging. The unit cannot continuously write to a USB.

The thermometer will also store the most recent 10 alarm events. Each alarm event data point contains the probe channel which alarmed, the alarm set point that was triggered, the date and time the channel reading went out of range, and the date and time the channel reading returned to within range.

VIEWING THE MEMORY CAPACITY

Slide the MEM VIEW switch to the ON position.

First line will display the current percentage of memory full. Second line will display the number of days remaining before memory is full at the current logging interval. Third line will display the current logging interval.

CLEARING THE MEMORY

1. Slide the MEM VIEW switch to the ON position.
2. Press the CLEAR SILENCE ALM button to clear all recorded data and alarm events.

Note: The MEM symbol will become active on the display when the memory is full. Once the memory is full, the oldest data points will be overwritten with new data.

SETTING THE LOGGING INTERVAL

1. Slide the MEM VIEW switch to the ON position. The first line will display the current percentage of memory full. The second line will display the number of days remaining before memory is full at the current logging interval. The third line will display the current logging interval.
2. To increment the logging interval, press the ADVANCE button. The minimum logging interval is one minute (0:01). The maximum logging rate is 24 hours (24:00). Once 24 hours is selected, the next subsequent press of the ADVANCE button will return to one minute.
3. Slide the MEM VIEW switch back to the OFF position to save setting.

VIEWING UNIQUE DEVICE ID NUMBER

1. Slide MEM VIEW switch to the ON position.
2. Press EVENT DISPLAY button. Second and third lines will display the first eight digits of ID number.
3. Press EVENT DISPLAY button a second time. Second and third lines will display last 8 digits of ID number.
4. Press EVENT DISPLAY to return to default display.

DOWNLOADING STORED DATA

Note: USB download will not occur if the battery LCD symbol is active. Plug supplied AC adapter into unit to provide sufficient power for USB operation.

1. The data can be downloaded directly to a USB Flash Drive. To begin, insert empty USB flash drive into USB port located on left side of unit.
2. Upon inserting flash drive, "MEM" will appear on right side of display indicating that data is downloading. If "MEM" does not appear, gently wiggle the flash drive while inserted until "MEM" appears and data begins downloading. Once "MEM" disappears, device will beep, indicating download is complete.

Note: Do not remove USB drive until download is complete.

Note: DO NOT leave USB Flash Drive inserted into unit. Insert, DOWNLOAD, and then remove. The unit cannot continuously write to a USB.

REVIEWING STORED DATA

Downloaded data is stored in a comma-delimited CSV file on flash drive. The filename naming convention is "D1D2D3D4D5D6D7R1.CSV" where D1 through D7 are the last seven digits of the thermometer's unique ID number and R1 is the revision of file starting with letter "A".

If more than one file is written from the same thermometer to USB flash drive, revision letter will be incremented in order to preserve previously downloaded files.

The data file can be opened in any software package supporting comma-delimited files including spreadsheet software (Excel®) and text editors.

The file will contain the thermometer unique ID number, the most recent ten temperature events, and all stored temperature readings with date and time stamps.

Note: All stored data is in Celsius (°C) and MM/DD/YYYY date format.

DISPLAY MESSAGES

If no buttons are pressed and LL.LL appears on the display, this indicates that the temperature being measured is outside of the temperature range of the unit, or that the probe is disconnected or damaged.

TROUBLESHOOTING

If the unit is missing segments in the LCD, reading erratically, or if data download encounters an error, unit must be reset.

RESETTING THE UNIT

1. Remove batteries
2. Remove from AC adapter
3. Remove probe
4. Push CLEAR and EVENT buttons once
5. Push SELECT and ADVANCE buttons once
6. Re-insert probe
7. Re-insert batteries
8. Re-insert AC adapter

After resetting unit, follow steps in **DOWNLOADING STORED DATA** section.

BATTERY REPLACEMENT

When battery indicator begins to flash, it is time to replace batteries on unit. To replace battery, remove battery cover, located on back of unit by sliding it down. Remove exhausted batteries and replace with two (2) new AAA batteries. Insert new batteries. Replace the battery cover.

Note: Replacing the batteries WILL clear the minimum/maximum memories and high/low alarm settings. However, replacing the batteries WILL NOT clear the time-of-day/date settings or stored temperature data.

STATIC SUPPRESSOR INSTALLATION

Static-generated radio frequency can affect any cable through the air or by physical contact. To protect against radio frequency, install the included suppressor onto the unit's cable to absorb radio frequency as follows:

1. Lay the cable along the center of suppressor with connector to your left.

2. Loop right end of cable under suppressor and back up again laying cable along center of suppressor.

3. Carefully, snap two halves together with looped cable routed through center.

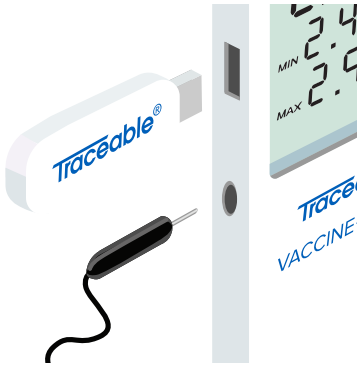
4. This completes installation of suppressor.

RECOMMENDED PROBE PLACEMENT

Place data logger on OUTSIDE of refrigerator/freezer

Place probe bottle and holder INSIDE of refrigerator/freezer on middle shelf

HOW TO INSERT USB AND AC ADAPTER INTO DATA LOGGER



TRACEABLE® VACCINE-TRAC™ USB DATA LOGGING THERMOMETER INSTRUCTIONS

Traceable® Products is ISO 9001:2018 Quality-Certi ied by DNV and ISO/IEC 17025:2017 accredited as a Calibration Laboratory by A2LA.

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