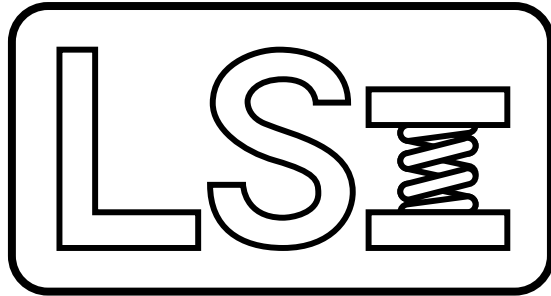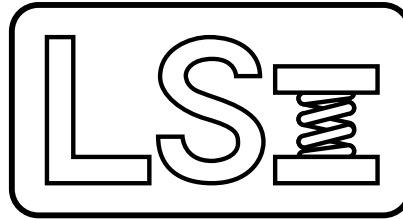# Larson Systems Inc.



# FLASH 11 & FLASH 24

*User Manual - Software / Firmware Updating*

April 2004
Part No. 060-1000-0081-00



Larson Systems Inc.
FLASH 11 & FLASH 24
User Manual - Software / Firmware Updating

Current for Software Version 1.5

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This manual could contain technical inaccuracies or typographical errors.  Changes are periodically made to the information herein; these changes will be incorporated in new editions of the manual.

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Contents

# 1.    Introduction

This instruction manual is to be used to upgrade any and all parts of the FLASH tester, DAQ board firmware, FLASH software, New Load Cells, and Imported load cell information.

These instructions should be followed in the order they are listed in this manual.  Any DAQ board upgrades should be done first.  FLASH software upgrades should be done second. New Load cells should be added after any DAQ board or FLASH upgrades are done.  Finally and Imported Load Cell data should be done last.

If there are any questions during any step please call the Service Department at Larson Systems Inc. at 1-877-780-2131.
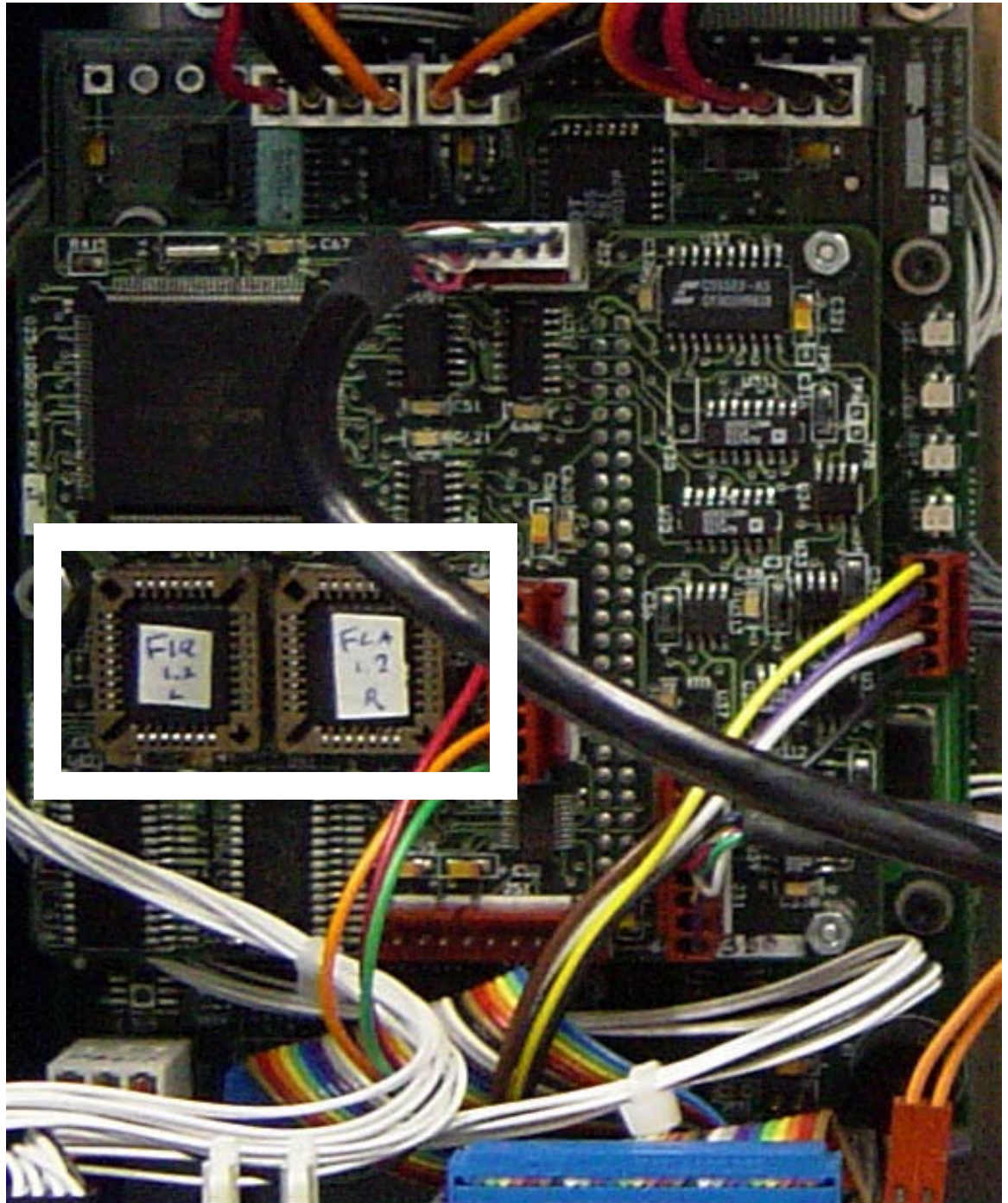
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# 2 Upgrading DAQ Board Firmware

