

## How to Use the Pulsed Frequency® Software on a Mac Computer

The Pulsed Frequency™ suite of software was developed for the Windows 10 operating system. This can be a problem for people who own Macintosh computers because the software can't be run natively on them. Fortunately, there is a solution that allows Mac users to run the Pulsed Frequency software.


### **Required Software**


There are two pieces of software that you need to do this. Virtual hosting software (free) and a copy of Windows 10. The free virtual hosting software was developed by Oracle and is called VirtualBox. You can download VirtualBox to your Mac by going to this link <https://www.virtualbox.org/wiki/Downloads> and clicking on the **OS X hosts** link. You will likely be prompted to save the Mac OS X image file VirtualBox - **Version\_Info**-OSX.dmg (approximately 90 MB), where **Version\_Info** is the latest version of the VirtualBox software. When you download it, make sure you know the name of the folder in which the software has been downloaded.

The other software you need is Windows 10 64-bit. To find a reseller of the software, enter the name of the software in a search engine's box ([www.google.com](http://www.google.com)), hit the Enter key, and a number of software resellers will be displayed. Purchase the 64-bit version of the software from the vendor of your choice. You should receive a 25-character product key in the format xxxxx-xxxxxxxxxx-xxxxx-xxxxx (typically via email), where the letter 'x' represents one of the characters in the product key. After you have obtained the product key, download a disk image (called an ISO file) of Windows 10 64-bit by going to <https://www.microsoft.com/en-us/software-download/windows10> and entering your 25-character product key. Again, make sure you know the name of the folder where the Windows 10 64-bit ISO file has been downloaded.

### **VirtualBox Installation**

The installation of VirtualBox can be accomplished via the following steps:

1. Go to the folder where the VirtualBox disk image file has been downloaded and double-click it.
2. Click the  icon with the label **VirtualBox.pkg**.
3. Click the **Continue** button (twice).


4. Click the **Install** button. You will be prompted to enter the password you use to log into your Mac.
5. Click the **Install Software** button.
6. You should get the message, "**The installation was successful.**" Click the **Close** button.
7. You may want to copy the **UserManual.pdf** file and the **VirtualBox\_Uninstall.tool** file to a folder on your Mac.
8. To launch VirtualBox, go to the Applications folder  and double-click


the VirtualBox icon



### Windows 10 64-bit Installation

To install Windows 10 64-Bit as a "virtual guest operating system" within VirtualBox, perform the following steps:

1. Launch VirtualBox.
2. Click on the New icon .
3. Enter a name for your Windows virtual guest operating system in the **Name:** field, e.g. "Windows 10 x64".
4. Select **Microsoft Windows** in the **Type:** field.
5. Select **Windows 10 (64-bit)** in the **Version:** field.
6. Click the **Continue** button.
7. Leave the **Memory size** at the default **2048 MB** value.
8. Click the **Continue** button.
9. Leave the radio button on the option **Create a virtual hard disk now** and click the **Create** button.
10. Leave the radio button on the option **VDI (VirtualBox Disk Image)** and click the **Continue** button.
11. Select the radio button on the option **Fixed size** and click the **Continue** button.
12. If you entered a name in Step 3, you will already be filled-in the Path field. Leave the size of the virtual hard disk at the default value of **50.00 GB** (this assumes that you have at least that amount of disk space on your Mac) and click the **Create** button.
13. After the virtual hard disk has been created, you will be back at the Oracle VM VirtualBox Manager page. On the left, you will see the virtual machine you just created, **Windows 10 x64**. Click that.
14. On the toolbar at the top, click the **Settings** button.

