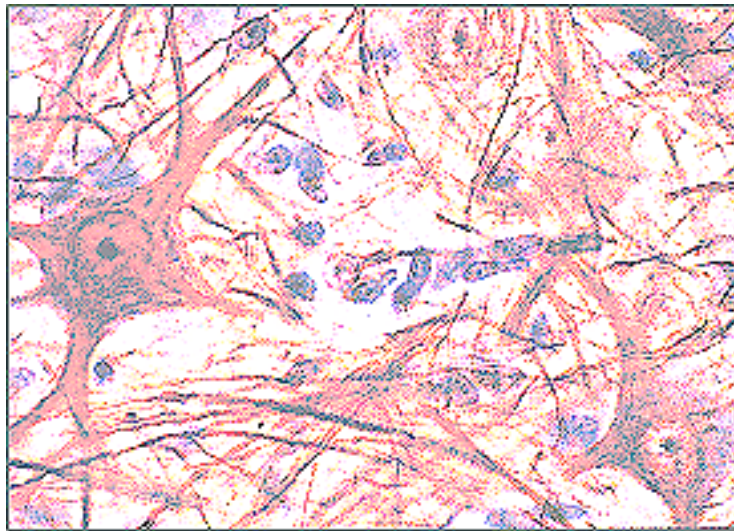


# Tinnitus Tamer



## User Guide

*Version 400 (Macintosh)*



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*To navigate to a page in Adobe Reader, click on the thumbnail tab in Adobe Reader to show thumbnails of the pages, then click on the thumbnail with the page number you want to see.*

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*In the text that follows the Tinnitus Tamer 4 is usually referred to as Tinnitus Tamer, when the text applies to all version of the Tinnitus Tamer*

## ***Tinnitus and the Tinnitus Tamer***

It has long been known that Tinnitus is not caused by sounds originating in the ear. Recent innovations in medical imaging techniques have made it possible to show that Tinnitus sounds are generated by activity in the auditory neural system in the brain. However, the exact nature and cause of this activity has not yet been determined.

The striking similarities between the Tinnitus sounds and the sounds produced by positive feedback in electronic circuits suggest that Tinnitus is caused by positive feedback between neurons in the sound-processing portion of the brain.

All learning takes place by weakening some and strengthening other axon connections in the brain.

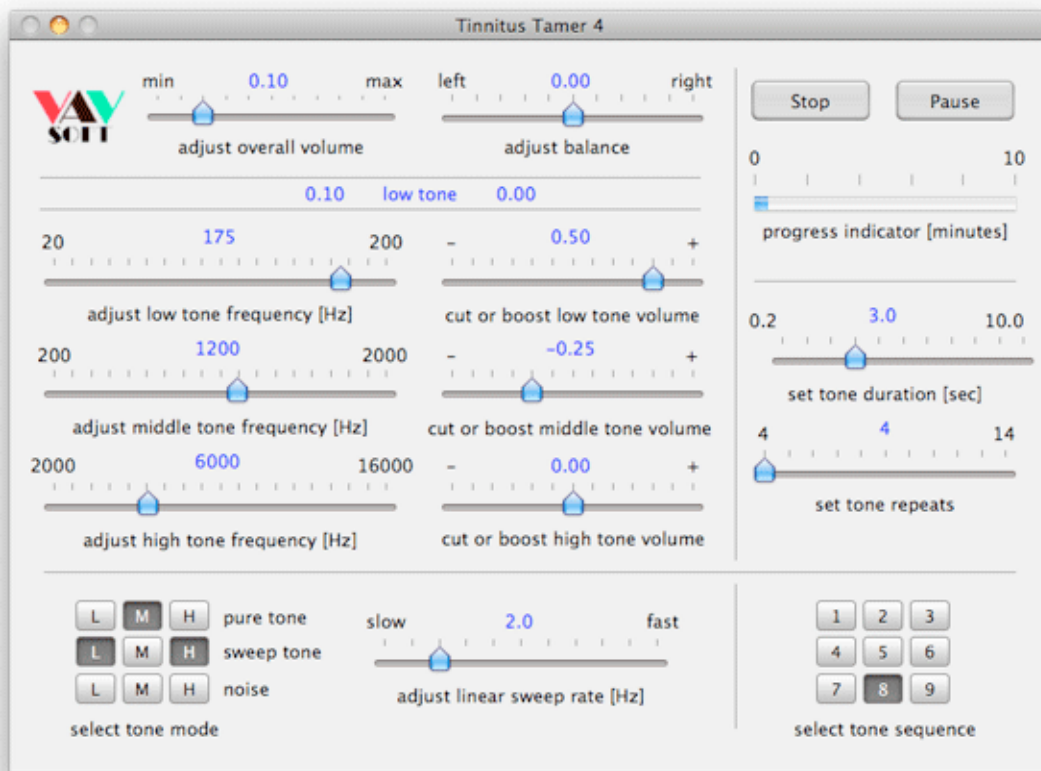
The Tinnitus Tamer uses sequences of special sounds and silent periods. When you listen to these sounds it retrains the neural networks in the brain by first weakening, and then eliminating the positive feedback that creates the Tinnitus.

