

**Form A6305**

Part Number D301683X012

December 2010

# ROC800L Field Conversion Guide

## Revision Tracking Sheet

**December 2010**

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<b>Page</b>	<b>Revision</b>
Initial issue	Dec-10

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## Guide Overview

This *ROC800L Field Conversion Guide* details the tasks and materials you need to convert a field-located ROC800 to a ROC800L. The guide is part of a conversion kit (see *Kit Contents* below), and identifies the conversion kit components and provides step-by-step instructions.

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**Note:** The ROC800L software works **only** on a Series 2 CPU, which has a black faceplate.

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The conversion focuses on a field-installed ROC800, and enables you to install the necessary hardware, firmware, and software. Follow these instructions to ensure a safe conversion and correct functioning of the ROC800L.

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**Note:** **Before** you begin the actual conversion, read through this manual to familiarize yourself with the parts and procedures required. If you need additional clarification, refer to the *ROC800-Series Remote Operations Controller Instruction Manual* (Form A6175). A copy is provided on the CD included in the conversion kit.

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The conversion process involves four major steps:

- Installing the ROC800L license key
- Loading the ROC800L firmware
- Installing the ROC800L software
- Verifying the installation

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**Note:** These processes assume you are familiar with routine ROC800 procedures. Refer to the *ROC800-Series Instruction Manual* (A6175) for detailed instructions.

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## Kit Contents

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The conversion kit should contain the following items. Ensure that you have **all** of these items **before** you begin the conversion process.

- One ROC800L license key (FS8KY-8)
- One CD-ROM (P/N W68272X0012) containing firmware, software, and user documentation:
  - *ROC800L Field Conversion Guide* (Form A6305 [this document], P/N D301683X012)
  - *ROC800-Series Remote Operations Controller Instruction Manual* (Form A6175, P/N D301217X012)

- *ROC800L Protocol Specifications Manual* (Form A6294, P/N D301659X012)
- *ROCLINK 800 Configuration Software User Manual (for ROC800L)* (Form 6214, P/N D301246X012)
- Technical specifications for ROC800L software: *ROC800L Liquid Application Software* (ROC800:SW1, P/N D301576X012)
- Technical specifications for ROC800L controllers: *ROC800L Remote Operations Controllers* (ROC800:800L, P/N D301678X012)



**Warning**

**Verify that the area is non-hazardous before you begin the following procedures. Failure to do so may result in serious personal injury.**

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## Installing the License Key

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1. Disconnect the ROC800 from **all** power sources.
2. Remove the wire channel cover next to the CPU module. If appropriate, remove wiring from the CPU module.
3. Remove the faceplate from the ROC800 CPU module.
4. Place the ROC800L license key in either available terminal slot.

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**Note:** Once installed, the ROC800L firmware and software does not require any license key other than the ROC800L license key. Unless required for another application, we suggest you remove and safely store any extraneous ROC800 license keys.

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5. Replace and secure the faceplate for the CPU module. Restore any wiring, if appropriate.
6. Replace the wire channel cover next to the CPU module.
7. Restore power to the ROC800.

**Verification** To verify that you have correctly installed the license key, select **Utilities > License Key Administrator** from the ROCLINK 800 menu bar. The License Key Administrator screen displays:

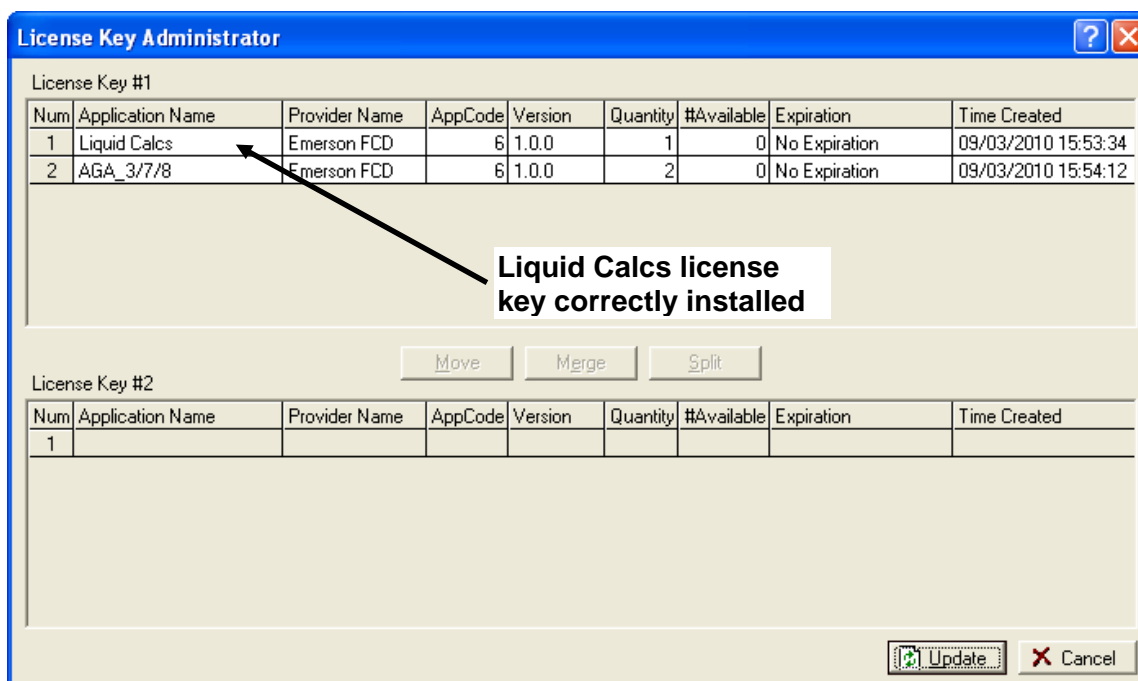


Figure 1. License Key Administrator Screen

This screen indicates that ROCLINK 800 recognizes the Liquid Calcs license key. Proceed to installing the firmware.

**Note:** The screen also shows the AGA 3/7/8 license key. This license is an available option for the ROC800L, since it can measure both liquids and gases.

## Installing the Firmware

The ROC800L firmware is designed to supports liquid measurements as well as up to six gas runs.

1. Using the LOI port, connect the ROC800 to a laptop on which ROCLINK 800 (version 1.88 or later) has been installed.
2. Start ROCLINK 800.

**Note:** We recommend you change the baud rate for the LOI port to 57.6K before you begin the firmware update.

3. Place the CD from the conversion kit in the laptop's CD tray and close the CD tray.
4. Select **Utilities** > **Update Firmware** from the ROCLINK 800 menu bar. The Update Firmware screen displays.

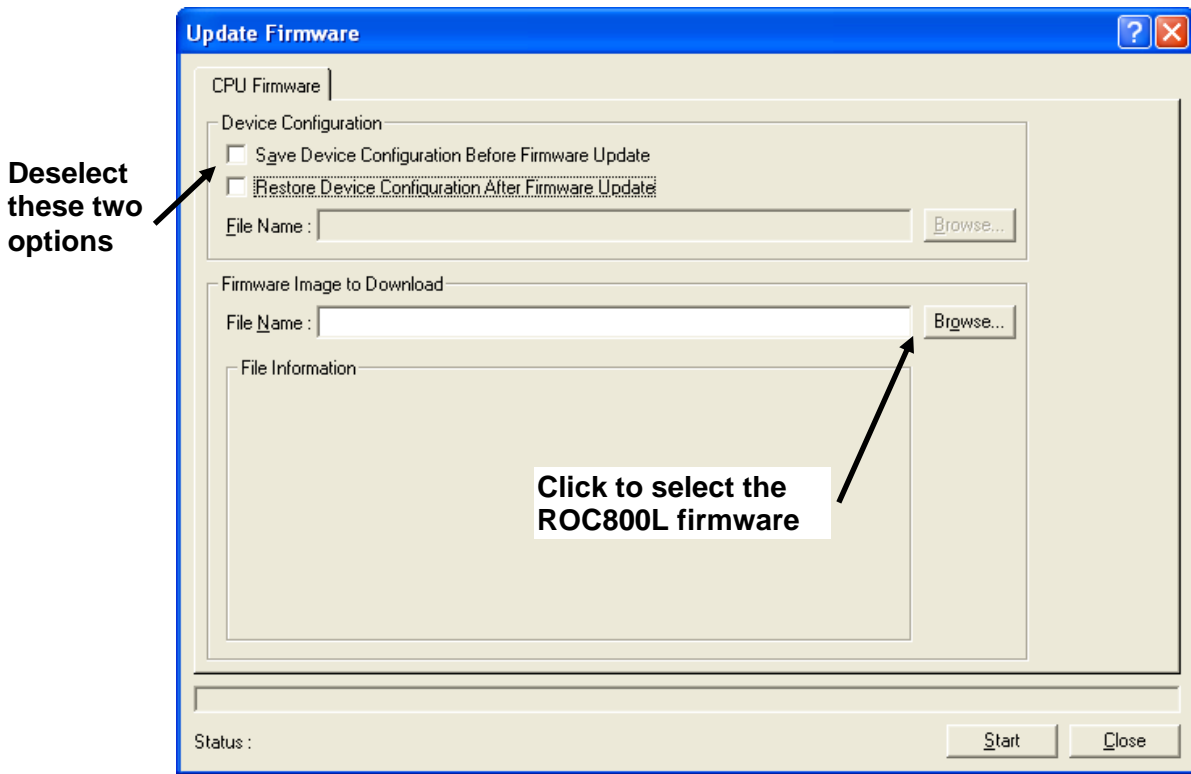
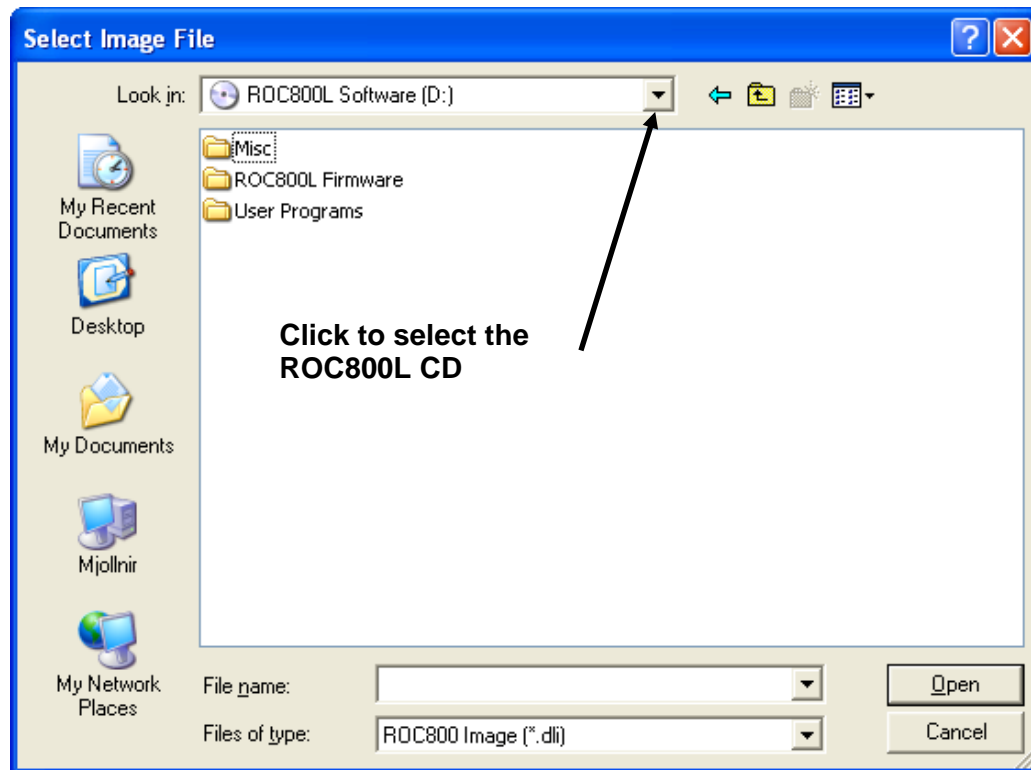


