

MiniOpticon Firmware Update Instructions For CFX Manager version 2.0

MiniOpticon Updating Instructions: For CFX Manager Software Control using Windows XP

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 27 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.

Instructions

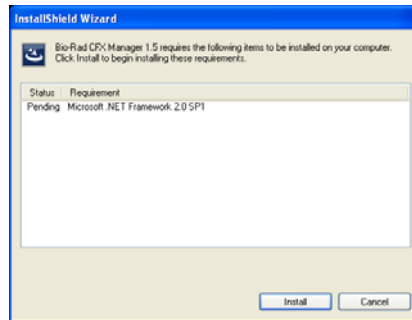
Install CFX Manager software (version 2.0)

- 1) Ensure the MiniOpticon system is disconnected from the computer. Turn off the power and remove the USB connection.
- 2) Insert the CD. Click **Install Software**. Click **Install**.

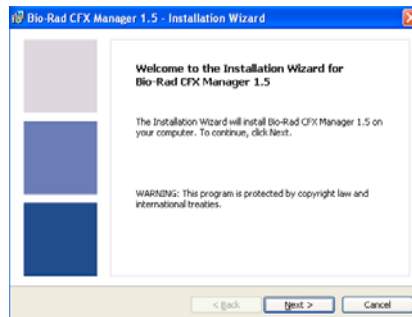


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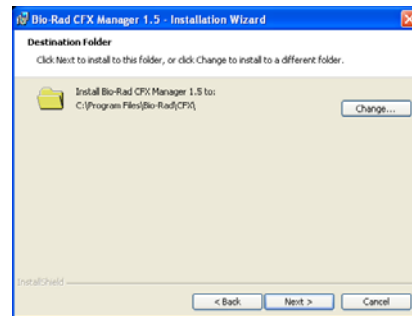
NOTE: The window below will appear if .NET and Service Pack 1.0 (SP1) have not been previously installed on the computer. If the window appears, click **Install**.



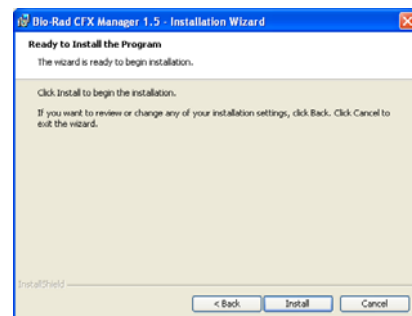
- 3) A progress screen will appear and then the Installation Wizard window. Click on **Next** and accept the terms and conditions.



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



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

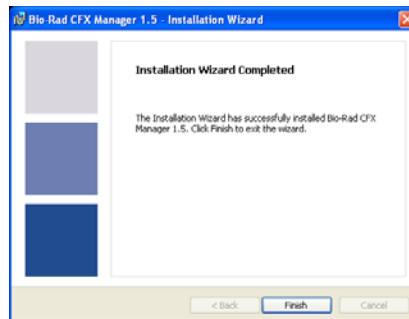


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- 6) When the following window opens, click **Continue Anyway**.



- 7) When the Installation Wizard has completed, click **Finish** and close the CFX Manger installation flash Window.



Install The Drivers

- 8) Connect the MiniOpticon instrument to a USB port of the computer and power on the instrument.
- 9) Whether you see the hardware installation screens shown in steps 10-13 depends on whether Opticon Monitor Software was previously installed on the same PC and whether Opticon Monitor drivers to run the MiniOpticon were previously installed for that USB port.

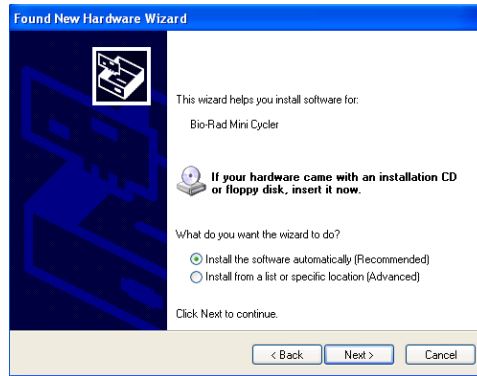
If no Found New Hardware installations screens (like the one shown in step 10) appear on your computer, skip directly to step 15.

- 10) Select the **No, not this time** option and click **Next**.