The DAQ board controls data acquisition and motor control.  It has firmware independent of the FLASH user interface.  This section gives step by step directions to update this firmware. LSI will provide you with the necessary equipment to perform this upgrade.

1.    Turn off tester and unplug
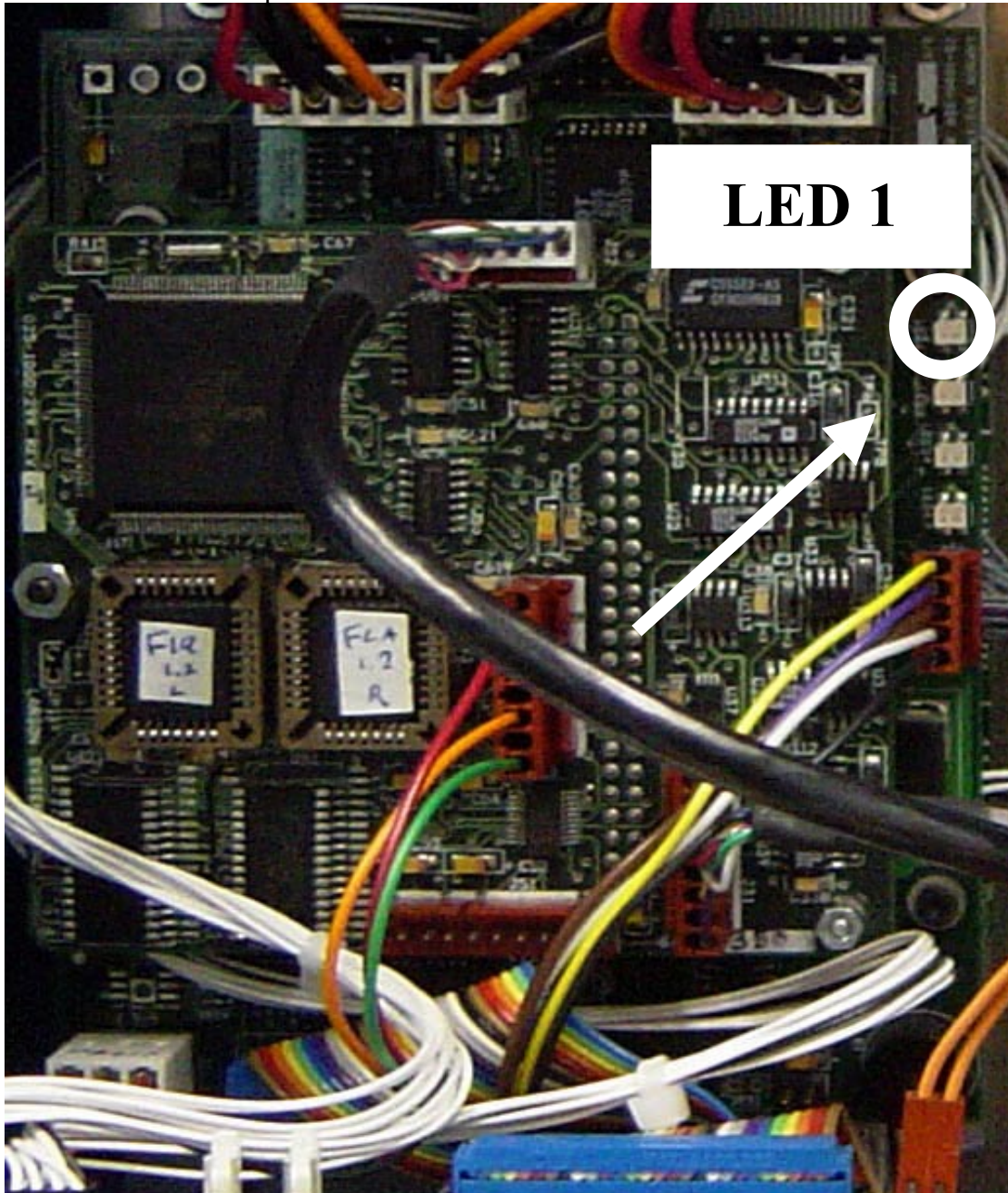2.    Remove back cover of blue computer head by removing 4 screws.

