

# Flash Memory Upgrade for Syringe Pump Controller

## Installation Instructions

### Overview

The syringe pump controller memory can be erased and reprogrammed via the RS-232 port on the rear panel.

### Finding Your Software Version

To check your controller's software version, press MENU (  ), MORE (  ), and STATUS (  ). The software version is located in the upper right corner of the run screen.

### Requirements

Software installation requires the following items:

- Pump and pump controller
- Computer with serial port
- RS-232 communication cable with DB25 (male) to DB9 (female) connectors (part #480-7996-00)
- Update file (obtained from Teledyne Isco)

Unzip the update files into the desired directory on your computer.

### Controller Differences

Systems using the updated pump controller (on sale beginning November 2011) are identified by the lighted display and the blue Dispense (DISP) button in the fourth row on the control panel. The two systems have several differences, including flash update procedures.

If you are updating the legacy controller, follow the steps in the section — **Legacy Controller Setup** —. If you are updating the current controller, follow the steps in the section — **Current Controller Setup** —.

If you encounter any problems, please contact Teledyne Isco's Technical Service department. Contact information is listed at the bottom of the last page.



**Legacy Pump Controller**



**Current Pump Controller**

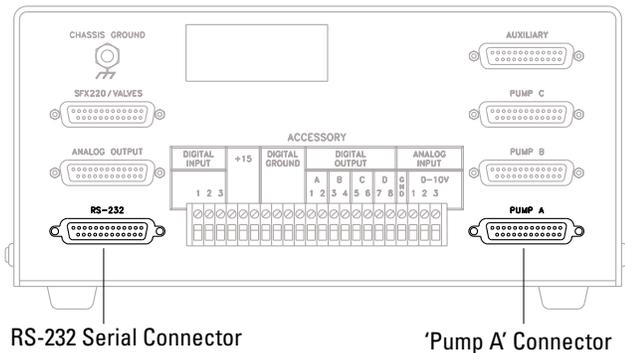
**Figure 1: Identifying Legacy Controller and Current D-Series Controller**

## – Legacy Controller Setup –

### **⚠ WARNING**

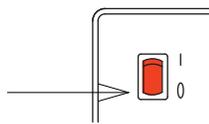
Ensure that power is disconnected from the system, the pump is switched to OFF (⏻), and the controller to **STANDBY** until step 4.

1. Connect the pump cable to the 'Pump A' connector on the back of the controller.
2. Connect the 25-pin end of the serial cable to the RS-232 connector on the back of the controller, and the 9-pin end to the COM port on the computer.



**Figure 2: Controller rear panel connectors**

3. Reconnect the power cord to the pump module. Leaving the pump switch **off**, switch the controller **on**.



Pump front panel power switch Off position (⏻)



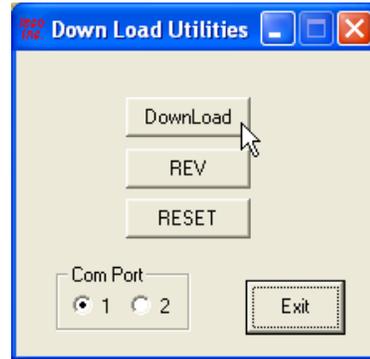
Controller power switch On position

**Figure 3: Preparing to flash** Pump and legacy controller

4. While holding down the HELP ( **HELP** ) key, turn the pump power switch to the **On** (⏻) position. After a count of three seconds, release the HELP key.  
The display should go blank at this point. If it does not, remove power and repeat the previous steps.

## Installation

1. In the folder where you saved the downloaded files, click the **download.exe** file to open the Download Utilities window.
2. Click the Download button.  
This action will cause the program files to be overwritten.



**Figure 4: Begin download** Legacy controller

3. Observe the “Download Utilities” window. The utility should display the download progress, followed by a notification of completion:



**Figure 5: Download complete** Legacy controller

4. When the download is complete, click OK and exit the utility. Perform a reset (described in the following section) and zero the pressure.

## Controller Reset

Complete the update by resetting the controller:

1. Switch the pump **Off**.
2. Switch the controller to **Standby**.
3. Switch the pump **On**.
4. While holding down the CLEAR ENTRY ( **CLEAR ENTRY** ) key, switch the controller back **On**.
5. After three seconds, release the CLEAR ENTRY key and switch the controller back to **Standby**.
6. Switch the controller back **On**; after it initializes, press MENU.
7. Press SYSTEM RESET ( **5** ).

- Press CONTINUE ( **A** ).

After resetting the controller, zero the pressure

( **ZERO PRESS** ) for all connected pumps.

**Note**

The status screen (MENU > MORE > STATUS) should now display the new software version in the upper right corner. If it does not, remove power, ensure proper connection of all cables, and repeat the update procedure.

