RAMTOOLS

Installation and Usage Guide

Introduction

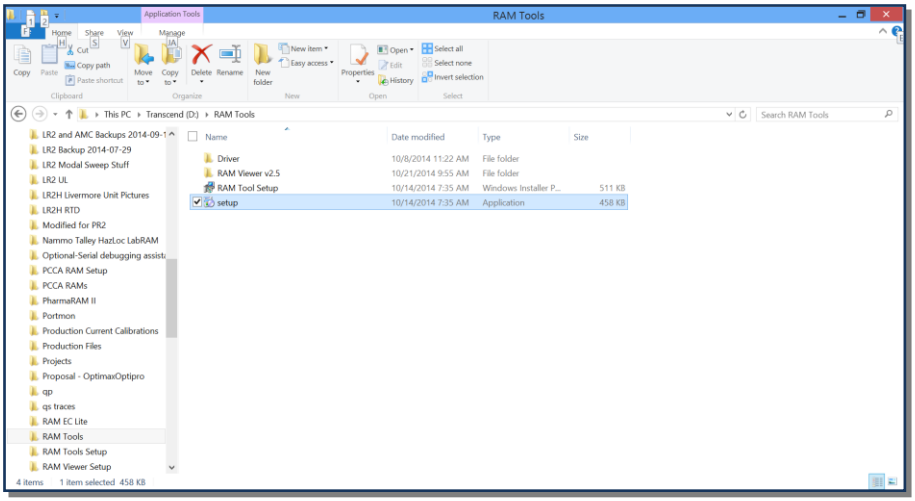
The LabRAM II series of Resodyn Acoustic Mixers store data in internal memory. In order for the user to transfer and view this stored data, a custom Windows Application, referred to as RAM Tools is required. RAM Tools synchronizes LabRAM II data with storage on a Windows PC. Additionally, the application can "flash" updated operating firmware to the LabRAM II.

RAM Tools is a lightweight Windows application that can run on Windows XP, Windows Vista/7, and Windows 8.

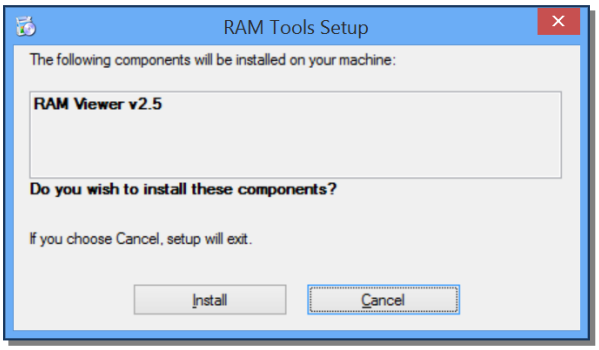
⚠	**NOTE:** Administrator login is required for RAM Tools installation and USB driver installation RAM Viewer will also be installed.

RAM Tools Installation

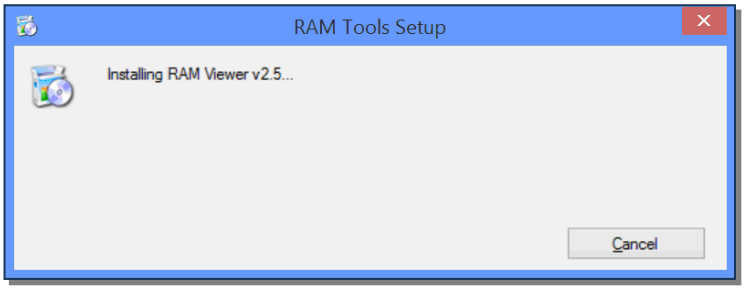
1. Insert the installation media into the Windows PC. Find "setup" or "setup.exe" and double-click on it.



