



METER
ENVIRONMENT

IS IT TIME TO RECALIBRATE YOUR ACCUPAR LP-80 EXTERNAL QUANTUM SENSOR?

Contributors

Inaccurate sensor calibrations can cause hours of data adjustment in the lab or complete loss of information from an experiment. As it says in the manual, the LP-80 is calibrated by matching the output of its 80 sensors to the external quantum sensor, made by Apogee Instruments Inc., which has been calibrated to a NIST traceable standard.

RECALIBRATE EVERY THREE YEARS FOR THE HIGHEST ACCURACY

Under standard field conditions, Apogee recommends the quantum sensors be sent in every two years for recalibration. Since the quantum sensor attached to the LP-80 will not experience the same continuous, harsh field conditions, METER recommends calibrating the external quantum sensor every three years.

Sending the external quantum sensor in for recalibration is simple and relatively inexpensive. The sensors can be sent directly to Apogee. Note: Please only send the external quantum sensor and not the LP-80.

To get the sensor recalibrated, call Apogee (435) 792-4700, and obtain a return material authorization (RMA) number and a quote for the calibration. After receiving the newly recalibrated quantum sensor back from Apogee, it is important to calibrate the LP-80. This process is explained fully in [the manual](#) in Chapter 7: Setup Menu: Calibrate Probe.

HOW TO CALIBRATE THE LP-80

First, go to the external sensor constant calibration screen in the Setup menu. Next, input the calibration constant. Go to the calibration screen in the Setup menu, and follow the steps on the screen by leveling the probe and quantum sensors

(a flat surface will work too, if both quantum sensor and LP-80 are at the same angle), ensuring PAR is over $600 \mu\text{mol m}^{-2} \text{s}^{-1}$, and pressing Enter on the LP-80. After completing these steps, the LP-80 and external sensor are ready to be used again.

UPDATING LP-80 FIRMWARE AND SOFTWARE

As with any firmware or software, METER regularly updates the code in the LP-80 to ensure it is functioning well and free from bugs. If the LP-80 is running firmware earlier than 1.34 (i.e., 1.33 and older), get an RMA# and send the instrument in to have the latest code loaded onto the instrument. Check the firmware version by moving to the Setup tab using the Menu button, scrolling down to “About”, and pressing Enter. The Firmware version will show on the screen along with other information. Please contact [METER's Technical Support Department](#) and they can help you through this process. In addition to running the latest LP-80 firmware, be sure to have the latest data retrieval software program running on the computer. LP-80 Utility installer is now available and can be downloaded [online](#).

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