Figure 2. Update Firmware Screen

5. Unselect both the **Save Device Configuration** and **Restore Device Configuration** options (by default, they are selected).
6. Click **Browse** in the Firmware Image to Download frame. A Select Image File screen appears.



*Figure 3. Select Image File Screen*

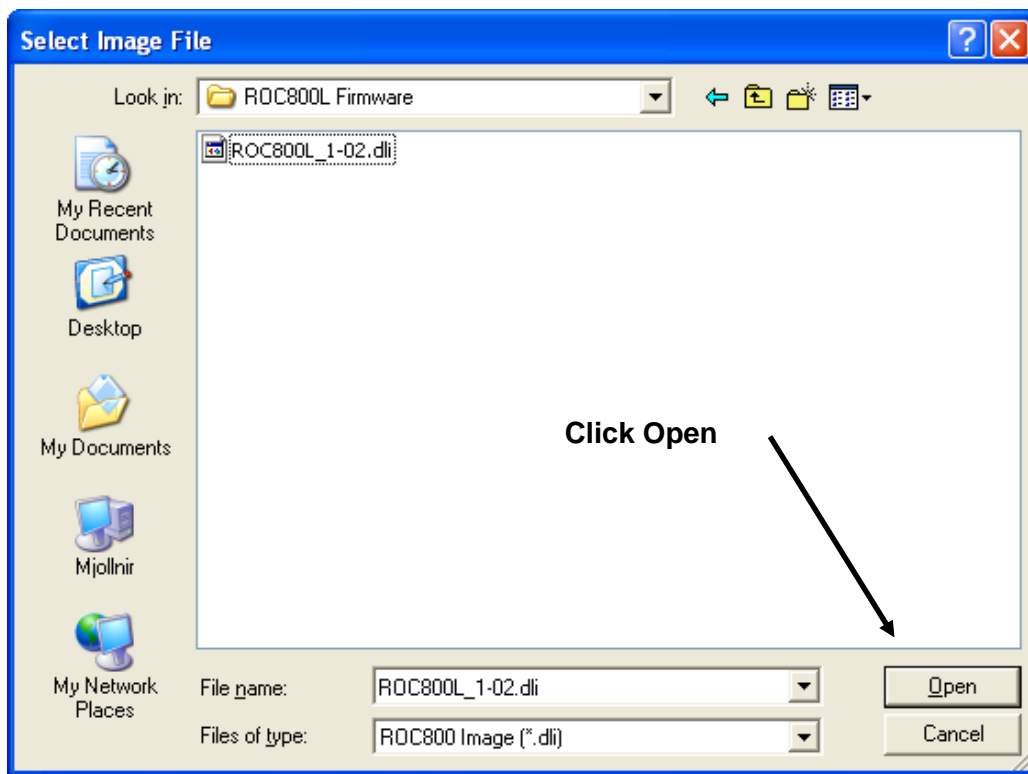
7. Click ▼ in the Look In field to select the ROC800L CD.

