LUDLUM MEASUREMENTS, INC
501 OAK STREET, P.O. BOX 810
SWEETWATER, TEXAS 79556
325-235-5494, FAX: 325-235-4672

M3xxx Series Firmware Update Instructions

This document specifically addresses updating firmware on the following models:

- 3003(i), 3004(i), 3007(B)(i), 3014, and 3078(i)

If you have any questions, please contact your local sales representative or contact Ludlum Measurements, Inc. at 800-622-0828 before proceeding.

Revised by: *Kimberly Jones*   Date: *11 April 2025*

Approved by: *(signature)*   Date: *11 April 2025*

GENERAL

The newest generation of Model 3000 series instruments (Gen 2) has greater capabilities than its predecessors. With this greater capability comes the need to store more information than ever before. As a result, new procedures are needed to update instrument firmware in the field.

WARNING

The Ludlum Lumic Firmware Updater is free to our customers and may be used to update the firmware on particular instruments to add or change currently available features. It is important to note that the changes may or may not be able to be reversed. While Ludlum Measurements has taken great care to develop firmware updates that will not affect current instrument calibration, it is still recommended that all firmware updates be performed prior to instrument recalibration. As a result, if you have any concerns before proceeding, contact your local sales representative or Ludlum Measurements, Inc at 800-622-0828.

PROCEDURE

Equipment Required:
- Ludlum Lumic Firmware Updater (available for free from the Ludlum Measurements, Inc. website at the link provided below)
  - https://ludlums.com/images/stories/firmware_updates/Lumic_FirmwareUpdater_Installer.msi)
- USB cable A male to A male (Ludlum P/N 22-9150)
- Text Editor

(1) Install the latest version of Ludlum Lumic Firmware Updater.

(2) Turn on the device to be updated.

(3) Connect the USB cable between the device and computer.

(4) Wait until the USB driver has been successfully installed. (This may take a short time, or up to 5 minutes.)

(5) Open the Lumic Firmware Updater and select the "Model 3xxx Series" from the *'Connected instruments'* box.
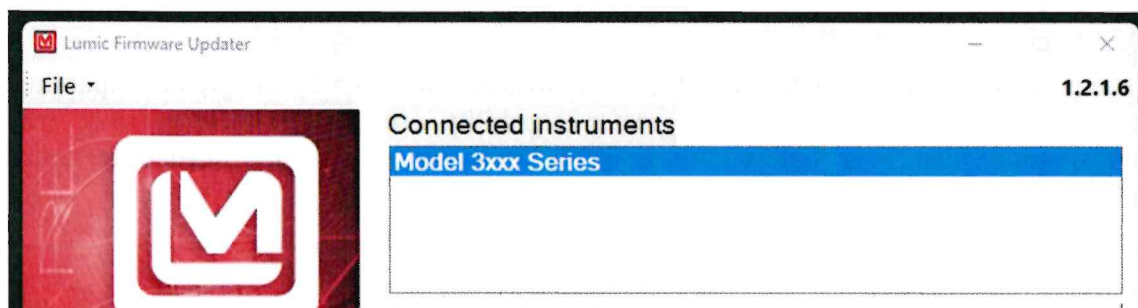

Figure 1 Select Instrument

(6) Select **File ▾, Save Parameters to a File** and be sure to name the parameter file something unique. (There will be a pause as it connects and retrieves all of the appropriate information.)
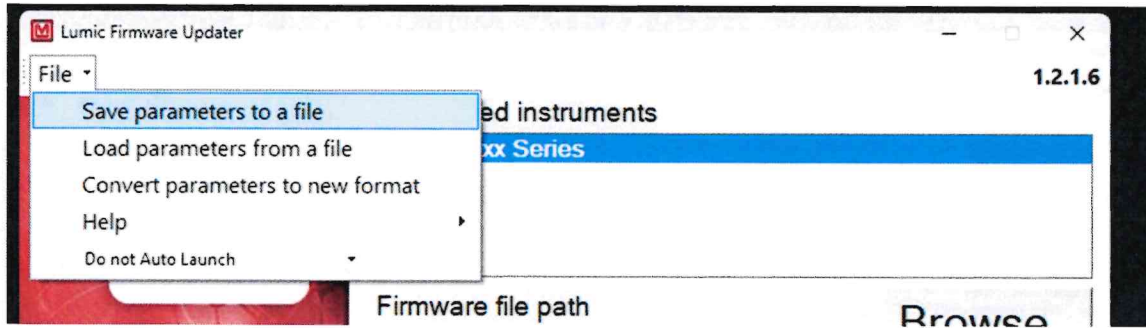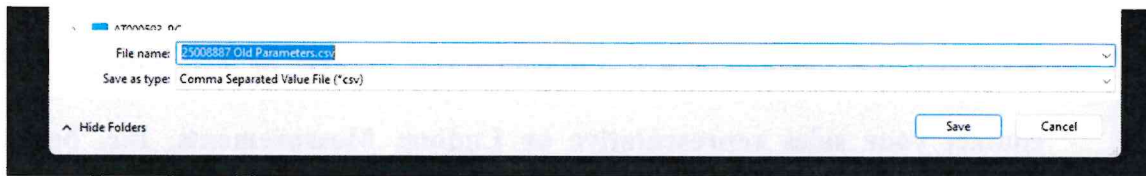
Figure 2 Save Parameters to a File