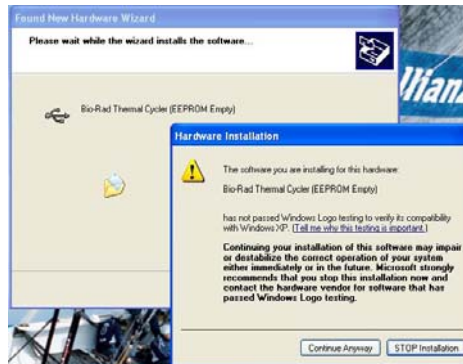


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11) Accept the default **Install the software automatically** option and click **Next**.



12) The following Windows Logo testing screen may appear on some computers. If it does, select **Continue Anyway**.



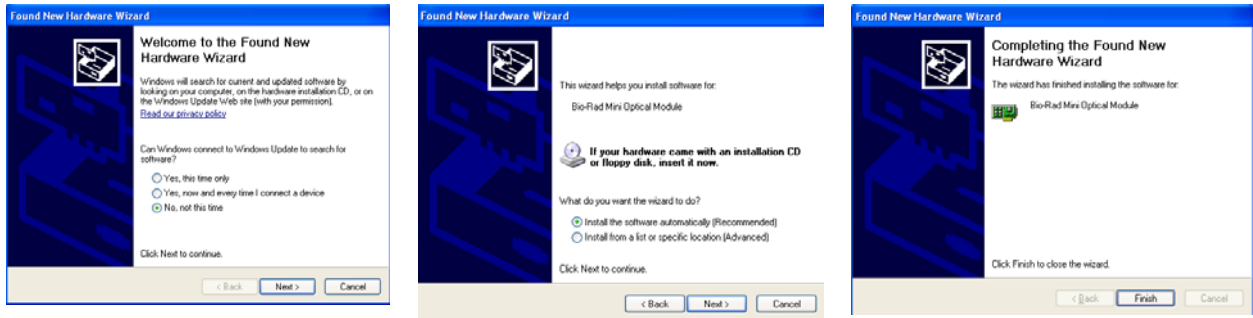
13) The following screen will be shown upon completion. Click **Finish**.



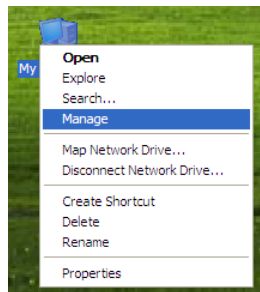
14) Repeat steps 10-13 for any additional new hardware installation screens that appear. Typically there will be two, one for the Bio-Rad Mini Cyclor and another for the Bio-Rad Mini Optical Module.

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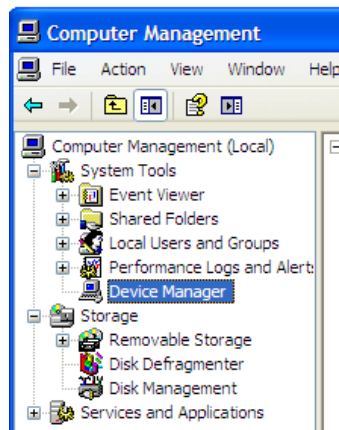
Click on **No**, **not at this time/Install the software automatically/Continue anyway**



15) Verify the currently installed drivers. Right click on **My Computer** and select **Manage**.



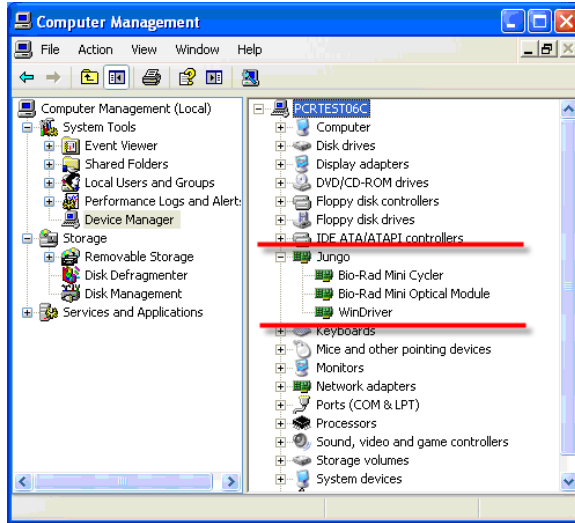
16) From the **Computer Management** window, select the **Device Manager**