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**Note:** The CD contains several folders (Misc, Doc, ROC800L Firmware, and User Programs). The ROC800L Firmware folder contains the ROC800L firmware file.

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8. Open the ROC800L Firmware folder and select the **ROC800L-1-02.dli** file. That file should appear in the File name field (see *Figure 4*).



*Figure 4. ROC800L Firmware ImageFile*

9. Click **Open** to select that file and redisplay the Update Firmware screen.



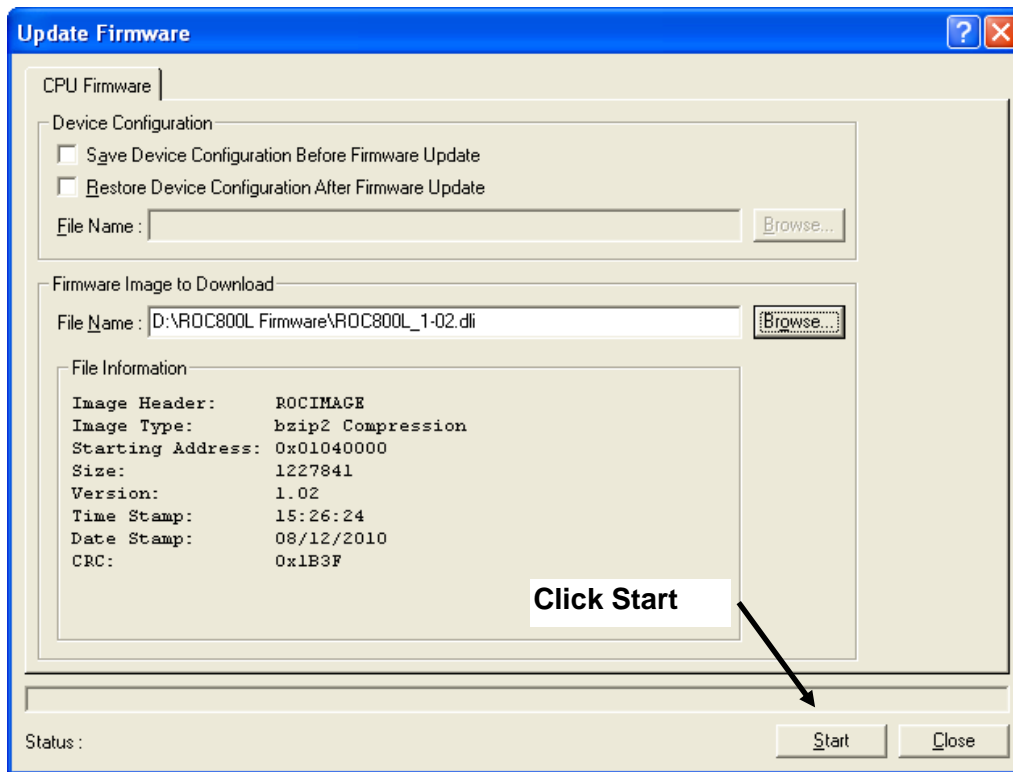
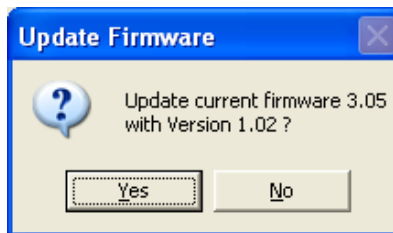


Figure 5. Update Firmware Screen (Completed)

10. Click **Start** to begin the firmware download. Since you are replacing the current ROC firmware, a verification dialog displays:



11. Click **Yes** to proceed. Changes in the Status messages indicate the progress of the download. Once the download completes, another verification dialog displays:



12. Click **OK** to close the dialog, and click **Close** to close the Update Firmware screen.

Once you have downloaded the firmware, proceed to installing the software.

## Installing the Software

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Five programs – Liquid Calcs, Batching, Batch Queuing, Proving, and Reporting – work together to provide ROC800L functionality. Using the Liquid Calcs program, you configure your liquid preferences and perform all liquid calculations. Liquid Calcs is actually the only **required** program. The other four programs provide additional functionality. Consequently, if your organization does not need proving or batch queuing functions (for example), you can choose not to install that program. If your organization requires that function later, you can install that program.

However, you **must** install and run the Liquid Calcs program **first**. The User Programs folder on the CD contains the following files:

*Table 1. ROC800L Program Files*

Folder Name	Program File
Liquid Calcs	LiquidCalcs_800L_1_01_01.tar
Batching	Batching+800L_1_01_01.tar
Batch Queue	BatchQueue_800L_1_01_00.tar
Proving	Proving_800L_1_01_01.tar
Reporting	Reporting_800L_1_01_00.tar

This section details the process of installing the LiquidCalcs program into flash memory. Follow the same process to install any of the other programs you select.