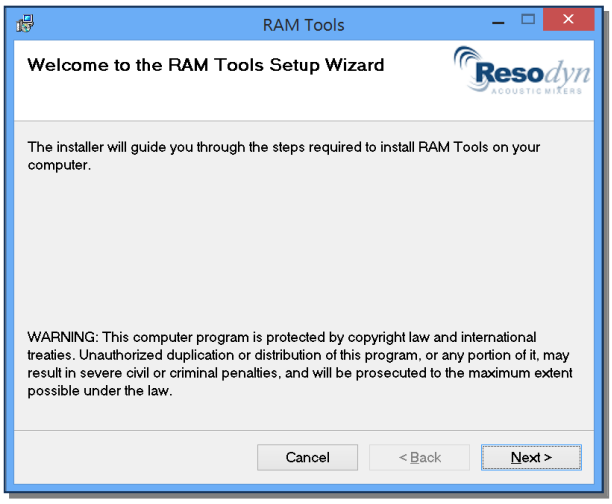
2. If using Windows Vista, Windows 7, or Windows 8, the UAC dialog will appear asking for Administrator credentials. After credentials are provided, the dialog below will appear. RAM Viewer will be installed first. Click on the Install button.

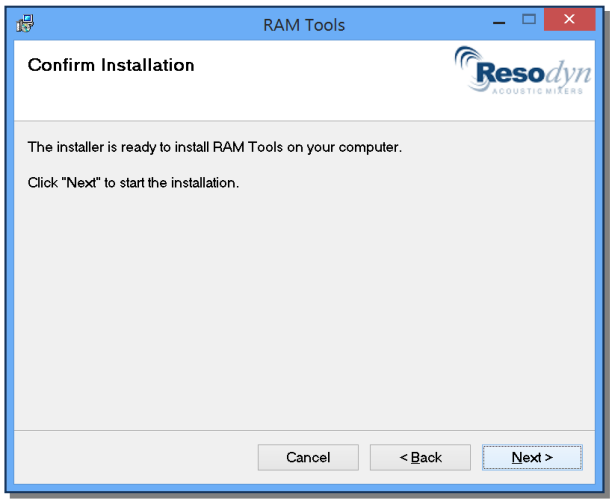


3. The RAM Viewer installation will begin.

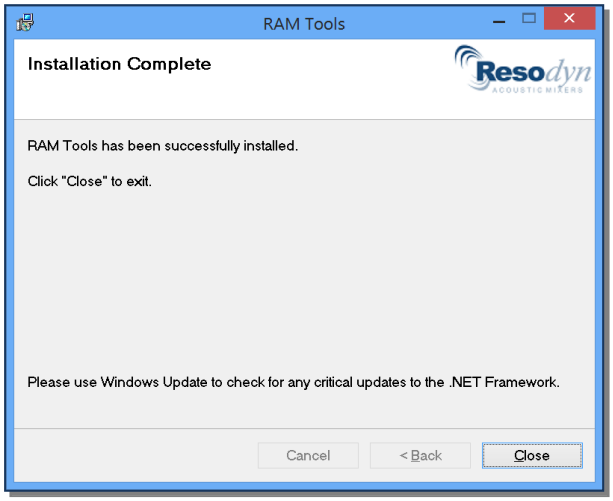


4. If using Windows Vista, Windows 7, or Windows 8, the UAC dialog will appear asking for Administrator credentials. After credentials are provided, the RAM Tools installer will start and the following dialog will appear. Click the Next button. The "Confirm Installation" dialog will appear. Click Next.





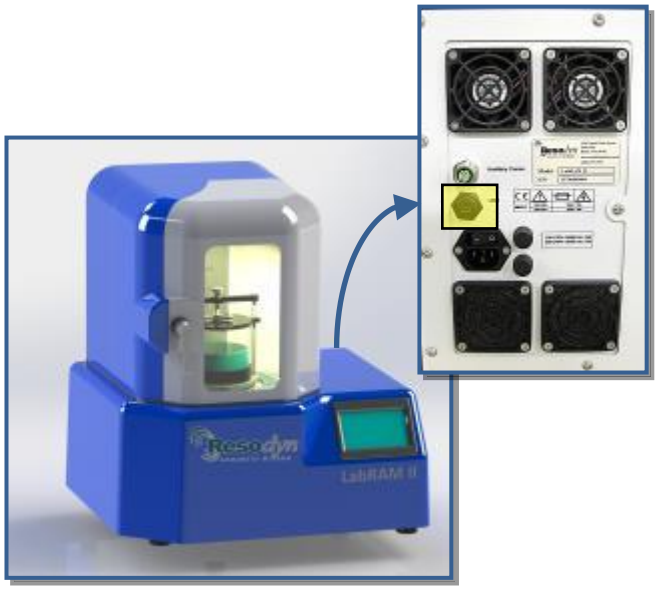
5. The installer will run and the completion dialog below will appear. Click Close. That completes the RAM Tools application installation.