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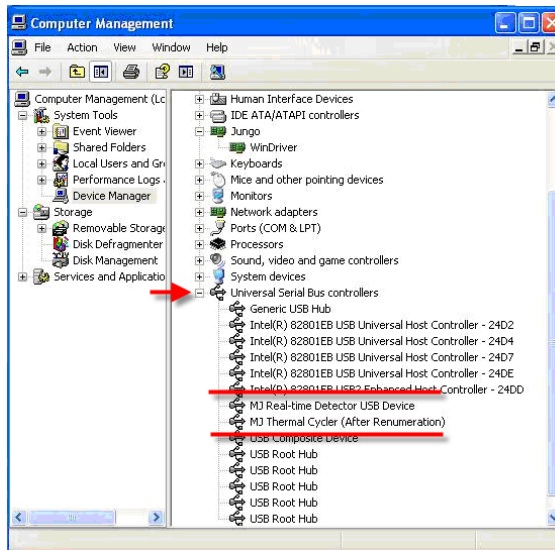
17) You will see one of two scenarios.

- I. If you see the screen below where there are three items (Mini Cyclor, Mini Optical Module and WinDriver) listed under the Jungo section, driver installation has completed successfully. Go directly to step 27.



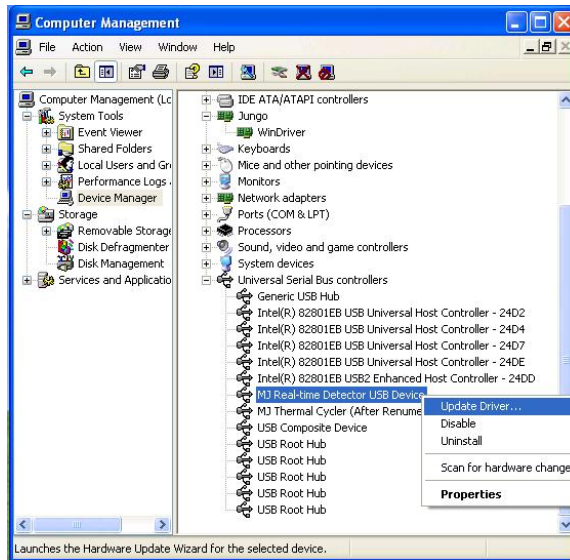
- II. If you see the following screen, where there is only WinDriver listed under Jungo and MJ Real Time Detector USB Device and MJ Thermal Cyclor are listed under the USB Serial Bus Controllers section, you must install the drivers manually. Please continue with step 18.

This scenario typically occurs on computers that have had Opticon Monitor previously installed and running a MinOpticon instrument. Installation of CFX Manager does not automatically un-install the Opticon Monitor drivers.



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- 18) Right-click the **MJ Real-time Detector USB Device** driver under **Universal Series Bus controllers** and select **Update Driver** option.



- 19) Select the **No, not this time** option and click **Next**.



- 20) Accept the default **Install the software automatically** option and click **Next**

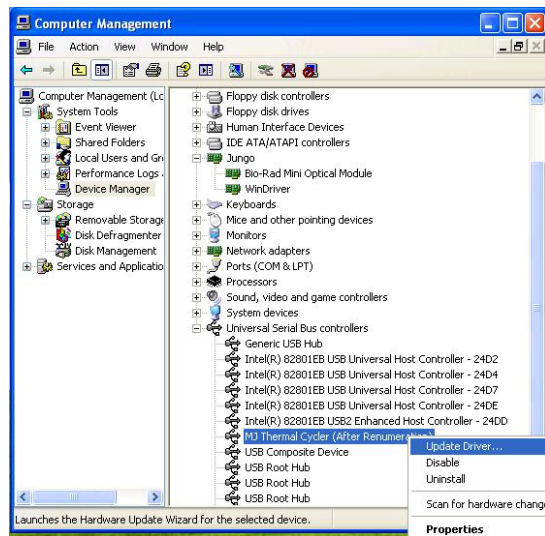


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- 21) Click **Finish** to complete manual installation of the MJ Real-Time Detector USB device.



- 22) Right Click on **MJ Thermal Cycler (After Renumeration)** driver under **Universal Series Bus controllers** and select **Update Driver** option as shown below:

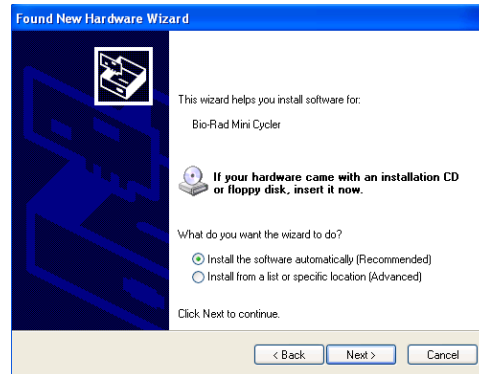


- 23) Select the **No, not this time** option and click **Next**.