Thus, the Tinnitus Tamer uses the resources of your own body to take care of the Tinnitus in a natural way.

When you first start using the Tinnitus Tamer, we recommend that you run three training sessions every day. After a few weeks of training sessions, the Tinnitus Tamer will have reduced your Tinnitus so that you are no longer aware of your Tinnitus between sessions. You will have to concentrate on your Tinnitus to hear it, and even then, it will no longer be annoying.

Many Tinnitus sufferers will find that the Tinnitus Tamer completely eliminates the Tinnitus.

## Fast Start



1. You may put the Tinnitus Tamer 4 folder anywhere on your computer, but we suggested that you put the Tinnitus Tamer 4 folder into the Applications folder.
2. To improve your Tinnitus you must use Tinnitus Tamer with earphones. Listening to the tones over loudspeakers will not help your Tinnitus. For now, use any pair of earphones you have handy. After you had your first session with Tinnitus Tamer, read the section on earphones to find out which earphones will give the best results.
3. Double-click the Tinnitus Tamer 4 Icon to start it.
4. You will see a window looking as shown above.
5. Click the **Play** button to start Tinnitus Tamer playing the a sound sequence from the start. The name of the button will chance to **Stop**.
6. Click the **Pause** button to temporarily stop the sound sequence from playing. The name of the button will chance to **Resume**.

7. Adjust the tone level to a comfortable level using the slider labelled **adjust overall volume**. If your keyboard has volume keys, you can use them for additional control.
8. If your hearing is better in one ear than the other, adjust the left to right balance using the slider labelled **adjust balance** until you perceive the sound to be at the same level in each ear.
9. Listen to a tone sequence to get a feel for the Tinnitus Tamer. A tone sequence will run for 10 minutes. The **progress indicator** will show you how the tone sequence is progressing.
10. To listen to another tone sequences, click one of the eight **select tone sequence** buttons that are light grey.
11. To create a sound file of a tone sequence, select **File > Create file from Current Tone Sequence** from the Tinnitus Tamer menu.
12. To quit the Tinnitus Tamer at any time press Command-Q, or select **Quit Tinnitus Tamer** from the **Tinnitus Tamer 4** menu.

### ***Important Note***

If you are initially overwhelmed by the many controls, just start training with one of the nine tone sequences that are provided with the Tinnitus Tamer. Select one that appears to make your Tinnitus less bothersome. This is usually a sequence, which contains sounds similar to your Tinnitus.

At each training session, try to get familiar with one other control by trying out different settings.

But remember, just as it is possible learn a language by just listening to it, it is possible to successfully use the Tinnitus Tamer by just using it.

## ***How does the Tinnitus Tamer Work?***

### **Where do we perceive Tinnitus?**

In about 96% of all Tinnitus cases, there is no detectable physical cause.

It has been known for a long time that people with amputated limbs can feel pain, itching, heat, or cold at specific parts of the limb they no longer have.

When, in a group of people, the loudness of the Tinnitus was measured by comparison with calibrated test tones, it was found that the loudness of the Tinnitus was not related to the irritation it caused.

In the past, some people had such severe Tinnitus that they had their aural nerve cut by a surgeon. This made them deaf in the ear with the cut nerve. However, in most cases this did not stop the Tinnitus, hence this operation is no longer performed today.

In recent years, PET scans of the brains of Tinnitus sufferers have confirmed that the Tinnitus sound does not originate in the cochlea or other parts of the ear. It originates from within the central auditory system in our brain.

***Tinnitus does not originate in the ear. It originates in the central auditory system and is perceived by the consciousness centre in our brain.***

### **What Determines How Loud We Perceive a Sound?**

Obviously, a sound with a higher sound pressure level is louder than a sound with a lower sound pressure level, everything else being equal.