Driver Installation

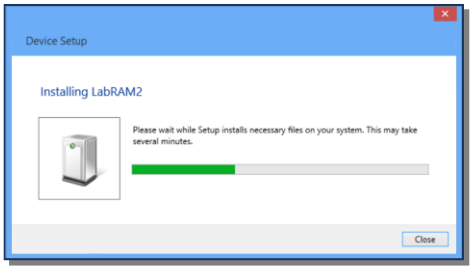
In order to obtain the files from the LabRAM II, a USB driver must be installed on the Windows PC. Again, administrator login is required to accomplish this task.

Find the USB connection on the back of the LabRAM II. A Mini USB cable is required to plug into the back of the LabRAM II and a standard USB connection for the PC. The USB connector is highlighted in yellow on the image to the right.

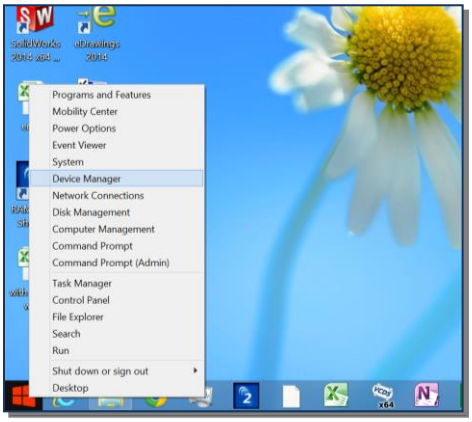


Windows 8 Driver Installation

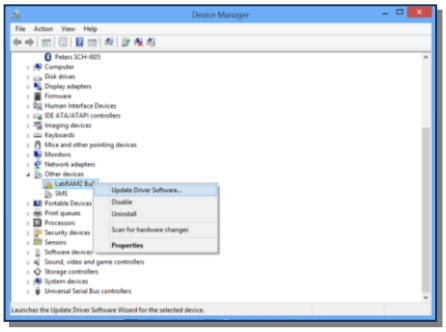
1. The first step of the driver installation process is to identify whether your PC is 32-bit (x86) or 64-bit (x64) because this will dictate which driver is selected. Per Microsoft Support:
    a. Swipe in from the right edge of the screen, and then tap Search. Or, if you are using a mouse, point to the lower-right corner of the screen, and then click Search.
    b. Type “system” in the search box, and then tap or click Settings.
    c. If you are running a 64-bit version of Windows 8, “64-bit Operating System” is displayed in the “System type” field under the “System” heading. If you are running a 32-bit version of Windows 8,”32-bit Operating System” is displayed in the “System type” field under the”System” heading.
2. Turn power on to the LabRAM II. At this point the Window PC will try to find a suitable driver for the LabRAM II. Close/cancel any attempts by the operating system to find a suitable driver.



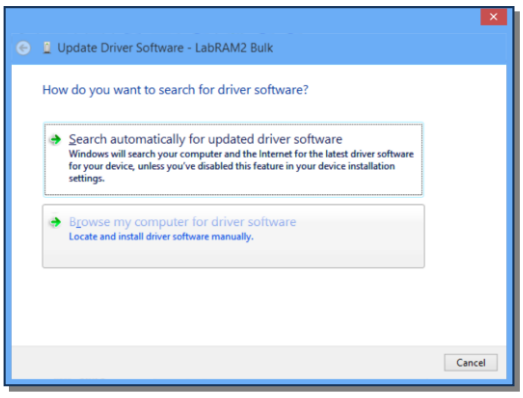
3. Right click on the Start button Window icon and select Device Manager.