3.  Using chip extractor tool removed chip labeled FLA X.X L, see picture for placement and orientation.
4.  Replace with new chip labeled FLA Y.Y L.  See picture for placement and orientation.
5.  Using chip extractor tool remove chip labeled FLA X.X R, see picture for placement and orientation.
6.  Replace with new chip labeled FLA Y.Y R.  See picture for placement and orientation



Picture of DAQ board firmware chips, version 1.2.

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7. Plug tester in and power on. LED 1 should blink green twice then red twice. This means the chips were installed correctly, proceed to step 8. If LED 1 does not blink within 10 seconds the chips were not installed correctly. Turn machine off and unplug. Verify placement and orientation. Remove and replace to reseat chips. Plug tester in, turn on, and monitor LED 1. If LED 1 does not blink call LSI Service department for assistance.



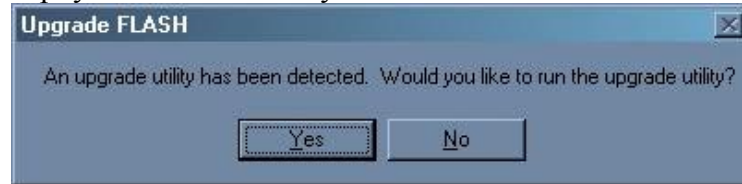8. Replace cover
9. Upgrade is finished.

## 3.      Upgrading FLASH Software

The FLASH software is the user interface to the tester and is running on a PC computer.  This section will give step by step directions to upgrade the FLASH software.


1.       Turn tester on and allow to fully power up.
2.       Insert USB "Keychain" drive into USB port on the bottom side of the blue computer head.

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3. The FLASH program will recognize the Upgrade Utility on the USB drive and will prompt you to run the utility. Select Yes.

**Upgrade FLASH**

An upgrade utility has been detected. Would you like to run the upgrade utility?

Yes    No

4. When the upgrade utility starts it will ask for verification to upgrade, it will also list the current FLASH version and the Upgrade version. Select Yes to continue with the Upgrade.