However, most of the time, everything else is not equal.

We have all heard of, or experienced, situations where there is a continuous noise in the environment. Yet, we barely perceive it, after we got accustomed to it. The brain is obviously capable of selective hearing. It can decide not to hear a sound, although the signal is passed from the ear through the auditory nerve to the hearing centre in the brain. The hearing centre decodes the signals sent by the ear, and in conjunction with some importance criteria, decides how loud the sound is presented to our consciousness.

The opposite effect has also been observed. An example frequently quoted is the ability of a mother to pick out very faint distress sounds from her child in environments filled with lots of other loud sounds. The low-level sounds from the child are passed from the ear, through the auditory nerve, to the hearing centre in the brain mixed with much louder other sounds. The auditory nerve centre decodes the signals sent by the ear, and in conjunction with some importance criteria, presents the child's sounds to the consciousness at an enhanced level.

We all have experienced that when we are deeply involved with what we are doing, such as being absorbed by a book, we do not hear many sounds that are present in our environment. This may go so far that we do not respond to our own name.

The carotid artery runs right next to the inner ear and yet we usually do not hear the pulse or heart sounds that are carried in the artery.

***The loudness of a sound as perceived by our consciousness does not necessarily reflect the true physical loudness of the sound received by the auditory centre in our brains, but is modified by the importance of the sound to our well being.***

Our inborn subconscious and past experiences determine how loud a sound is perceived. In animals, the sound of a predator is enhanced, as is the sound of a potential prey. Our brains enhance sounds that might be an indication of danger to us, or our social group. On the other hand, sounds that have no association with danger or pleasure and that have no meaning are perceived at a low level.

***This has a great impact on Tinnitus. If we perceive Tinnitus as a threat to our well being, the Tinnitus sound will be presented to our consciousness at a level out of proportion to the strength of the signal from the auditory nerve centre.***

### **How Do We Perceive Silence?**

Our first intuition would be to say that in the absence of sound, our ears send no signals to the auditory nerve centre in our brain. This turns out to be wrong. Measuring the signals in the auditory nerve has shown that when no external sounds are perceived by the inner ear, the auditory nerve carries random signals to the brain. The auditory centre recognises these random signals as an indication that no external sound is present, and does not pass this signal as noise to our consciousness. This is another example of sound filtering done in the brain. We may even speculate that this random noise plays a role in how our brain adjusts the sensitivity threshold of our hearing.

***How our auditory nerve centre perceives and processes silence is as important as how it perceives and processes sounds.***

### **Why does the Tinnitus Tamer use Low Frequencies?**

The middle ear contains two tiny muscles, tensor tympani and stapedius, which play an active role in the functioning of the ear. Lack of tone in these muscles prevents the transmission of certain frequencies to the inner ear. The Tinnitus Tamer uses the low frequencies to exercise these tiny muscles. As their muscle tone improves, the transmission of external sounds to the inner ear also improves, the sensory cells, the hairs, in the inner ear is stimulated and restored to better respond to all frequencies.

In addition, lack of muscle tone in the stapedius may also impede the ear's ability to adjust and balance the fluid pressure in the inner chambers.

### **Why does the Tinnitus Tamer use Mid Frequencies?**

The normal ears are not equally sensitive to all frequencies. They are most sensitive at the centre of the audible frequencies, at about 2 kHz. Frequencies in this range help the ears to establish a proper relationship between the low and high frequencies.

### **Why does the Tinnitus Tamer use High Frequencies?**

Tinnitus is frequently perceived in the higher frequency range. If your Tinnitus is in that range, you should, in most but not all sessions, include frequencies that are close to the one you perceive as your Tinnitus. Because Tinnitus is generated within the brain rather than coming from the ears, it is normal that most people can not exactly match Tinnitus with an external sound. Using the **Pure**, **Sweep** or **Noise** tone modes of the Tinnitus Tamer makes it easier to mimic certain Tinnitus sounds.

### **Why does the Tinnitus Tamer use Fast Repetitions?**

Fast repetitions train your ears to perceive tones rapidly switching from one ear to the other, and tones rapidly switching between tones and silent periods. Put another way, you train your ears to perceive silence to move from one ear to the other, or to come and go.

Very fast switching rate can produce a mild but beneficial confusing affect.

### **Why does the Tinnitus Tamer use Slow Repetitions?**

Slow repetitions allow you to concentrate and compare the absence of sound with the sound when it was present. After a while you will be able to better hear the silence, that is, you will hear less Tinnitus.