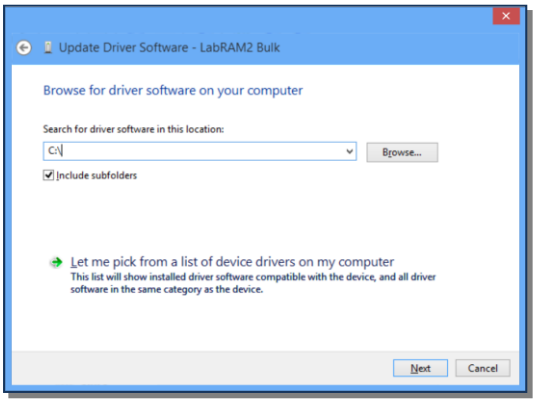
4. "LabRAM2 Bulk" icon should be located under "Other Devices". Right click on "LabRAM2 Bulk" and select "Update Driver Software".

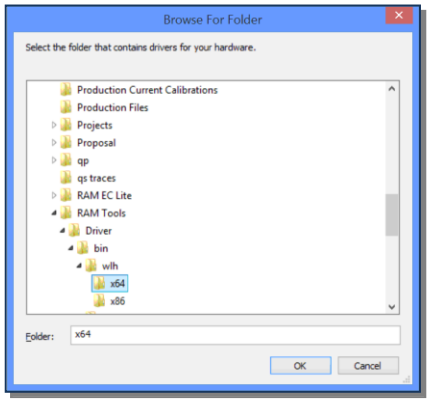


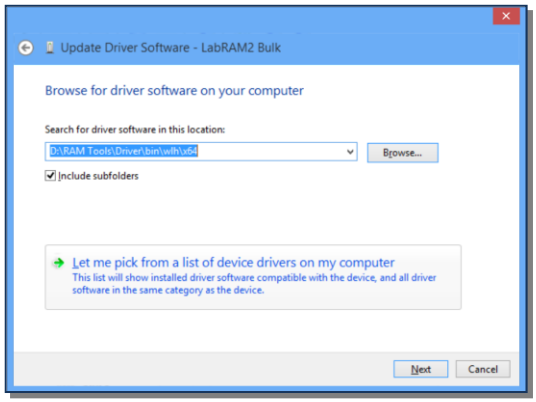
5. Select "Browse my computer for driver software" in the following dialog.



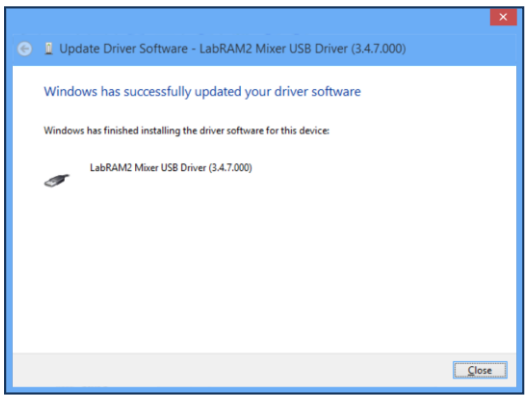
6. Browse to the “Driver” folder on the installation disk. For 64-bit versions of Windows 8, select the Driver\bin\wlh\x64 folder. For 32-bit versions of Windows 8, select the Drivers\bin\wlh\x84 folder. Then click OK.

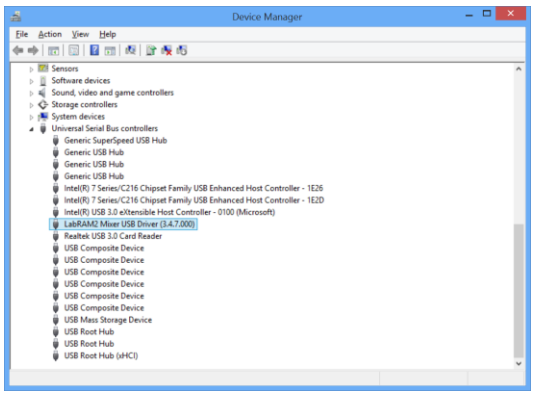






7. Click Next on the following dialog.
8. In the Windows Security dialog that appears, select “Install”.
9. When the driver installation is complete/successful, the dialog below will be displayed. Close this dialog. Driver installation is complete. “LabRAM2 Mixer USB Driver ….” should now be under “Universal Serial Bus controllers” group in the Device Manager.