### Installing the LiquidCalcs Program

To install this program:

1. Connect the ROC800 to your computer using the LOI or other available comm port.

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**Note:** We recommend using the Ethernet port to speed program downloads.

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2. Start and logon to ROCLINK 800.
3. Select **Utilities > User Program Administrator** from the ROCLINK menu bar. The User Program Administrator screen displays (see *Figure 6*):

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**Note:** If the User Program Administrator option is initially grayed out, you may need to disconnect and reconnect with the ROC.

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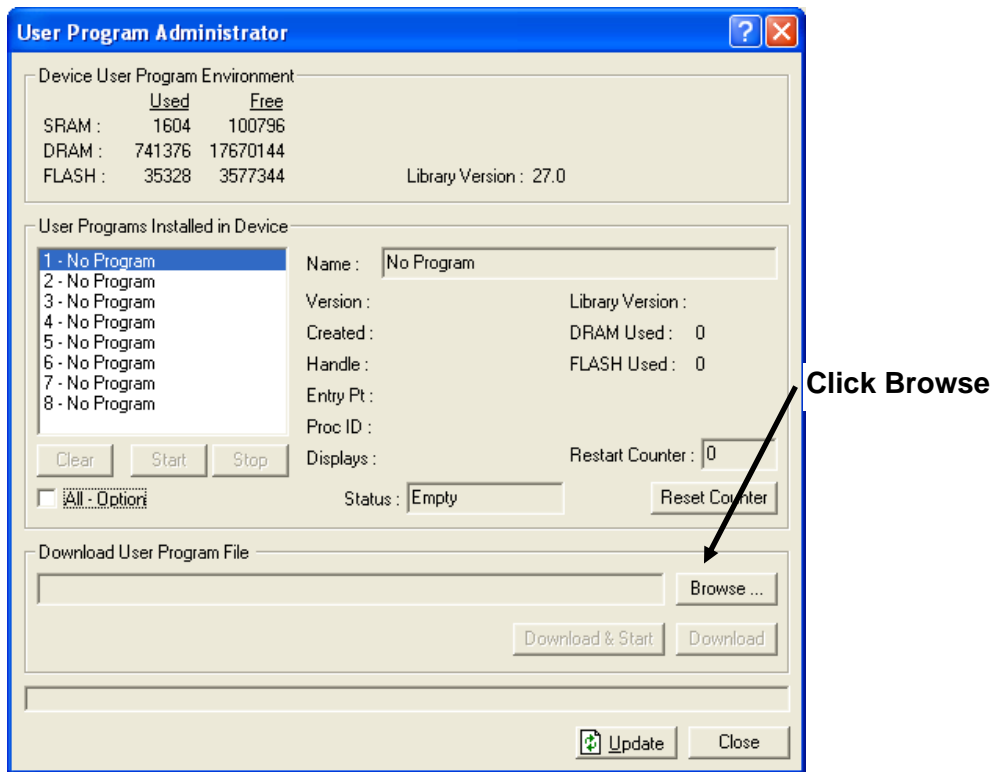


Figure 6. User Program Administrator

4. Select any empty program number (in this case, number 1) into which to download the program.
5. Click **Browse** in the Download User Program File frame. The Select User Program File screen displays (see Figure 7).

