MiniOpticon Firmware Update Instructions
For CFX Manager version 2.0

MiniOpticon Updating Instructions:
CFX Manager Software Control using Windows Vista or Windows 7

Overview

The MiniOpticon system (CFB-3120) consists of the MJ Mini thermal cycler connected to the MiniOpticon real-time PCR optical unit. To run the MiniOpticon system under CFX Manager software control, you must complete the following steps:

- Install CFX Manager v2.0
- Install the appropriate drivers on your PC
- Update the firmware on the MJ Mini thermal cycler to version 1.2K or later

NOTE: *Firmware version 1.2K or later is required to run the MiniOpticon using CFX Manager software. If CFX Manager software is started when the computer is connected to a MiniOpticon containing a firmware version earlier than 1.2K, the Block Status Log form in CFX manager software will display the following message: "Invalid Version. Cycler current: 1.2H. Minimum: 1.2K"*
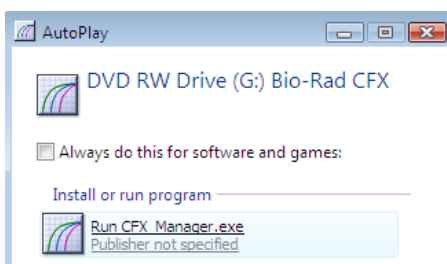
As of 20 August 2010, the current release firmware version for the MiniOpticon MJ Mini thermal cycler is 1.2K. To view the current firmware version installed on a MiniOpticon refer to step 11 instructions below.

For any questions or problems you may encounter, please contact Bio-Rad Laboratories. For technical support in the United States and Canada, call 1-800-424-6723 (toll-free phone), and select the technical support option.

Updating Firmware Instructions

Install CFX Manager software (version 2.0)

1) Ensure the MinOpticon system is disconnected from the computer. Turn off the power and remove the USB connection
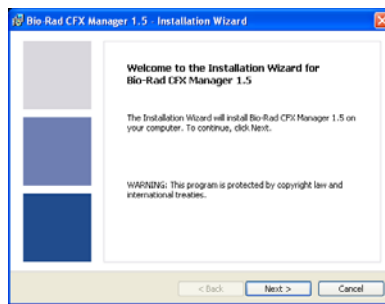
2) Insert the CD. Click **Run CFX Manager.exe**.

3) Click **Install Software** (DO NOT click more than once when using Vista. The next screen may take up to 30 sec to appear. If you click multiple times, multiple instances of the installation process will open.). Click **Continue**. DO NOT click more than once. The next screen may take up to 30 sec to appear
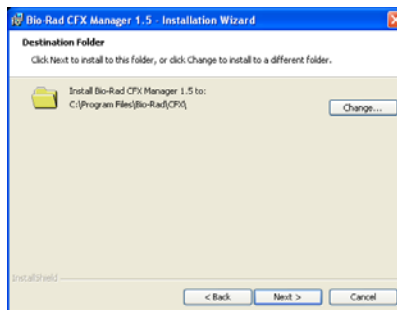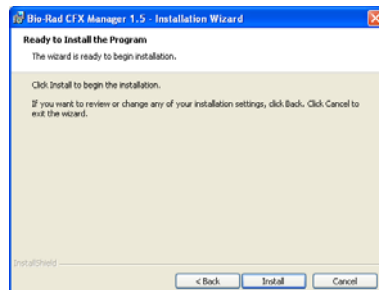
4) If a Vista User Account Control security screen opens click **Continue**.

5) Click **Next** and accept the terms and conditions of the software license.

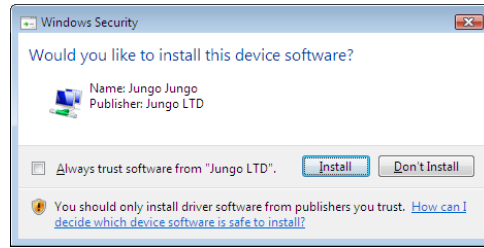6) Click **Next** to install CFX Manager software to the default destination folder listed.