Figure 3 Comma Separated Value File Name

(7) Open the comma separated value file, that was just created, using a text editor, like Notepad. Search for the following parameters and record the results:

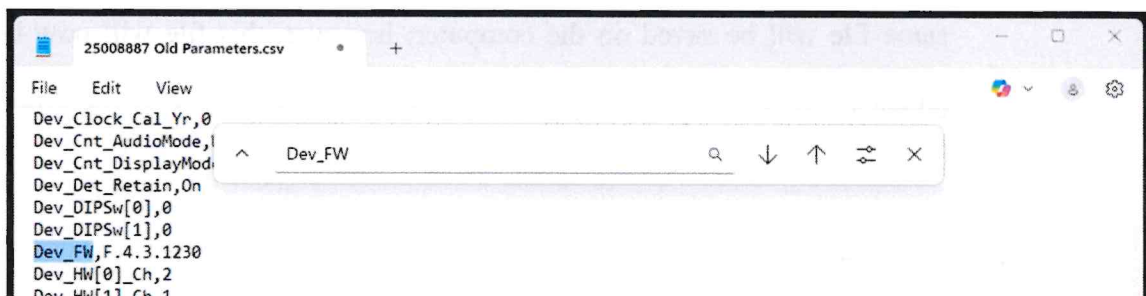   a. *Dev_FW* (F.2.1.1000, F.3.0.1084, etc.)

Figure 4 Device Firmware Number

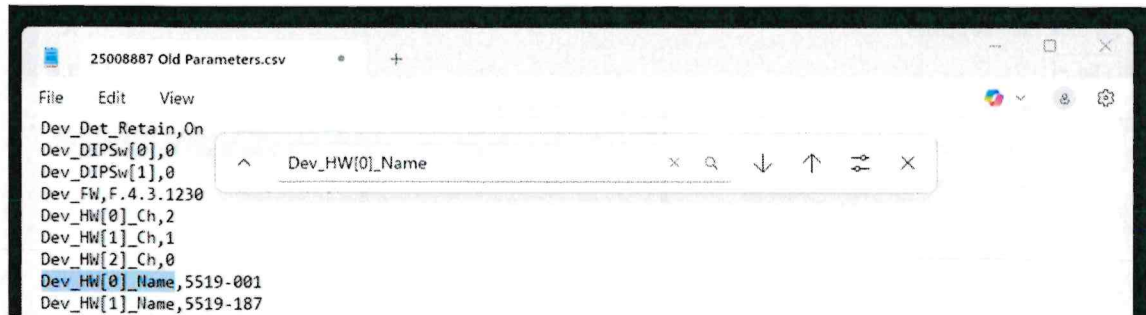   b. *Dev_HW[0]_Name* (5519-001, 5519-305, 5519-812, etc.)

Figure 5 Device Hardware Name

Note: Leave the file open as it will need to be edited.

(8) If the Dev_FW value determined in step 7(a) is 2.0.xxxx or less, stop now and contact your sales representative or Ludlum Measurements, Inc. before proceeding.