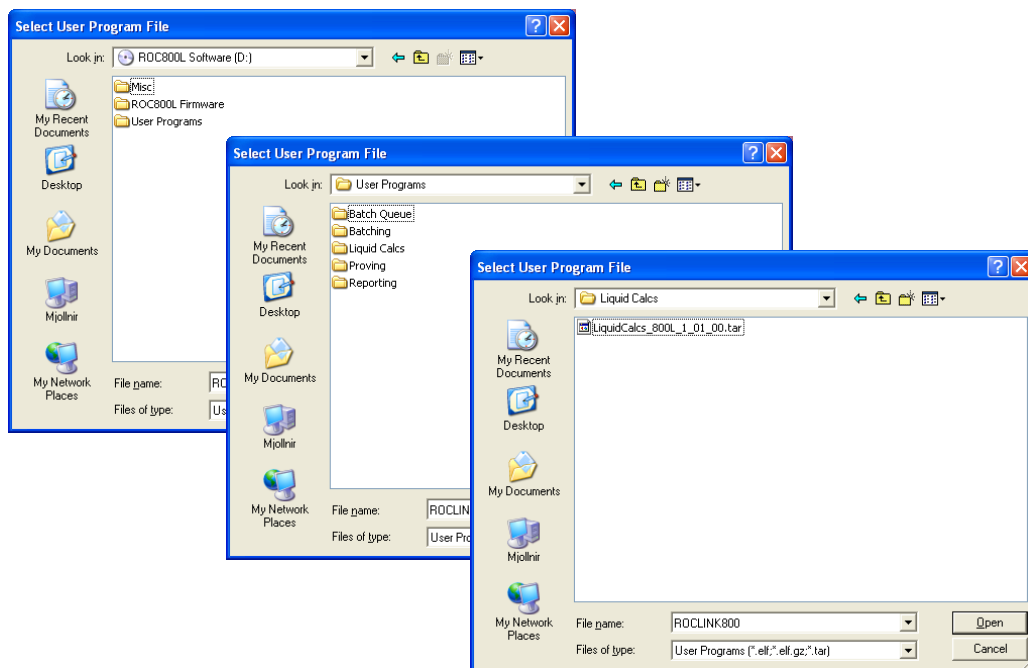
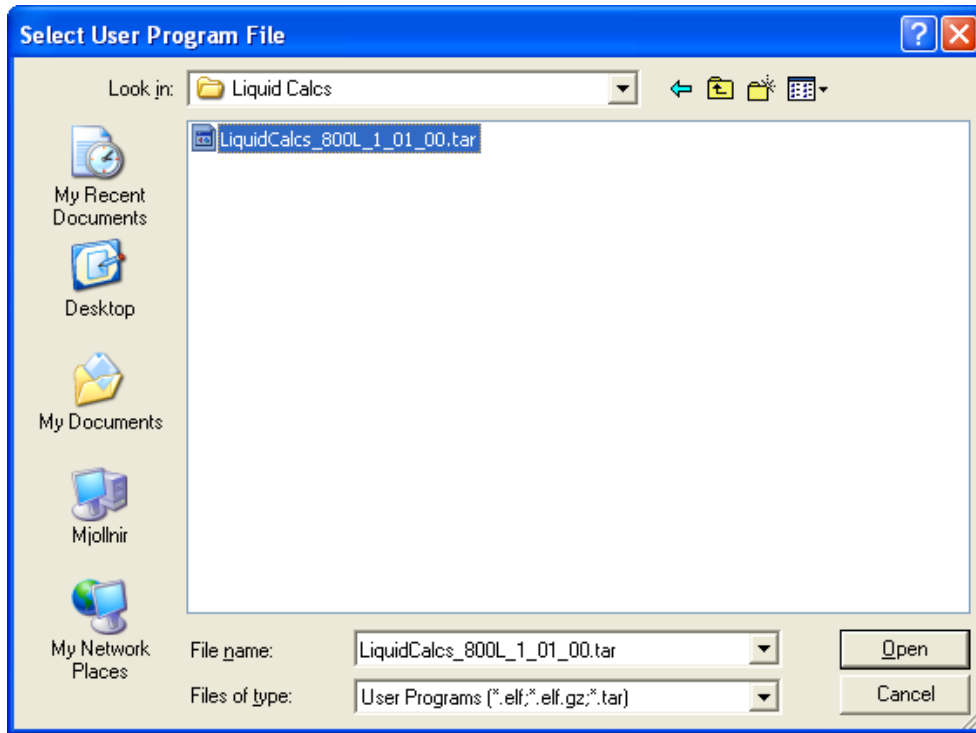


Figure 7. Select User Program File

6. Select the path and user program file to download from the CD-ROM. (As shown in *Table 1*, the User Programs folder contains all the program files.) As *Figure 8* shows, the screen lists all valid user program files with the .TAR extension:



*Figure 8. LiquidCalcs User Program File*

7. Select the program file and click **Open**. The User Program Administrator screen displays. As shown in *Figure 9*, note that the Download User Program File frame identifies the selected program and that the **Download & Start** button is active:

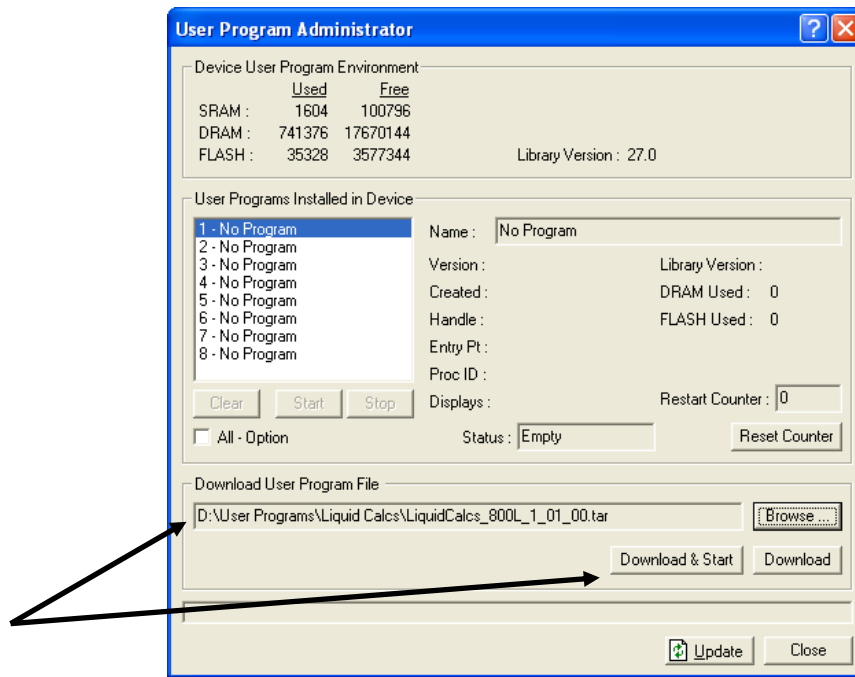
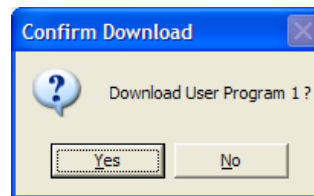
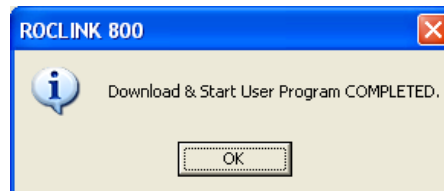