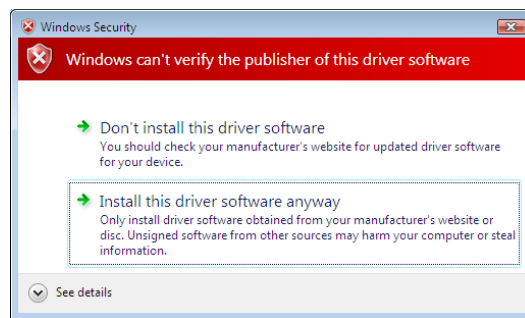7) Click **Install**. A window with a progress bar will appear. Installation will take several minutes.

MiniOpticon Firmware Update Instructions
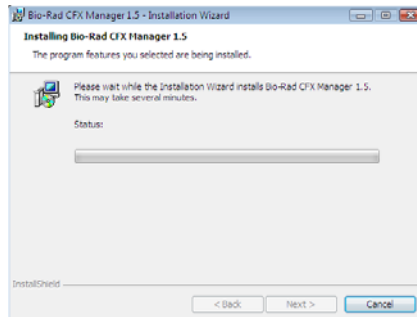For CFX Manager version 2.0

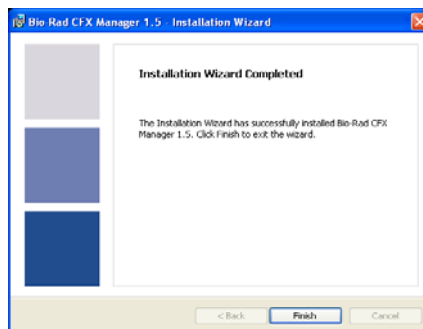8) When the Vista security screen opens, click **Install**. Another screen with a progress bar will open.

9) When the following security popup opens, click **Install this driver software anyway**. Repeat this step when the second identical popup appears for the second driver.

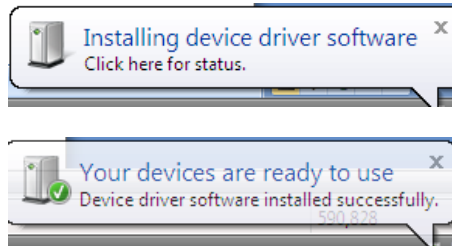A progress bar screen will open during these driver installations.

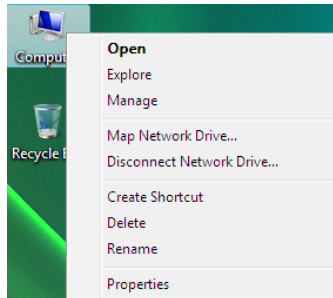10) When the Installation Wizard has completed, click **Finish** and close the CFX Manager CD flash screen.
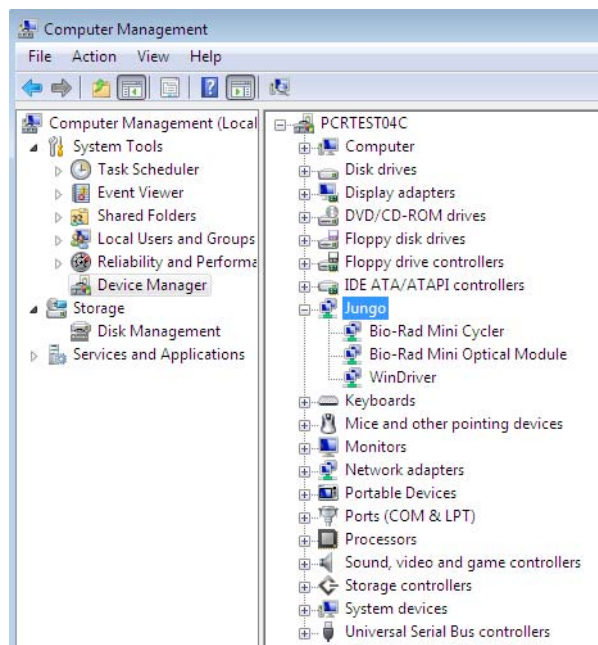
Install The Drivers

11) Connect the MiniOpticon instrument to a USB port of the computer and power on the instrument. The driver installation occurs automatically. You will see the "**Your Devices are Ready to Use**" message appear in the bottom right-hand corner of the desktop.