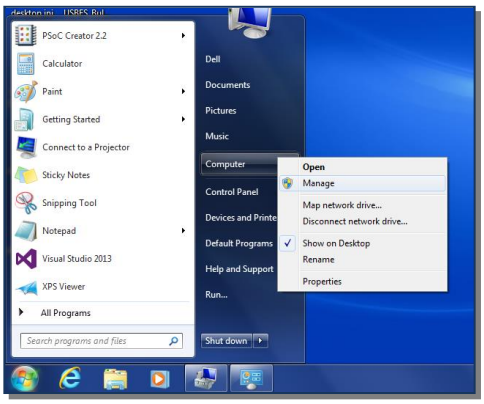




Windows Vista/7 Driver Installation

1. The first step of the driver installation process is to identify whether your PC is 32-bit (x86) or 64-bit (x64) because this will dictate which driver is selected. Per Microsoft Support:
    a. Click Start

    b. Type system in the Start Search box, and then click System in the Programs list.
    c. The operating system is displayed as follows:
        i. For a 64-bit version operating system, “64-bit Operating System” appears for the “System type” under System.
        ii. For a 32-bit version operating system, “32-bit Operating System” appears for the “System type” under System.
2. Turn power on to the LabRAM II. At this point the Window PC will try to find a suitable driver for the LabRAM II. Close/cancel any attempts by the operating system to find a suitable driver.
3. Click Start in the task bar. Right click on Computer and select “Manage”. Supply admistrator credentials or click yes on the UAC dialog that appears.



4. From this point forward, the installation process for Windows 7 is identical to that explained in the Windows 8 section. Please follow steps 3 – 8 in that section to complete driver installation

Windows XP Driver Installation

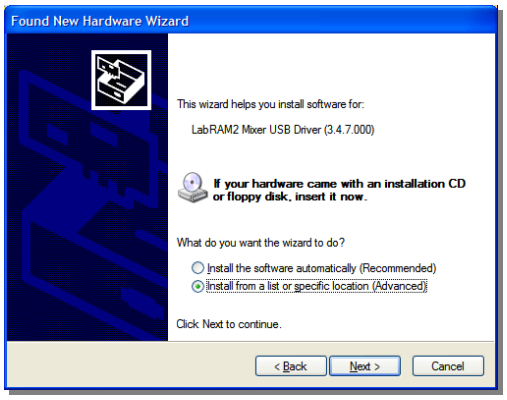
1. The first step of the driver installation process is to identify whether your PC is 32-bit (x86) or 64-bit (x64) because this will dictate which driver is selected. Per Microsoft Support:
    a. Click Start, and then click Run.
    b. Type sysdm.cpl, and then click OK.
    c. Click the General tab. The operating system is displayed as follows:

i. For a 64-bit version operating system, Windows XP Professional x64 Edition Version < Year> appears under System.

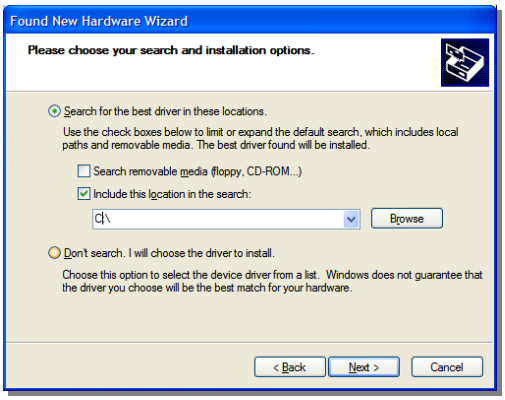
ii. For a 32-bit version operating system, Windows XP Professional Version <Year> appears under System.

2. Turn power on to the LabRAM II. In the "Found New Hardware Wizard", select the "No, not this time" radio button and then click on the Next button.

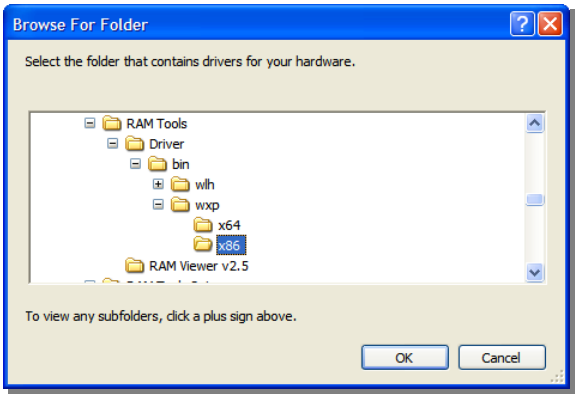
3. In the next dialog, click on the "Install from a list of specific location (Advanced)" and then click Next.