**FLASH UPDATE**

Please verify you want to update your FLASH from version 1.20 to version 1.30
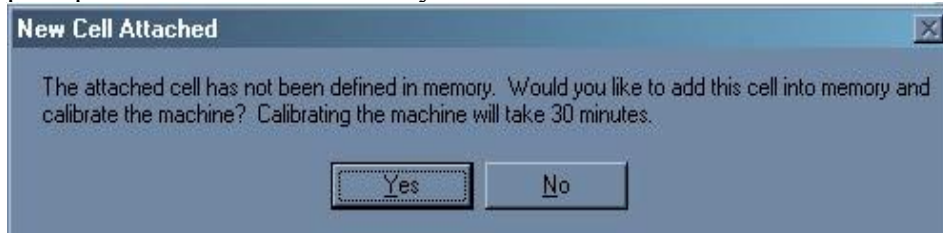
Yes    No

5. When the Upgrade is finished the FLASH will start. When the FLASH has restarted completely remove the USB "Keychain" drive.
6. The upgrade is complete. Return the USB "Keychain" drive to LSI.
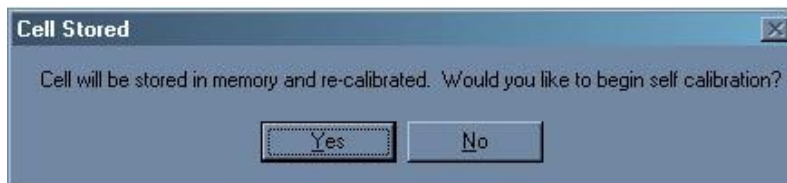
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## 4.    Installing New Calibrated Load Cell

The FLASH is capable of recognizing new load cells that have been calibrated by Larson Systems Inc. at our factory.  The FLASH will recognize such a load cell and will automatically incorporate it into your tester.  This section gives step by step directions to add a new load cell.

1.    Turn tester on an allow to power up completely.
2.    Put tester into Program Mode.
3.    Remove connected load cell and set aside.
4.    Attach new load cell.
5.    Put tester into Manual Mode.  The Load cell will be detected and you will be prompted to add the cell to the system.



6.    You will then be asked to start the 30 minute countdown to begin self calibration.



7.    After the 30 minutes the FLASH will begin self calibration, this process will take a few minutes.  You will be able to see the tester searching for 0 lbs for an offset and also searching for the shunt value.  When self calibration is finished the display will return to Manual Mode.

## SELF CALIBRATION DOES NOT RESULT IN THE SAME ACCURACY AS A FULL CALIBRATION.

With standard calibration methods the accuracy of the load cell is +/- 2 resolution counts.

For load cells that go through Self Calibration the accuracy is +/- 10 resolution counts from 0 to 20% full scale and +/- 4 resolution counts from 20% to 100% full scale.
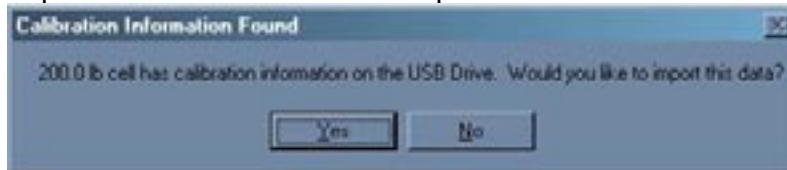
## 5. Importing Load Cell Calibration Information

Some calibration information can be added or modified without the need of the smart load cell. This information can be sent on a USB "keychain" drive. This section gives step by step directions on how to import this data.
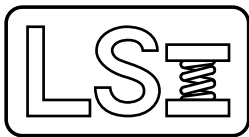
1. Turn on tester and allow to power up fully.
2. Insert USB "Keychain" drive into USB port on the underside of the blue computer head.



3. If the drive contains an upgrade utility select No to not run the utility.
4. The FLASH will recognized any load cell import files and you will be prompted to import the data. Select Yes to import the data.



Calibration Information Found

200.0 lb cell has calibration information on the USB Drive. Would you like to import this data?

Yes     No

5. The tester will take approximately 5 second to import the data and return to the normal display. When the display is shown again the import is finished.

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