**– Current Controller Setup –**

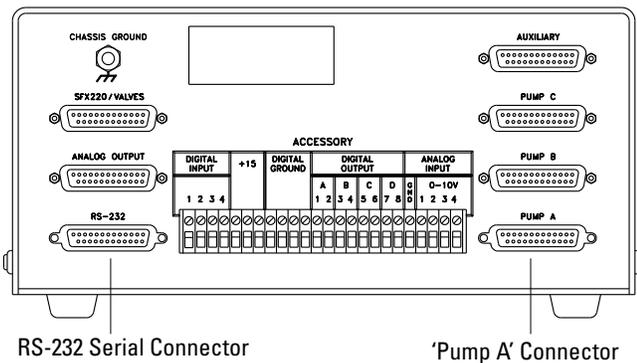
**WARNING**

Ensure that power is disconnected from the system, the pump is switched to OFF ( **I** ), and the controller to STANDBY until step 4.

- Connect the pump cable to the 'Pump A' connector on the back of the controller.
- Connect the 25-pin end of the serial cable to the RS-232 connector on the back of the controller, and the 9-pin end to the COM port on the computer.

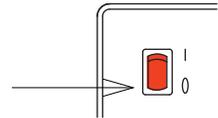
**Note**

If your computer does not have a serial port and you are using a USB to serial converter cable, run the appropriate driver installation program included with your USB signal to serial cable. The driver will assign the USB port a COM number. This can be found in the port settings of the Device Manager on the PC.



**Figure 6: Controller rear panel connectors**

- Reconnect the power cord to the pump module. Leaving the pump switch **off**, switch the controller **on**.



Pump front panel power switch Off position ( **I** )



Controller power switch On position

**Figure 7: Preparing to flash** Pump and current controller

- While holding down the DISPENSE ( **DISP** ) key, turn the pump power switch to the **On** ( **I** ) position. After a count of three seconds, release the ( **DISP** ) key.

The display should go blank at this point. If it does not, remove power and repeat the previous steps.

**Installation**

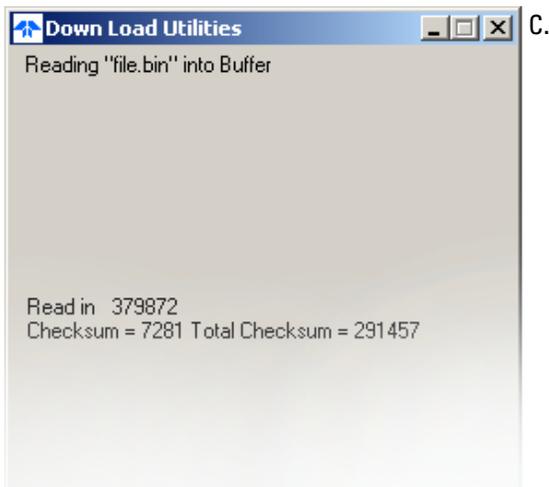
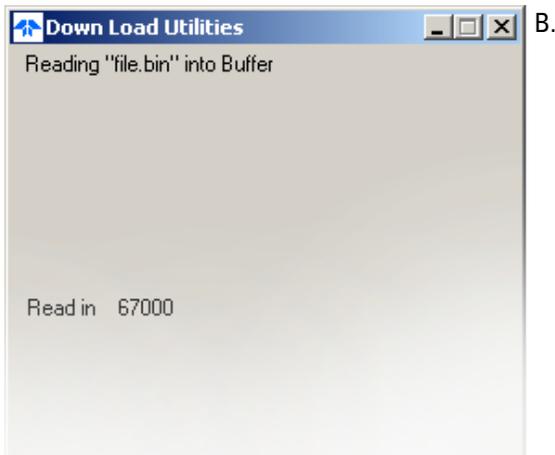
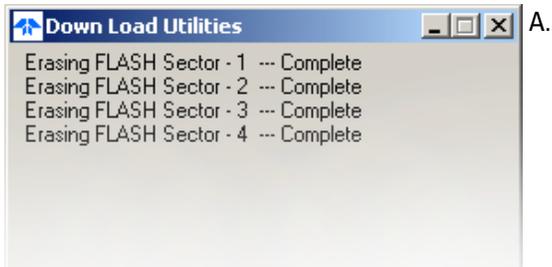
- In the folder where you saved the downloaded files, click the **download-4thgen.exe** file to open the Download Utilities window.
- In the Download Utilities window, select the COM port you are using on your computer for the software download. If using a USB to serial converter cable this is the COM port number assigned in step 2 of the Controller Setup instructions.
- Click the Download button.

This action will cause the program files to be overwritten.



**Figure 8: Begin download** Current controller

- Observe the "Download Utilities" window. The utility should display the download progress (A, B), followed by a notification of completion (C):



- When the download is complete, click Exit and exit the utility. Perform a reset (described in the following section) and zero the pressure.

## Controller Reset

Complete the update by resetting the controller:

- Switch the pump **Off**.
- While holding down the CLEAR ENTRY (  ) key, switch the pump back **On**.
- Release the CLEAR ENTRY key.
- After the controller initializes, press MENU.
- Press SYSTEM RESET (  ).
- Press CONTINUE (  ).

After resetting the controller, zero the pressure

(  ) for all connected pumps.

### Note

The status screen (MENU > MORE > STATUS) should now display the new software version in the upper right corner. If it does not, remove power, ensure proper connection of all cables, and repeat the update procedure.

*Last modified January 29, 2013*

**Figure 9: Download complete** Current controller

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