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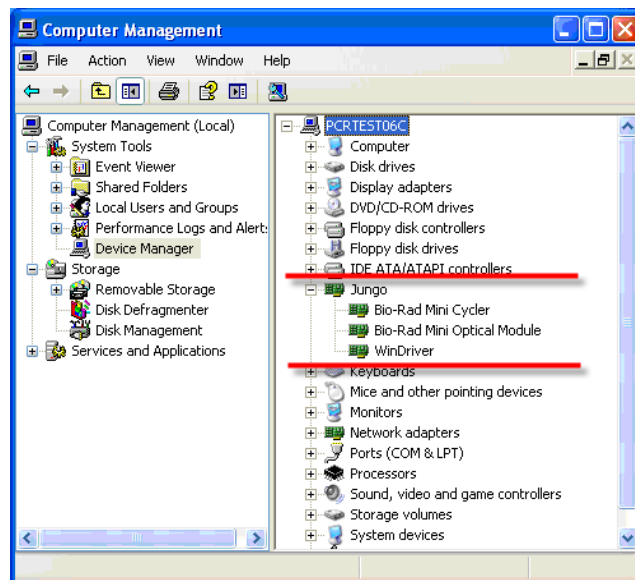
24) Accept the default **Install the software automatically** option and click **Next**.



25) Click **Finish** to complete manual installation of the Bio-Rad MiniCyclor.



26) Confirm that the **Device Manager** now shows three items (Mini Cyclor, Mini Opticon Module and WinDriver) under **Jungo**. Driver installation has now completed successfully. Continue with step 27.



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Update the MJ Mini Thermal Cycler Firmware

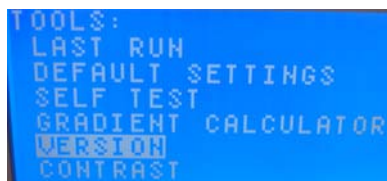
27) Check the current firmware version

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.

28) Locate the Latest Firmware Updater

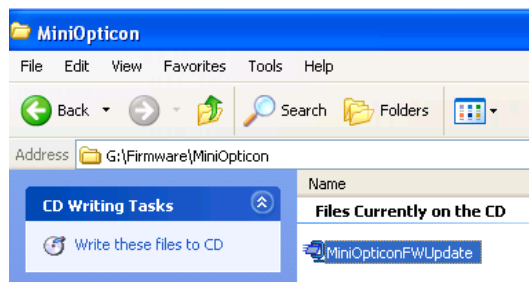
Obtain the most recent MiniOpticon firmware update file (MiniOpticonFWUpdate.exe) by copying it from the CFX Manager Software version 2.0 installation CD, downloading it from www.bio-rad.com, or by contacting your local Bio-Rad technical support department.

- I. To access the MiniOpticonFWUpdate.exe file from the installation CD, insert/open the CD.
- II. When the flash screen opens, click **Firmware**.

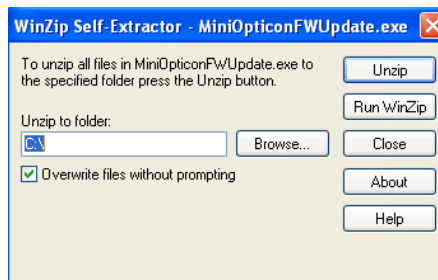
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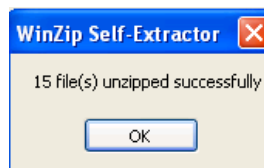
- III. In the new window, open the MiniOpticon folder to access the **MiniOpticonFWUpdate.exe** file.



- IV. Save the firmware update file (MiniOpticonFWUpdate.exe) to a convenient location, such as the computer Desktop.
- V. Close the Windows Explorer window and the CFX Installation disk flash screen window.
- VI. Double click the self-extracting MiniOpticonFWUpdate.exe file to start the unzip process.
- VII. From the WinZip Self Extractor form, select **Unzip**. This will extract the update files to the C:\ drive of the computer.

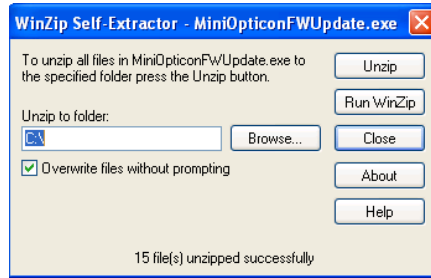


- VIII. Acknowledge the “15 file(s) unzipped successfully” message dialog and close the WinZip Self Extractor form.