(9) Edit the file from step 7.

    a. Save the parameter file a second time with a new name that will help indicate that the file has been edited. (Upon completion, two copies of the same file will be saved on the computer; however, this file will now be edited.)
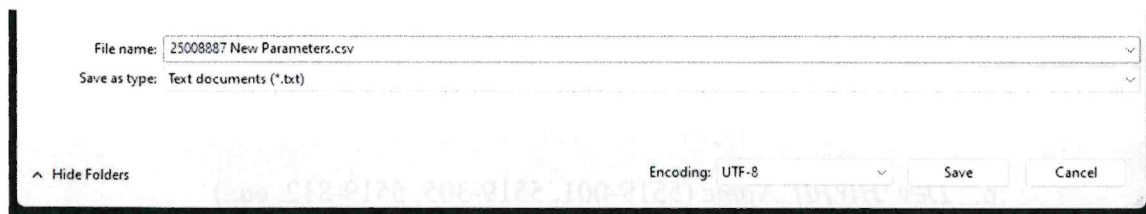

Figure 6 CSV New File Name

    b. Return to the first line of the file.

    c. Search for '*Dev_*' to find the beginning of the device parameters, skipping the detector parameters (*DetMem[x]_...' where x is a number from 0 to 4*) in the process.
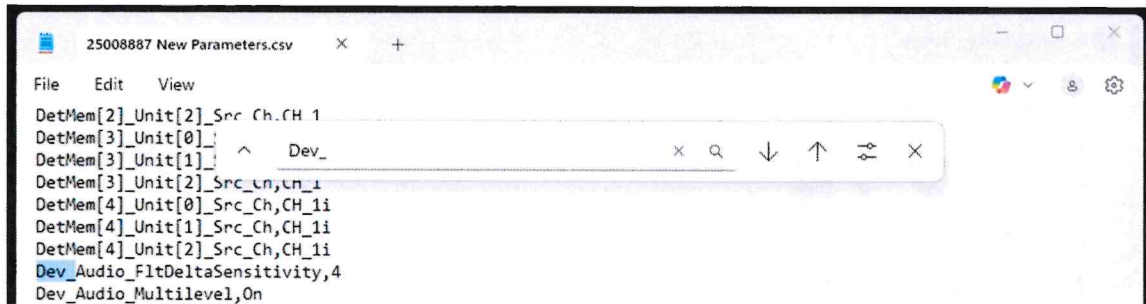
Figure 7 Device Dev_

d. Delete all remaining lines of the file, leaving only the list of parameters beginning with '*DetMem[x]_*' (where x is a number from 0 to 4) as well as time and date.

Figure 8 All Lines After Last DetMem Are Gone

e. Save the file.

(10)   **Due to the potential of losing the detector configuration during the firmware update process if the instructions are not followed properly, the firmware is not available to download from our website. Please contact Ludlum Measurements for information on obtaining the latest version of firmware for your instrument once you have read and fully understand this procedure. Ludlum Measurements will require the instrument model as well as the main board hardware version (*Dev_HW[0]_Name*) recorded in step 7 above.**