### **Why does the Tinnitus Tamer use Silent Periods?**

As mentioned before, during periods of silence, the inner ear transmits random signals through auditory nerve to the brain. When the Tinnitus Tamer alternates sounds and silent periods, it challenges the auditory nerve centre in the brain to decode sound as sound, and random nerve signals as silence.

### **When should I use the Sweep tone mode?**

Many types of Tinnitus respond better if the frequency is varied as it is being played.

Depending on how your Tinnitus sounds to you, the sweep control can also help you to create a sound that is similar to your Tinnitus sound. For example, some people perceive their Tinnitus as a *motor-boating* sound, which can be imitated

by setting the Sweep control to a low sweep rate at a low frequency. Others perceive their Tinnitus similar to bird chirping, which can be imitated by setting the Sweep control to a fast sweep rate at a high frequency.

However, even if your Tinnitus is not *motor-boating* or *chirping*, you should use sweep tones in some of your training sessions.

**When should I use the Noise tone mode?**

If you perceive your Tinnitus as noise, the Tinnitus Tamer can imitate the sound by selecting the Noise tone mode.

However, even if you perceive your Tinnitus as noise, you should include pure or sweep tones in your training regimen.

**How long do I have to use the Tinnitus Tamer to eliminate the Tinnitus?**

The time required to completely eliminate the Tinnitus varies from one individual to the next. However, most users find that they notice a reduction in their Tinnitus after using the Tinnitus Tamer for a few weeks. You may have to use the Tinnitus Tamer for six months, or possibly even longer, to completely eliminate the Tinnitus. Do not be discouraged by this. Think how well you will feel after you get rid of your Tinnitus.

The faster you use the Tinnitus Tamer after you first perceived the Tinnitus, the shorter will be the time to first reduce and then eliminate the Tinnitus.

It would certainly be nice if you could take a pill that would immediately rid you of your Tinnitus. Unfortunately, such a pill does not exist. And should there ever be one, it will probably have as many terrible side effects as many other drugs have.

The Tinnitus Tamer uses the resources of your own body to take care of the Tinnitus in a natural way. However, you have to make up your mind to work on this problem to make it go away. It will not be as simple as taking a pill. It will take time and patience, but getting rid of your Tinnitus will make it worth the effort.

## ***Medical Advice You Should Seek***

If you have not already done so, you should consult your doctor and an Ear-Nose-Throat specialist to re-assure yourself that the sounds you hear are nothing more than Tinnitus.

This is important for two reasons.

If there is an underlying cause you will want to have it treated.

If no physical cause for your Tinnitus can be detected, you can put your mind at ease that it is not a sign of a serious medical condition. This is extremely important, because as long as you perceive Tinnitus as a threat to your physical well-being, your consciousness will perceive your Tinnitus louder than it actually is.

However, should you be told that nothing can be done about your Tinnitus, please take that to mean only that the person telling you this can do nothing about your Tinnitus. While that person may not be able to do anything for your Tinnitus, you can do something about it using the Tinnitus Tamer!

## ***Getting the Most Out of the Tinnitus Tamer***

**Concentrate on the sounds** produced by the Tinnitus Tamer. Listening to the Tinnitus Tamer while doing other things is not as effective as intently concentrating on the sounds produced by the Tinnitus Tamer.

**Set the sound levels to be comfortable, no louder.**

When you start out, try to run **three ten-minute sessions each day**. If convenient, do one in the morning, one during your lunch break, and again before going to bed. As your Tinnitus subsides, you might use the Tinnitus Tamer only as you feel the need for it.

Also use the Tinnitus Tamer when your Tinnitus bothers you, because using the Tinnitus Tamer is likely to reduce the perception of your Tinnitus sound.

Use the **adjust balance** slider to set for equal sound level in both ears at the mid frequency. This is best done with a fast tone duration around one second.

Use the **adjust overall volume** slider to adjust the sound level when the mid frequency is playing. Because the human hearing response is not linear, there will be situations where reducing the adjust overall volume slider to a very low setting, will make the high or low frequencies imperceptible. Use the **cut or boost** low tone volume, cut or boost mid tone volume, and cut or boost high tone volume sliders to make the low, middle, and high tones play at about the same level. The Tinnitus Tamer is designed to limit the amount you can boost or cut a tone.