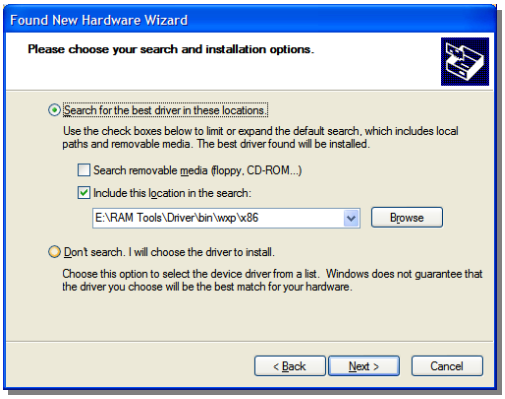
4. Click the “Search for the best driver in these locations.” radio button and then the “Include this location in the search:” check box. Click the Browse button.



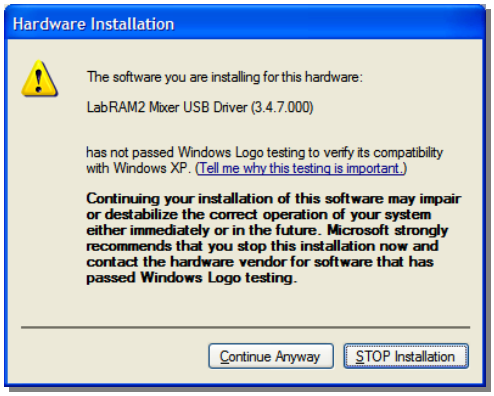
5. Navigate to the installation media’s Driver\bin\wxp folder. Select x86 for a 32-bit installation of Windows XP, or x64 for 64-bit Windows XP. Then click OK.



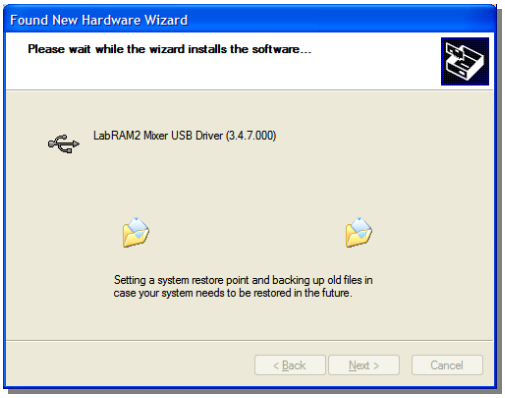
6. Click next on the “Found New Hardware Wizard” dialog reappears.



7. Click “Continue Anyway” on the Hardware Installation dialog.



8. The driver installation process will begin.



9. When complete, the dialog below will appear. Click Finish. The driver has now been loaded into the operating system.

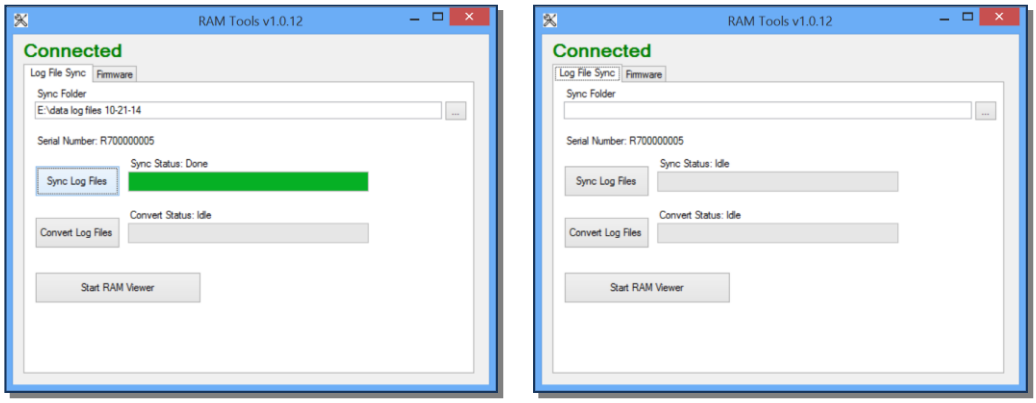
RAM Tools

Launch RAM Tools from the Resodyn Acoustic Mixers group using the preferred method of launching applications. The application uses a simple tab format layout. Currently, there are only two tabs which are “Log File Sync” and “Firmware”. The “Log File Sync” tab is used to copy files from the LabRAM II, convert them and then view them in RAM Viewer. The “Firmware” tab is used to update the operation firmware of the LabRAM II.