12) Verify the drivers are installed correctly. Right click **My Computer** and select **Manage.**

13) If a Vista Security screen opens, click **Continue.** Select **Device Manager**. If you see the screen below where there are three items (Mini Cycler, Mini Optical Module and WinDriver) listed under the Jungo section, driver installation has completed successfully.
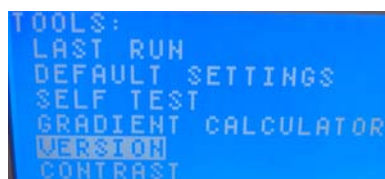
Update the MJ Mini thermal Cycler Firmware

14) **Check the current firmware version**

To view the current firmware version installed on a MiniOpticon;
I.   From the MiniOpticon front panel, using the arrow keys, select the **Tools** menu item.
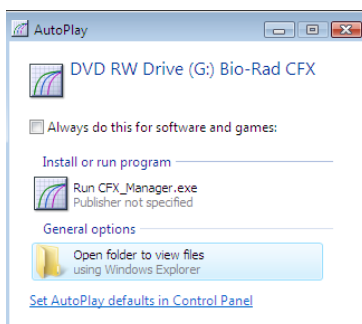

II. Select the **Version** menu item

III. The firmware version is listed at the top of the screen.

- If the firmware listed is version 1.2K you have the latest firmware. The upgrade process is complete and your instrument is ready to use with CFX Manager control.

- If the firmware listed is version 1.2F, 1.2G or 1.2H proceed to step 28.

- If the firmware listed is earlier than version 1.2F, please download and install the appropriate firmware updates from www.bio-rad.com before proceeding with step 28 instructions.
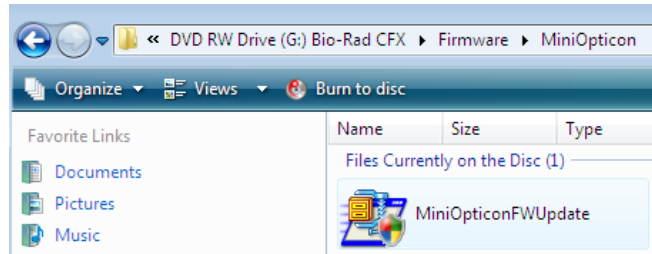
15) **Locate the Latest Firmware Updater**

Obtain the most recent MiniOpticon firmware update file (MiniOpticonFWUpdate.exe) by copying it from the CFX Manager Software version 2.0 installation CD, downloading it from www.bio-rad.com, or by contacting your local Bio-Rad technical support department.

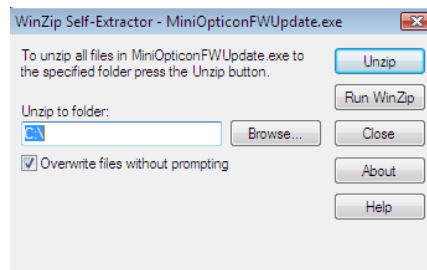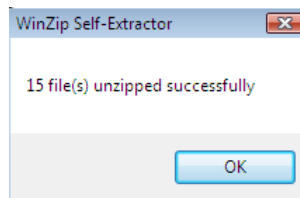I.   To access the **MiniOpticonFWUpdate.exe** file from the CD, Insert the CD. Click Open folder to View Files.

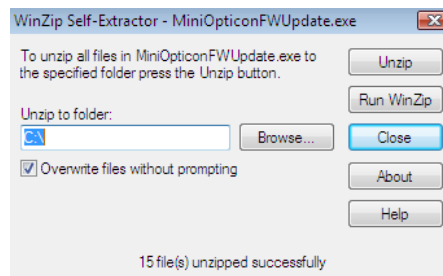II. Go to the Firmware folder and open the MiniOpticon folder to access MiniOpticonFWUpdate.exe file.

III. Save the MiniOpticonFWUpdate.exe firmware update file to a convenient location, such as the computer Desktop and close the explorer window.

IV. Double click the self-extracting MiniOpticonFWUpdate.exe file to start the unzip process. (when the UAC security screen opens, click Allow)

V. From the WinZip Self Extractor form, select Unzip. This will extract the update files to the C:\ drive of the computer.