Adjust the low frequency volume only as high as you can hear the sound more or less as a pure tone. How high a volume you can use depends on your individual hearing curve and on the low frequency response of your earphones. It is normal that you will have to set the **cut or boost low tone volume** slider to positive value.

For some sessions, try to set one of the tones to be similar to your Tinnitus sound you hear. For other sessions, set it slightly lower or higher than your Tinnitus. Depending on how your Tinnitus sounds, this may require the use of the Sweep or Noise tone modes.

Select **sweep tones** by clicking one of the nine buttons in the lower left of the window. The adjust sweep rate control will be visible in the lower centre of the Tinnitus Tamer window. To mimic your Tinnitus sound, adjust the low, middle, or high tone, as appropriate, and the **adjust sweep rate** slider. If you are in Basic Tone Mode, clicking any of the three buttons in a row will activate all three buttons. If you are in Advanced Tone Mode, click the button corresponding to the frequency you want to sweep.

***Do not set the high frequency to a value beyond your hearing range and increase the high frequency volume to a high level trying to hear the tone.***

At some time, set the high frequency volume so low that you can barely hear the sound. Then slowly change the high frequency, with the **pure tone** button selected, and listen for the sound to increase or decrease at a certain frequency in either one ear or the other. The increase or decrease usually occurs over a range of frequencies rather than at one specific frequency. Use the centre of the increased or decreased frequency range for some Tinnitus Tamer sessions with and without the sweep button being selected. You may find that, over time, the spots at which the sound gets softer or louder will occur at different frequencies, or you may find that the peaks and valleys in your hearing curve may disappear altogether.

When the sound switches from the left to the right ear and back, concentrate on where it is. It may help if you close your eyes and move them to the side from which the sound is coming, or up and down when the sound appears and disappears in both ears simultaneously.

***Concentrating on the sound while running a tone sequence will improve your Tinnitus much faster compared to listening to the tone sequences while doing other things, such as reading a book or using your computer.***

Having said this, listening to the Tinnitus Tamer while you are doing other things will likely make you be less bothered by your Tinnitus. So you may do it, but keep the tone volume at a low setting. Just do not count this use as one of your daily training sessions.

For some sessions, set the **tone duration** to a low value, i.e. make tones alternate fast. This challenges your hearing to determine if there is sound or no sound.

For most sessions set the **tone duration** to a longer value, i.e. make tones alternate slowly, to allow you to concentrate on the location of the tones and silent periods. This will exercise you skill to hear silence when there is no real sound present. If needed, start with a one or two seconds setting. As you become more skilled in hearing the silence, increase the time towards the maximum value of ten seconds.

This is very important, so we repeat it once again:

***Concentrate to listen to the tones and the silence. This will exercise you skill to hear silence when there is no real sound present.***

Set the sound level very low for some sessions, and at a comfortable listening level for most others.

Tinnitus is usually more marked at bedtime, when one's surroundings become quiet. You may want to run a session with the Tinnitus Tamer just before going to bed.

With the introduction of the Tinnitus Tamer 4 you no longer have to install the Tinnitus Tamer at the computer where you work. You can create Sound files with the Tinnitus Tamer 4, and play them at the where you work. You can play the AIFF file from a computer, or the AAC file on an iPod. When you use a computer, do not forget that you must use earphones to get nay benefit from listening to the sound sequence.

If you find yourself in a situation where you have no access to a computer for a few days, create one or two sound files of your most used tone sequences, convert them to the AAC format, and use an iPod to listen to them.

Experiment with different settings. Find out what works best for your Tinnitus. There are many different types of Tinnitus, and only you can judge what works best for you.

Once you customised some tone sequences that reduce your Tinnitus, use them. You do not have to fine-tune the settings every day, but when it appears that a certain tone sequence create little progress, modify the settings or create another tone sequence.

Tell other Tinnitus sufferers of your success story. Tell us if you need some help with the use of the Tinnitus Tamer. Select **Technical Support** from the **Communicate** menu to contact us.

### **Note**

The **Technical Support** item will only work if you have registered your Tinnitus Tamer, and have a default e-mail application set-up on your computer. If your set-up is correct, your e-mail application will launch and automatically enter our e-mail address in the message.

For general inquiries about the Tinnitus Tamer you can send an e-mail to [vavsoft@kagi.com](mailto:vavsoft@kagi.com).

## ***Creating a Sound File for the iPod***

To create a sound file, from the currently selected sound sequence, select **File > Create File from Current Tone Sequence** from the **Tinnitus Tamer** menu.

