



**VARIAN**

*Number: SHT-440LC-03*

*Date: Jan 11, 2010*

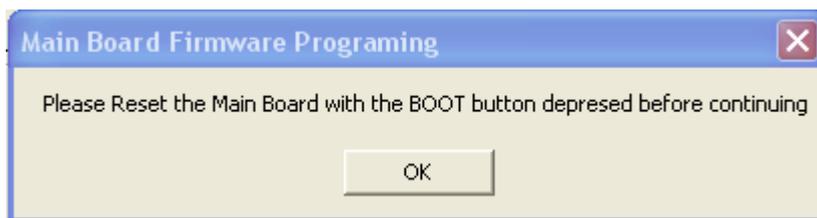
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## ***SERVICE How To***

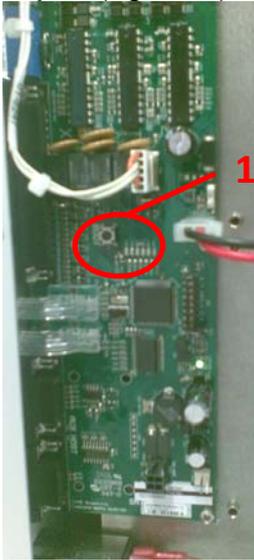
Model Number:	Originator:	Topic
<b>440-LC</b>	<b>P. van Poppel</b>	<b>Updating the Firmware</b>

### **Updating the Firmware**

1. **Start MDS:** The MDS software should start and connect to the Fraction collector. The current firmware version should be displayed along with other instrument status/configuration information. If the unit fails to connect check to see if the unit is powered up, the serial cable is connected or the correct port along with baud rate etc. is selected on the PC.
2. Save the systems variables, following the steps in SHT\_440LC\_01, but choosing "Save As..." rather than "Load Variables" when prompted in this document.
3. **Diagnostics:** Click on the diagnostics tab, and then select **Firmware** from the diagnostics window. The following message should come up:



4. Depress the **Boot button (1)**, located on the main control board. While keeping the **Boot** button pressed, depress the **Reset** button (2) with a pointy object (eg. Pen).



5. Once the instrument has been **Reset/ Power cycled** release the **Boot** button. This initialises the instrument for firmware download.
6. Click the **OK** button on the MDS software, and navigate the path to where the firmware is located.



7. Click **FLASH program** to initiate the firmware download.

**NOTE:** If the firmware download terminates prematurely, accompanied by a text box with error messages. Confirm that the correct port is selected for the firmware download. This can be found in the flash pull down menu on the "FLASHsimple" window.

8. After the successful download of firmware the following pop up appears.



9. Before pressing the **OK** button, the following steps need to be taken:

- Place the “jumper” on the main control board across position **2**
- **Reset** the unit either by the reset button or by power cycle.
- After completion of the reset initialisation routine remove the “jumper” by attaching it to only one pin of the 8 position header.

10. The OK button can now be pressed. This completes the firmware download for the 440LC.

11. Load the earlier saved variables as per SHT\_440LC\_01.

12. Load the supplementary variables onto the 440-LC. Using the Send Script button on the Diagnostics window, navigate the path to where the supplementary 440LC config.txt file is located.