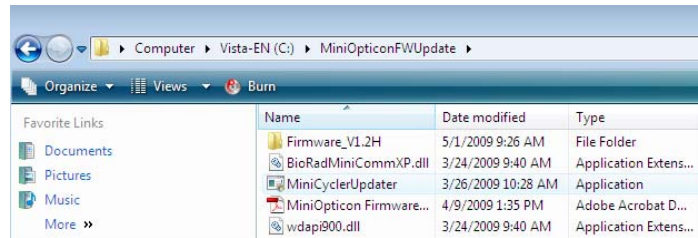VI. Acknowledge the "15 file(s) unzipped successfully" message dialog and close the WinZip Self Extractor form.

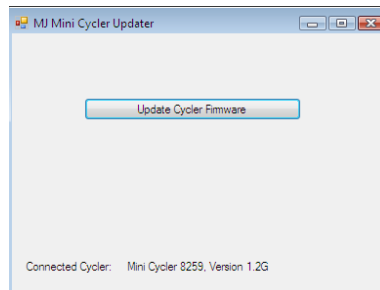VII. Click Close to close the WinZip self extractor dialog box
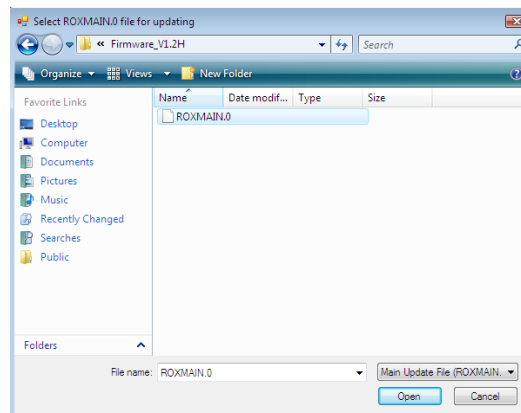
16) **Launch the Firmware Updater**

    I.   From Windows File Explorer, browse to the C:/ drive to locate the folder MiniOpticonFWUpdate which contains your unzipped firmware updater files.

    II.   From the C:\ MiniOpticonFWUpdate folder, double-click the **MiniCyclerUpdater.exe** application file to start the updater. Click **Allow** when the security prompt appears.

    III.   The MJ Mini thermal cycler Updater window will open and display the MJ Mini thermal cycler serial number and the currently installed firmware version in the Connected Cycler area of the form. Click **Update Cycler Firmware** to start the update process.
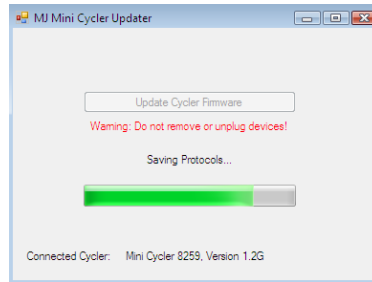

    IV.   From the Windows Open dialog, navigate to the firmware folder C:\ MiniOpticonFWUpdate\Firmware_V1.2K\, select the ROXMAIN.0 file, and then click **Open.**
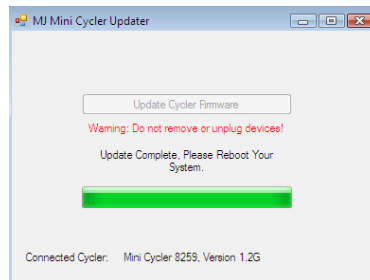
V. The update process will start and display progress. Do not disconnect or power off the instrument during this time. The update will take approximately 8-10 minutes to complete.

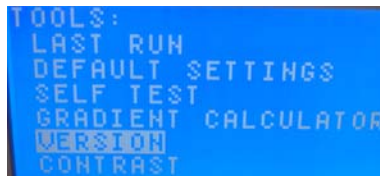VI. When the update has completed the following screen will display. Close this screen.

17) Power off the instrument and then power the instrument back on.

Verify The Firmware Update has Completed Successfully

18) From the MiniOpticon instrument front panel, navigate to the **Tools** menu item using the arrow keys and press **Enter**.

19) In the Tools menu, navigate to the **Version** menu item and press **Enter**.

20) Verify that the firmware version is correct. It should read version **1.2K**.