The dialogue, which appears, asks you for the folder into which the file should be saved, and a name for the saved sound file. Tinnitus Tamer will check if the path is valid, and whether the filename already exists, and will ask you to change the information if needed

The sound sequence will be saved as a high quality AIFF file at a 44100 Hz sampling rate. The AIFF file size is typically about 200 MB. To play the sound sequence on another computer just copy the AIFF file to the other computer. To play the file on an iPod, open the AIFF file in iTunes. In **iTunes**, select **Advanced > Create AAC Version** from the **iTunes** menu. The converted AAC file size is typically about 5 MB

### **Notes**

1. If you have made any changes since you opened the current tone sequence, and select **Create Sound File from Current Sound Sequence** menu item from the **File** menu, the saved sound file will reflect all changes made. To create a sound file without the changes made since opening the current tone sequence, select any other tone sequence, decline to save the changes, and re-select the tone sequence from which you want to create a sound file.
2. Unless you have modified the default file associations on your computer, double-clicking the **AIFF** file, will open it automatically in **iTunes**.
3. To save file space, you can delete the AIFF file once it has been converted into an **AAC** file.
4. We strongly recommend to use the **AAC** format for its ability to provide sound quality that is nearly identical to that heard directly played from the Tinnitus Tamer.
5. For optimum sound quality from the **iPod** sound file, hold down the option key when you click on the **Create File** button in the Create Sound File dialogue box. In the extra dialogue set the rate to **96000** kHz. Leave the other settings as they are, and click **OK**. This will more than double the size of the **AIFF** file. However, the sound quality of the compressed **AAC** file will be better than those created from a 44100kHz **AIFF** file, even though the size of the AAC file will hardly change.

## ***Other Things to Consider***

1. Attempt to obtain adequate rest and avoid over-fatigue.
2. Avoid exposure to loud sounds and noise. Use hearing protection if appropriate.
3. Limit the use of stimulants such as caffeine and nicotine
4. If you are taking prescription medications, check with your doctor whether the medication may be ototoxic (harmful to the ear).
5. If you regularly use nonprescription medications, check with your pharmacist whether they may be ototoxic.
6. Improve your circulation with some physical exercise.
7. Learn as quickly as possible to accept the existence of Tinnitus as an annoying reality and then promptly and completely ignore it as much as possible.
8. Tinnitus will not cause you to go deaf, will not result in your losing your mind, or cause your death. Forget such distracting and terrifying thoughts.
9. Some patients, who find it difficult to "live with" their Tinnitus, may become depressed. If your doctor suspects a major depression, he or she may suggest therapy for this.

## **Earphones**

The Tinnitus Tamer only works with earphones. (You can hear the Tinnitus Tamer sounds from speakers, but listening to the Tinnitus Tamer on speakers will not improve your Tinnitus.) Reasonably good earphones are required. The earphones must have a wide frequency response, good isolation from external noises, and good ear-to-ear isolation. Quite a few suitable earphones are available for less than \$ 30 US, or equivalent local currency.

Traditional earphone designs use ear cups that are either open-back (open-air) or closed-back, and ear pads that are either circumaural (around the ear) or supra aural (on the ear).

The lightweight headphones that come with portables and most headphones with foam ear pads are supra aural, that is, the ear pads sit on the ears. The foam seal is very leaky whether they are of the open-air or closed-back design. Ambient noises are heard quite clearly and there is significant sound leakage from one ear to the other.

Another type of headphone has circumaural ear pads but open-back ear cups that are acoustically transparent. In this case, the circumaural ear pads are more of a comfort feature because they provide no acoustic isolation.

***Headphones with foam ear pads and headphones with open-back ear cups are not suitable for use with the Tinnitus Tamer.***

Closed-back headphones with circumaural ear pads are categorised as *sealed*, because the listener's ears are completely enclosed in the ear cups with almost airtight seal to block out external noise. Thus, the sound quality is usually very clear and detailed, and there is practically no sound leakage from one ear to the other. They also have excellent bass response.

***Closed-back headphones with non-foam circumaural ear pads are the preferred design for use with the Tinnitus Tamer.***

The portable audio revolution has introduced a new type of headphones, the In-ear headphones (intra-aural). These are either *ear bud* type or *canal* types.

Ear buds are worn in the opening of the ear. A headband either supports them or they have an attached earpiece that fits around the ear. They are comfortable, after a period of acclimatisation, but may not fit all ear shapes well.