(11)   Select **Browse** on the main screen and select the new firmware file to be loaded from step 10. Once the desired firmware is selected, click **Open.**
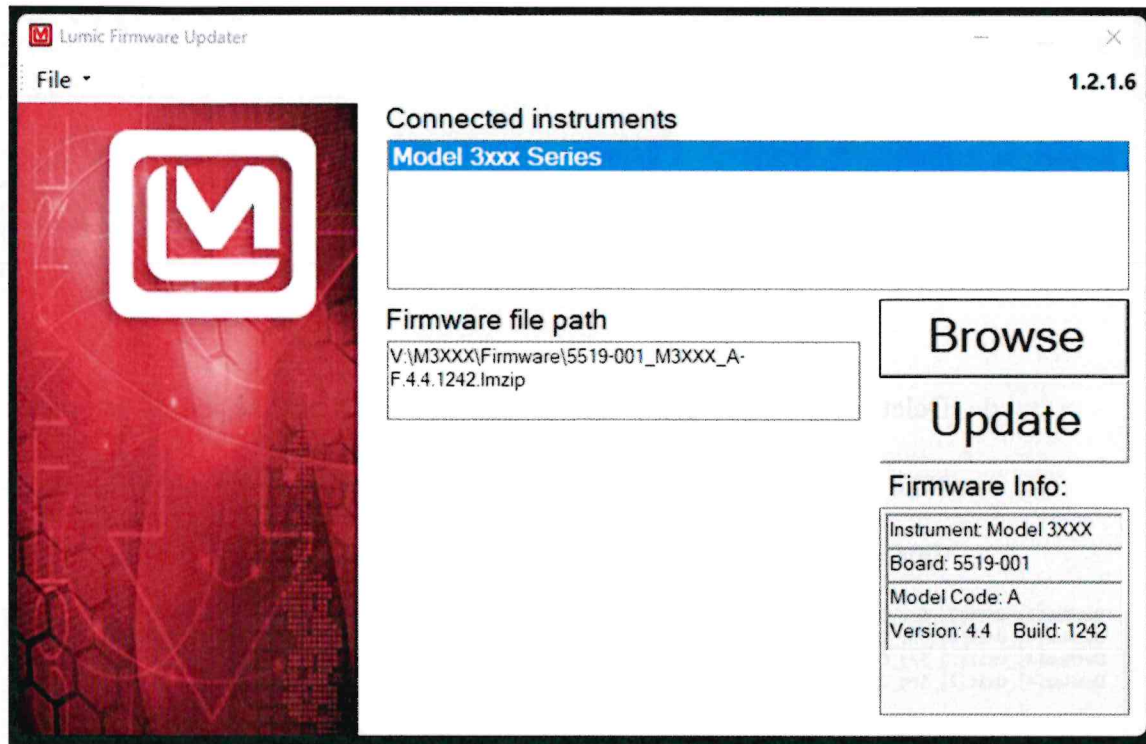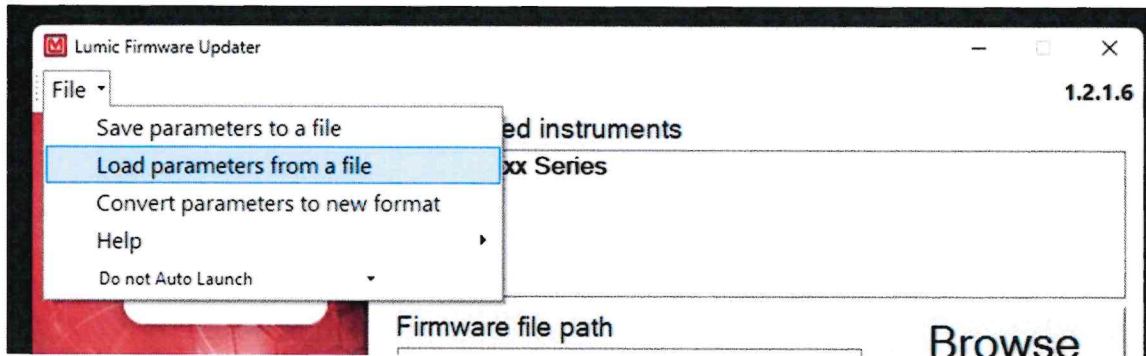
Figure 9 Lumic Firmware Updater

(12) Select the **Update** button on the main screen.

   a. Once the file has finished loading, the instrument will restart and the device will disappear from '*Connected instruments*' on the Lumic Firmware Updater screen.

(13) When the instrument reappears on the Lumic Firmware Updater screen, select the "Model 3xxx Series" from the '*Connected instruments*' box (Figure 1 Select Instrument).

(14) Select **File ▾, Load parameters from a file.**

(15) Select the parameter file saved in step 9 (the edited file) and select **Open**.
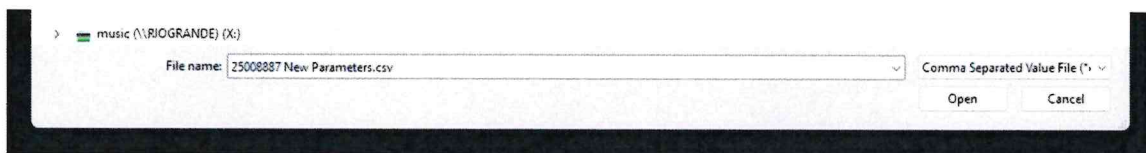

Figure 10 Load Detector Parameters into Instrument

Note: No error messages should pop up. If they do, it may be an indication of a problem with the saved data or the instrument. For instance, the previously saved value may now be outside of the available parameter limits for the latest firmware release, and the parameter will need to be reconfigured before proceeding. Stop and contact your local sales representative or Ludlum Measurements, Inc. if you have any concerns.

(16) Review parameters and instrument operation, including performing a simple check source test, to confirm instrument operability.