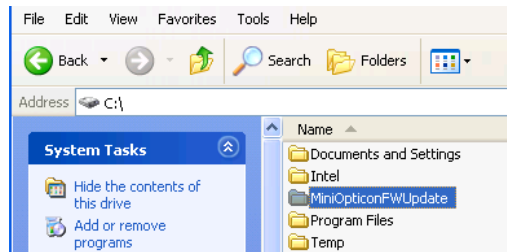
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- IX. Click **Close** to close the WinZip self extractor dialog box

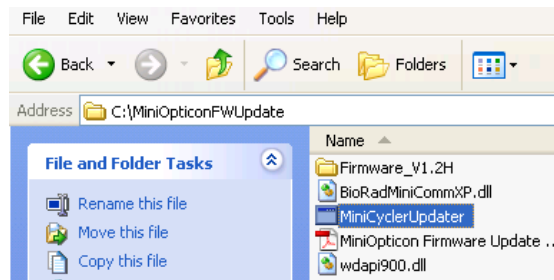


29) Launch the Firmware Updater

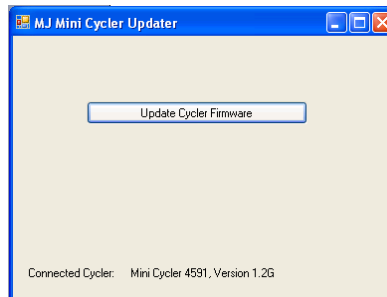
- I. From Windows File Explorer, browse to the C:/ drive to locate the folder MiniOpticonFWUpdate which contains your unzipped firmware updater files.



- II. From the C:\ MiniOpticonFWUpdate folder, double-click the **MiniCyclerUpdater.exe** application file to start the updater



- 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.

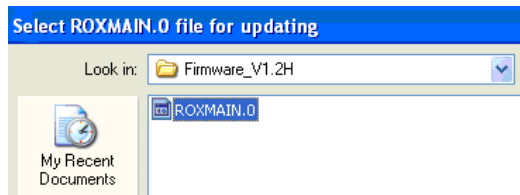


- IV. A progress screen will open.

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- V. When the Windows Open dialog opens, navigate to the firmware folder **C:\MiniOpticonFWUpdate\Firmware_V1.2K**, select the **ROXMAIN.0** file, and then click **Open**.



- VI. The update process will start and display a progress bar. Do not disconnect or power off the instrument during this time. The update will take approximately 8-10 minutes to complete.
- VII. When the update has completed an Update Complete screen will display. **Close** this screen.

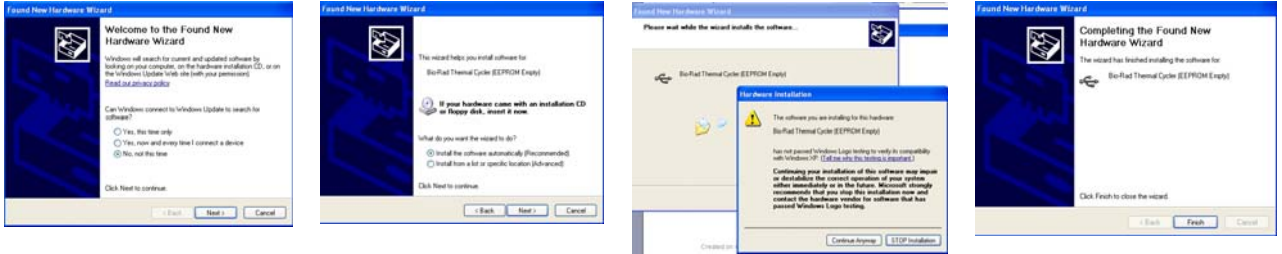


30) Power off the instrument and then power the instrument back on. Proceed to step 32.

NOTE: In some installation scenarios, turning the MiniOpticon instrument back on after a firmware upgrade will trigger a final set of Hardware installation screens to open. This usually occurs when Opticon Monitor and Opticon Monitor MiniOpticon drivers have not previously been installed on the computer.

If a **Found New Hardware** wizard screen opens, as shown below, click on **No, not at this time/Install the software automatically/Continue anyway** to complete installation of the Bio-Rad Thermal Cycler (EEPROM empty).

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Verify The Firmware Update has Completed Successfully

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



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



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