Canal headphones are seated in the ear canal itself, forming an airtight seal. The high acoustic isolation of these headphones greatly attenuates external noise, but emphasises internal sounds, such as breathing. Custom moulded canal stems that fit deep into (around the second bend of) the ear canal can reduce this effect and provide superior acoustic isolation. Good canal headphones are

known for their crystal clarity and detailed presentation. They are excellent for outdoors listening, because they can be played at safer volume levels.

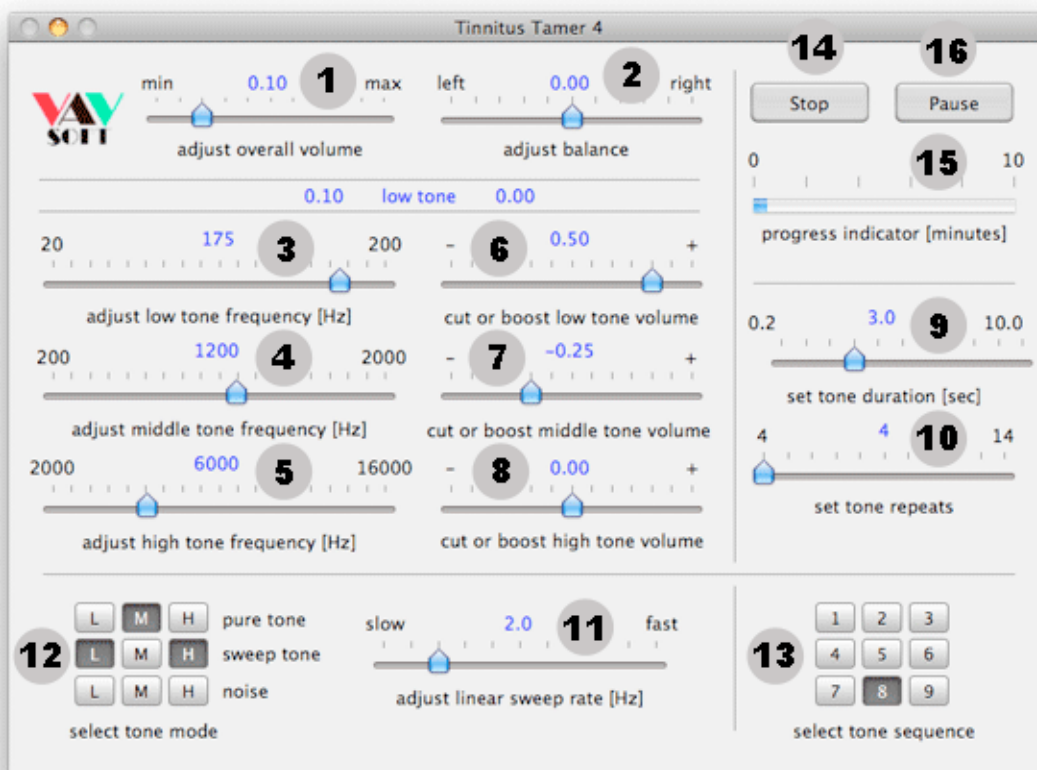
***In-the-ear headphones may be used with the Tinnitus Tamer provided they fit well.***

This is very important, so we repeat it:

***The most important characteristics of suitable earphones are:***

- ***A sound played at one ear cannot be heard by the other ear.***
- ***When no sound is played, you cannot hear environmental background noises.***

## Tinnitus Tamer Window



To see a description of how a control works, go to the paragraph corresponding to the call-out in the figure.

1. The **adjust overall volume** slider adjusts the low, middle, and high tones by equal amounts. It is usually best to adjust this slider while the mid tone is playing. In addition, you can use the volume control keys on the keyboard to adjust the overall volume up or down.

*Note:* To move any slider, click on the slider, and while holding down the mouse, move the slider to the desired position.

*Note:* In each slider control you can click in the slider channel to the left or right of the slider button to make the slider jump to the mouse position.

2. The **adjust balance** slider adjusts the volume balance between the left and right ear. If your hearing is about equal in both ears, you need not adjust this slider.