Figure 9. User Program Administrator

8. Click **Download & Start** to begin loading the selected program. A verification dialog displays:



9. Click **Yes** to begin the download. When the download completes a completion dialog displays:



10. Click **OK**. The User Program Administrator screen displays (see *Figure 10*). Note that:

- The Device User Program Environment frame reflects the use of system memory.
- The User Programs Installed in Device frame identifies the installed program(s).
- The Status field indicates that the program is running.

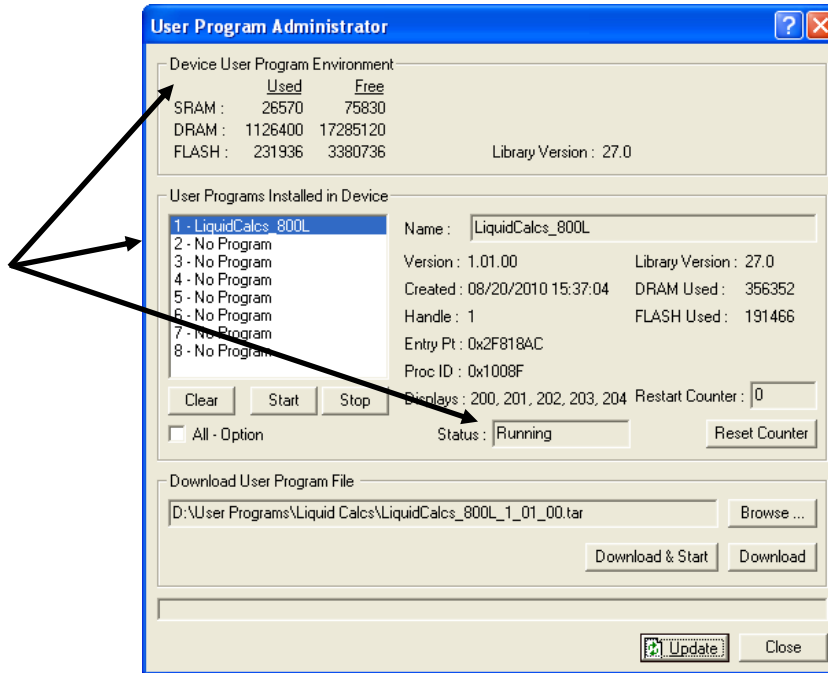


Figure 10. User Program Administrator (with LiquidCalcs Installed)

11. Repeat steps 4 through 10 for each program you want to include in your ROC800L.

When you have successfully installed all the programs you need, proceed to verifying the conversion.

## Verifying the Conversion

To ensure that you have correctly installed the appropriate programs, review the content in the User Program portion of the directory tree on the left side of the ROCLINK 800 display (see *Figure 11*):