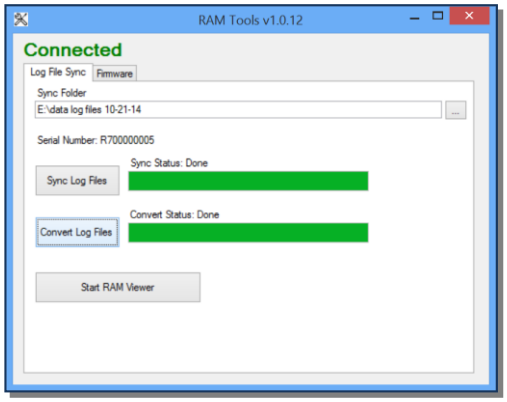
The top Connected/Disconnected message notifies the user of connection status to the machine. In order to perform any activities with RAM Tools, this message should be green and say “Connected” as shown below.

RAM Tools – File Synchronization, Conversion, and RAM Viewer

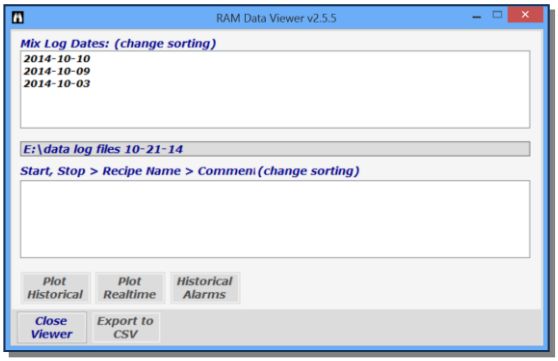
The first step is to select a destination directory on the Windows PC to store the log files. Click the “…” button to the right of the “Sync Folder” textbox and select the destination folder. Click the “Sync Log Files” button to begin the synchronization process. All new/updated files on the LabRAM II will be copied to the destination folder in a sub-folder called “Raw Log Files”. Depending on file size, synchronization can take several minutes. When the process is complete, the message above the progress bar will read “Sync Status: Done”. Note that these files are not in a format that is compatible with RAM Viewer and must be converted.



To convert the raw log files into a RAM Viewer compatible format, click the “Convert Log Files” button. Again, only files that need to be updated will be created/modified. This process may also take several minutes depending on file sizes. When the conversion process is complete, the message above the progress bar will read “Sync Status: Done”.



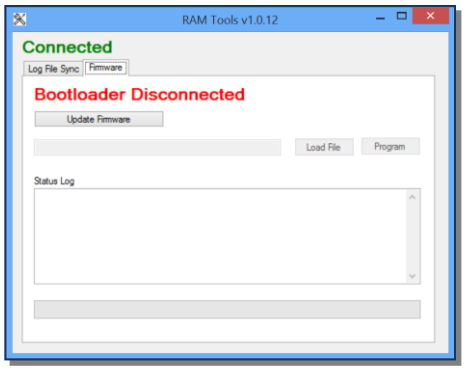
To view the data in RAM Viewer, click the “Start RAM Viewer” button. RAM Viewer is an application used to more easily evaluate RAM Mixer data. RAM Viewer will start and will be pointed to the directory where the converted files are located. At this point, RAM Viewer can be operated normally.



RAM Tools – Firmware Update

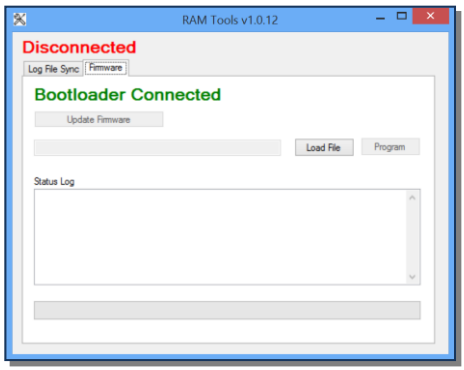
Make sure your LabRAM II family machine is turned on, your computer with RAMTools installed is connected to the LabRAM II, and the driver has been installed before starting the firmware update.

