February 20, 2002

Dear LI-7500 Customer:

We have several product issues & updates regarding the LI-7500 IRGA that we would like to share with you.

1. **LI-7500 Direct Sunlight Sensitivity**
2. **Embedded Software Updates**
3. **Other SDM Interface Issues**

1. LI-7500 Direct Sunlight Sensitivity

We have received several field reports of a large sensitivity to direct sunlight, such as 20-30 ppm shifts in CO_2 concentration. This came as a surprise to us, since our tests with early units indicated a sensitivity of just a few ppm. On further study, we have determined that some units do indeed have excessive sensitivity, which results from a combination of subtle factors - some we can control (but didn't), and some we can't. The net result is that any given LI-7500 (prior to serial number 75H-0283) may or may not have an excessive response to direct sunlight.

There is a simple test (see attached field note) that you can do to determine your instrument's sensitivity. If it does not meet our specification, you can send it back and we will repair it under warranty. Please contact LI-COR for an RMA number prior to returning your instrument.

There is also a simple work-around to this problem that you may be able to employ to avoid having to return your instrument (see attached field note).

2. Embedded Software Updates

- Customers using the analog output are not affected by this update.

A new version of the embedded application software has been released. This latest version (2.0.2) corrects an SDM timing issue (for use with Campbell Scientific Dataloggers) and RS-232 lockup issue for customers using these two interfaces. The embedded application software is a binary code that is loaded into the white box and not onto the PC. Instruments with control box serial numbers 75B-0283 and above ship with version 2.0.2 software installed.

The new software is available for download on our Core Support Website at **http://coresupport.licor.com/**. Customers must use the Username **7500** and Password **update** (in lower case letters) to login. To access the software updates, click on **Analyzer Home**. At the bottom of this web page you will find the files listed below (and instructions) to update the LI-7500. Be sure to review the link "Read the Update Instructions for the LI-7500 **here** before you begin" on the bottom of this web page.

The Windows Interface program and instruction manual do not have to be re-downloaded if you already have copies of these. Only the embedded software has been recently updated.

LI-7500_embedded_2_0_2.exe   - Windows $^®$ program that will install new instrument software
      - Release Date: 1/28/2002

LI-7500_win_2_0.exe   - Windows $^®$ interface program for the LI-7500
      - Release Date: 4/30/2001

LI-7500 Instruction Manual for V.2.0   - Instruction Manual for the LI-7500
      - Release Date: 4/19/2001

3. Other SDM Interface Issues

- Customers using only the analog or RS-232 outputs are not affected.

a) CPLD Update
(CPLD stands for Complex Programmable Logic Device). We have had several customer reports regarding the LI-7500 "locking-up" the Campbell Scientific, Inc. SDM 5-wire interface. The symptom appears to prevent the CSAT3 or other SDM devices from communicating with the Datalogger when both instruments are powered and running for a period of a day or two. After the instruments have locked up if a customer presses the blue reset button in the white control box (or cycles power) the problem is temporarily fixed. The CPLD only affects customers using the LI-7500 with a Campbell Scientific Datalogger.

If you are using Campbell Scientific Dataloggers and wish to fix this problem, the control box must be returned to LI-COR to update the software in this integrated circuit. The CPLD cannot be updated in the field. The serial number ranges for LI-7500 control boxes that have this problem are 75B-0001 through 75B-0282. When a unit in this range is updated, a sticker with the label "OPT-CPLD-2" will be put inside the box on the bottom of the printed circuit board between the power and serial interface connectors. Please contact LI-COR for an RMA number and shipping information prior to returning your instrument.

b) SDM using the CR5000 datalogger
The Reps option in the CS7500 () instruction was not working properly in the datalogger operating system. If more than one LI-7500 was addressed using a single CS7500 () instruction, only data from the first LI-7500 was displayed in the Public Table.

There is a minor issue with the SDM interface where the CR5000 will erroneously bring in data from an SDM device, e.g. LI-7500. This issue could cause a signature error in the SDM data. This problem is strongly correlated to the number SDM devices connected to the CR5000, the program's measurement rate, and if the CR5000 was communicating with a PC. This issue has not been a problem in typical Eddy Flux stations running at 10 Hz or 20 Hz.

Version 1.4 of the CR5000 Operating System corrects the above issues. Contact Campbell Scientific, Inc. at (435) 753-2342 for a copy of the CR5000 OS version 1.4.

If you have any questions regarding these updates, please let us know.

Sincerely,

LI-COR, Inc.