

Digital Multi-Day Soil Thermometer Calibration

Field Guide

Task

Calculate the soil sensor correction offsets used to adjust for instrument inaccuracy.

What You Need

- Calibration thermometer that has been checked following the instructions in the *Thermometer Calibration Lab Guide*
- Digital Soil Thermometer Calibration and Reset Data Sheet*

In the Field

1. Open the door to the instrument shelter and hang the calibration thermometer and the two probes, both 5 cm and 50 cm, in the instrument shelter so that they have air flow all around them and do not contact the sides of the shelter. Close the door to the instrument shelter.
2. Wait at least an hour and then open the door to the instrument shelter.
3. Read the temperature from the calibration thermometer and record it to the nearest 0.5° C on your *Digital Soil Thermometer Calibration and Reset Data Sheet*.
4. Turn on the 5 cm temperature display of the digital multi-day max/min thermometer by pressing the 5 cm sensor ON button (upper left in button cluster)
5. Turn on the 50 cm temperature display of the digital multi-day max/min thermometer by pressing the 50 cm sensor ON button (upper right in button cluster).
6. Read the temperatures reported by the 5 cm sensor and the 50 cm sensor of the digital thermometer and record them on your *Digital Soil Thermometer Calibration and Reset Data Sheet*.
7. Close the cover flap of the digital thermometer and the door of the instrument shelter.
8. Repeat steps 2 to 7 four more times, waiting at least one hour between each set of readings. Try to space out the five sets of readings over as much of a day as possible.
9. Report your calibration data to GLOBE.