RAM Tools is also used to update firmware on the LabRAM II series of mixers. Resodyn Acoustic Mixers

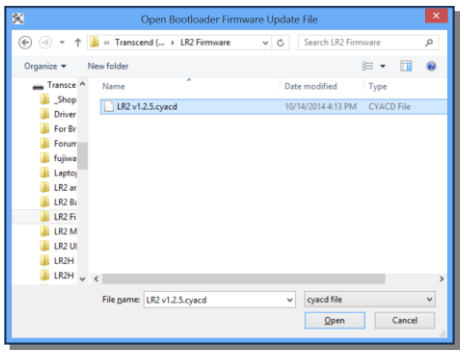


will need to provide a file with a *.cyacd file extension to execute a firmware update. In RAM Tools, click on the "Firmware" tab. To begin the firmware update, click the "Update Firmware" button.

The top connection message will change to red color and read "Disconnected", and the connection message in the "Firmware" tab will change from red to green and will read "Bootloader Connected".

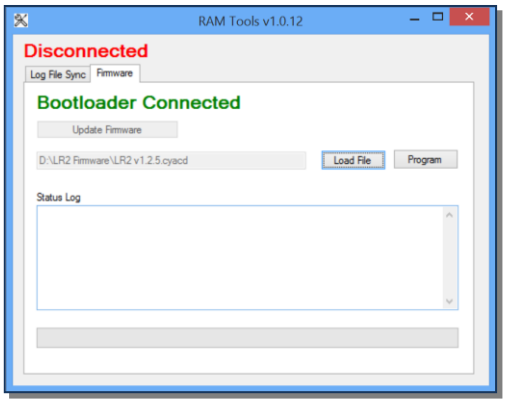


Click the "Load File" button and browse to the *.cyacd provided by Resodyn Acoustic Mixers. The file path will appear in the text box. Click "Program" to flash the new firmware to the LabRAM II.

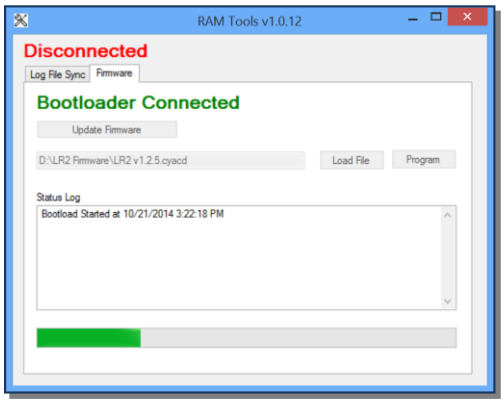


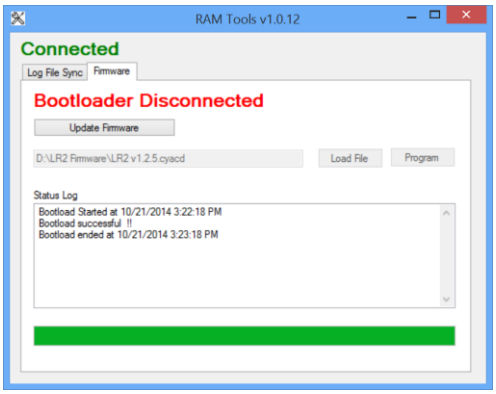
⚠	**NOTE:** The mix chamber light in the LabRAM II will turn off and the HMI screen will say "HMI Comms Failure" in the status bar. This is the correct behavior.

On the LabRAM II, the mix chamber light will turn off and the HMI screen will say "HMI Comms Failure" in the status bar.



Status messages will be printed to the "Status Log" text box and the progress bar will be begin updating. The process should take around 1 minute. When complete, a "Bootload ended at…" message will be printed to the "Status Log" textbox, the top connection message will change back to a green "Connected", and the bootloader connection will go back to a red "Bootloader Disconnected". On the LabRAM II, the mix chamber light will come back on and the HMI screen will reset.





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