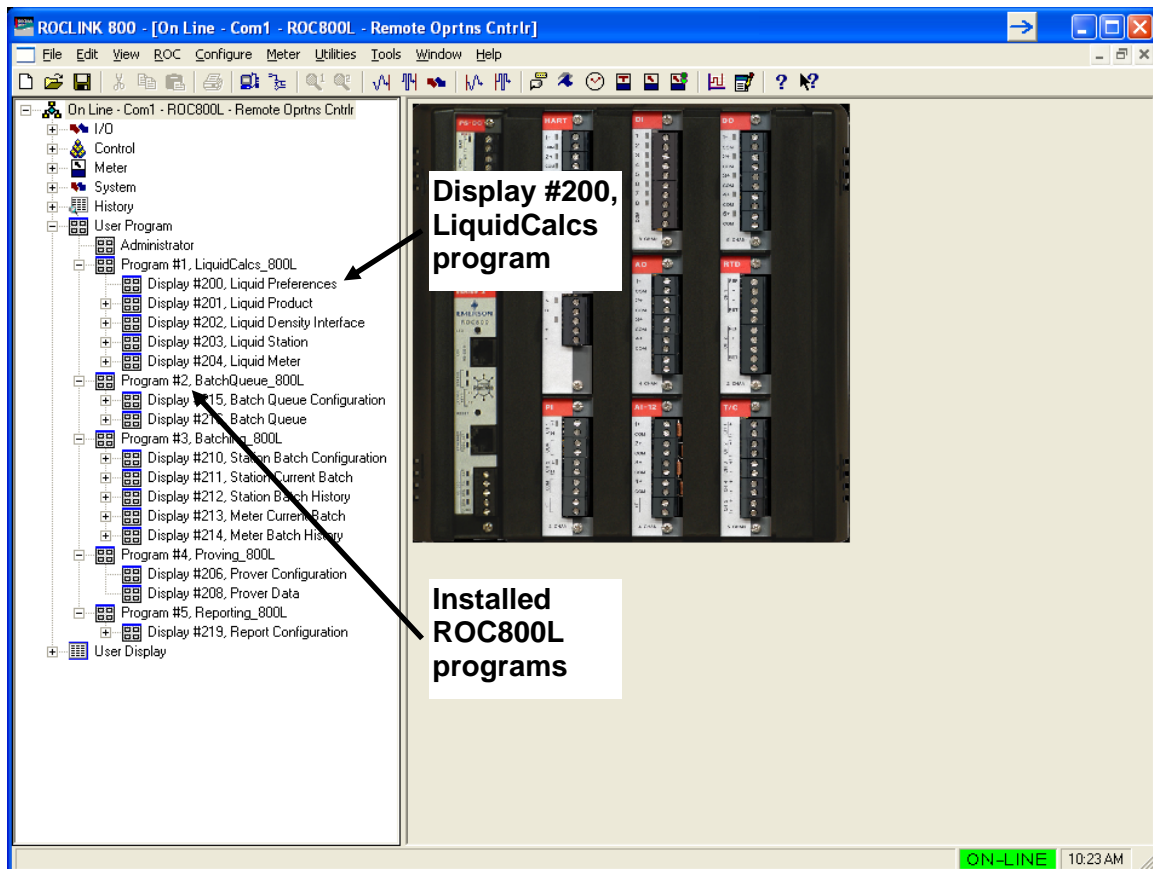


Figure 11. ROCLINK 800 Display (with Installed ROC800L Programs)

This example shows that all five ROC800L programs have been successfully installed.

Next, verify that the LiquidCalcs program is running. Double-click Display #200, Liquid Preferences. The Liquid Preferences screen displays (see Figure 12):

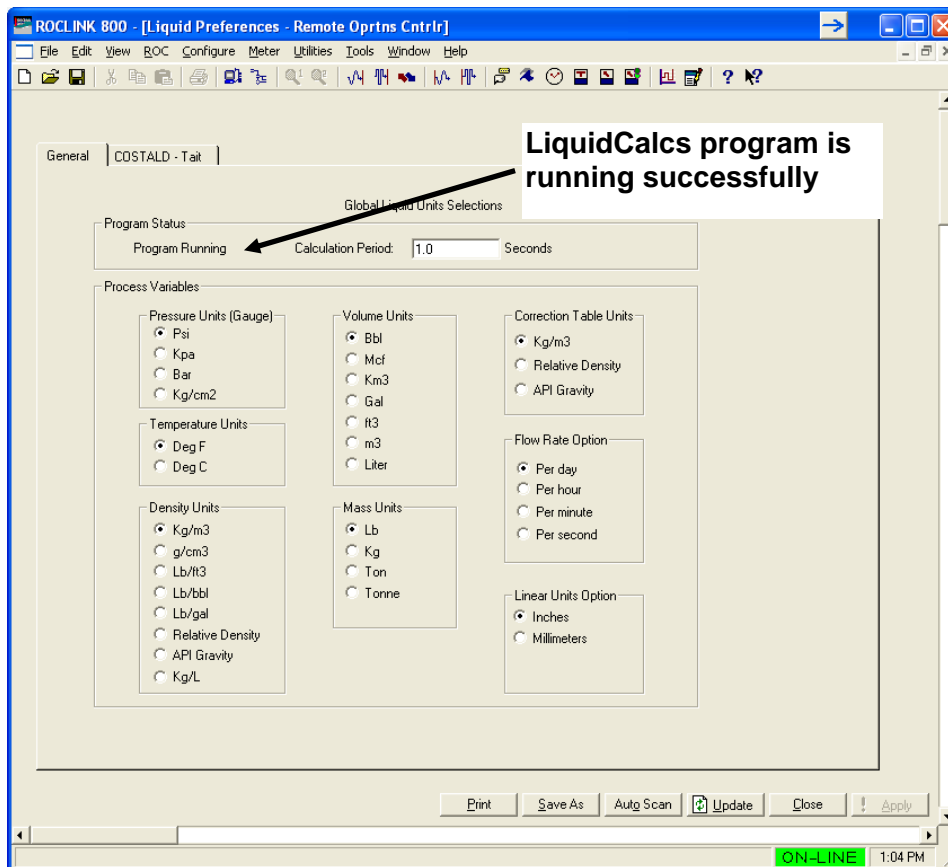


Figure 12. Liquid Preferences Screen

The Program Status frame should show “Program Running.” If you have another message (such as *License Not Found* or *Program Not Running*), use that message to diagnose a possible solution.