15. In the toolbar at the top, click the **Storage** button.
16. Under the Controller list on the left, click the icon that looks like a CD-ROM.
17. On the right where it says Optical Drive, click the CD-ROM icon. A drop-down list will appear. In that list select, "**Choose a disk file.**"
18. Browse to the folder that contains the Windows ISO image, and select the file, e.g. **Win10\_20H2...lish\_x64.iso**, then click Open.
19. Click OK.
20. Click the Start button on the toolbar. 
21. VirtualBox should now start the Windows 10 64-bit installation process.
  - a. Click the **Next** button.
  - b. Click the **Install now** button.
  - c. Enter 25-character Product Key in the box provided, then click Next.
  - d. Select Windows 10 Pro from the dropdown list.
  - e. Check the box labeled **I accept the license terms** and click the **Next** button.
  - f. Click the **Custom (advanced)** option to install a new copy of Windows.
  - g. Click the **Next** button.
  - h. The installation program will now install Windows 10 64-bit. (**Note:** This will take some time to complete.)
  - i. When it asks about the Region, confirm it's on the United States, then click Yes.
  - j. Confirm the keyboard is set to US, then click Yes.
  - k. When asked to add a second keyboard, click Skip.
  - l. Type in a **user name** to log into Windows in the box provided. You can leave the **computer name** as it appears in its own box. Click the **Next** button.
  - m. Enter a password for the user name if you want to. If not, leave the field blank. Click the **Next** button.
  - n. Choose the privacy settings you want, then click Accept.
  - o. On the screen asking whether you want to use Cortana, click Not Now.
  - p. When Windows boots to the desktop, on the right side of the screen, it will ask if you want to allow your PC to be accessible on the network. Click the Yes button.
  - q. In the lower right-hand corner of the screen, it will ask about using Microsoft Edge. Click Maybe Later.
  - r. Right-click on the Desktop and select Display Settings.
  - s. Scroll down and in the Display Resolution drop-down list, select 1600x1200.

- t. At this point, the Virtual Machine has been created. Go back to the Oracle VM VirtualBox Manager, right-click on the Windows 10 x64 entry on the left and select Snapshots.
- u. In the Description field, enter "Windows 10 x64 installed." Then in the lower left, click Take. This will take a snapshot of the virtual machine in its current state.
- v. At this point, your Windows 10 virtual machine has been created and saved.

### **Installing the Pulsed Frequency Software**

From the virtual machine, you can use Microsoft Edge to download the Pulsed Frequency Software. If you wish, you could download and install Google Chrome or Firefox. But, the following directions assume you are using the Edge browser.

Open the browser, then go to <https://pulsedfrequency.com/user> and login to your account. If you don't have an account, you can create one. After logging in, click the Software menu item, point to Download, point to Pro, then click the name of the software you want. The website will then go to another page where there will be a **Download** button. Click the button and then follow these instructions:

1. In the lower left corner of the browser window, you will see a progress bar showing the download progress. Click the ellipsis button (the three dots) to the right of the progress bar, then select **Open when done**.
2. After the download finishes, there may be a **Delete** button appear with an ellipsis button to the right. Click the ellipsis button and select **Keep**.
3. The browser may go to another page where a dialog box appears. It will have two choices, Delete and Cancel. Don't click the buttons, instead click down arrow to the right of Show More and select **Keep Anyway**.
4. Next, up towards the top center of the page, select **Open downloads folder**.
5. In the window that opens, double-click the EXE file that begins with "PulsedFrequency...".
6. A blue dialog box will open that says, "Windows protected your PC." Click the **More Info** link, then click the **Run anyway** button. The installation program for the software will run.
7. Another dialog box will open that asks you if want to run the app, click **Yes**.
8. The installation program will run and on the Welcome page, click **Next**.
9. On the next page, select "I accept the terms of the license agreement", then click **Next**.
10. On the next page, click **Next**.
11. Now click **Install**.

12. At this point, the drivers for the software will be installed. To do this, click **Next** on the first page.
13. On the next page, select "I accept the agreement" and click **Next**.
14. Then click **Finish**.
15. Control will be returned to the Pulsed Frequency installation program. On this page, click **Finish**.
16. Your software is now installed. Double-click the shortcut on your device. The shortcut will be named after the device you purchased.
17. When the installation program runs, it will check for updates from the server. Since this is the first time running the software, the file banks will need to be downloaded. When given the choice, click the **Update Now** button.
18. The file banks will be downloaded and copied to the appropriate place. When it finished, press the OK button.
19. The software is now ready to use.

### **Using your Device on the Mac**

Plug the USB cable into your device, then plug the other end into a USB port on your Mac. On the status bar at the bottom of the virtual machine windows, on the right-hand side, move your cursor over each of the icons displayed. Find the one that looks like the end of a USB cable. When the cursor is hovering over it, a tooltip will probably be displayed that says, "No USB devices attached." Click the icon and a list will display. Select the item that says, **FTDI FT232R USB UART**. When you do this, you will hear a connection sound coming from your computer. Your Wellness device is now connected and you may use the Pulsed Frequency software to program it.

### **Closing the Virtual Machine**

When you are finished using the virtual machine, you can just shut down Windows like you would with any Windows computer. Just click the Flag button at the lower left corner, click the **Power** button, then click **Shutdown**. The current state of the virtual machine will be saved for next time.

The next time you wish to use the Pulsed Frequency software, just select the **Windows 10 x64** virtual machine again, then click the **Start** arrow button.