3. The **adjust low tone frequency** slider adjusts the frequency (pitch) of the tone that plays whenever **low tone** is displayed in the middle of the divider line, which is located below the **adjust overall volume** and **adjust balance** sliders. The blue number above the centre of the **adjust low tone frequency** slider shows the frequency (pitch) selected by the slider.
4. The **adjust mid tone frequency** slider adjusts the frequency (pitch) of the tone that plays whenever **mid tone** is displayed in the middle of the divider line, which is located below the **adjust overall volume** and **adjust balance** sliders. The blue number above the centre of the **adjust mid tone frequency** slider shows the frequency (pitch) selected by the slider.
5. The **adjust high tone frequency** slider adjusts the frequency (pitch) of the tone that plays whenever **high tone** is displayed in the middle of the divider line, which is located below the **adjust overall volume** and **adjust balance** sliders. The blue number above the centre of the **adjust high tone frequency** slider shows the frequency (pitch) selected by the slider.

Note: If you adjust the frequency slider for a frequency other than the one that is playing, that frequency will start playing at the beginning of the current sequence, to allow you to judge the new setting. The tone sequence will play for a minimum of 30 seconds to let you judge if the setting is what you aimed for. Any time the frequency slider is clicked or moved, the repeat time is reset to 30 seconds from the last click or move. After the 30 second extended repeat time is completed, the next frequency in the tone sequence will be played.

6. The **cut or boost low tone volume** slider adjusts the relative volume of the low tone whenever the low tone is playing. For most users this slider will need to be set towards the + sign to boost the low tone volume. The amount of boost required depends on the setting of the **adjust low tone frequency** slider, and the hearing curve of your own ears. Lower settings of the **adjust low tone frequency** slider require more boost. Higher settings of the **adjust low tone frequency** slider require less boost.
7. The **cut or boost mid tone volume** slider adjusts the relative volume of the mid tone whenever the mid tone is playing. Usually this slider will need to be set near zero or towards the - sign to cut the mid tone volume. The amount of cut required depends on the setting of the **adjust mid tone frequency** slider, and the hearing curve of your own ears.
8. The **cut or boost high tone volume** slider adjusts the relative volume of the high tone whenever the high tone is playing. Usually this slider will need to be set towards the + sign to boost the high tone volume. The high frequency boost need usually not be set as high as the low frequency boost. The amount of boost required depends on the setting of the **adjust high tone frequency** slider, and the hearing curve of your own ears.

9. The **set tone duration** slider adjusts the length of the tone and silent periods you hear when listening to a tone sequence. At its shortest setting, each tone will play for 2 tenth of a second; at its longest setting each tone will play for 10 seconds.
10. The **set tone repeats** slider adjusts how many times the left-right and on-off sequences are repeated during a tone sequence. At its lowest setting each sequence is repeated four times; at its highest setting each sequence is repeated 14 times.
11. The **adjust sweep rate** slider can only be adjusted if at least one of the three sweep buttons is selected. The **adjust sweep rate** slider adjusts the rate at which pure tones are varied about their centre frequency during a tone sequence. Each tone is varied by one full octave, which is centred on the selected frequency. At very slow sweep rate settings, you can actually hear as the tone slowly changes its frequency (pitch). At fast sweep rate settings, the tones change their frequency (pitch) so fast that it actually sounds as if there were many similar sounds played at the same time. The **adjust sweep rate** slider sets the sweep rate for all tones that have their corresponding **sweep tone** buttons selected.
12. The nine buttons visible over the **select tone mode** label determine whether tones are played as **pure tones**, **sweep tones**, or **noise tones**. In **Basic Tone Mode**, clicking any one button in a row will select all three buttons in that row, and all three tone frequencies will be played in the selected tone mode. In **Advanced Tone Mode**, each frequency can be played in different tone mode. When a button is selected it turns into a darker grey.
13. The nine buttons above the **set tone sequence** label allow you to select any one of nine tone sequences. If you click any of the buttons while a tone sequence is in progress, you will automatically switch to the settings corresponding to that tone sequence. The button that is selected shows up in a darker grey.

Note: The factory pre-sets of the nine pre-set buttons are typical user settings. There is no progression from 1 to 9. You might find that anyone of the nine sets may be close to what works for you. Each set can be, and indeed at least one set should be, customised by you to work best with the type of Tinnitus you have.

Note: Every time you exit the Tinnitus Tamer it will remember the last tone sequence you used, and on the next opening of the Tinnitus Tamer that tone sequence will be automatically selected.

If you save a tone sequence as one of the nine tone sequence buttons, the previous tone setting stored under that button will be over-written, and can not be recovered, unless it was the factory default setting-see below.

To restore the factory pre-set for any of the nine tone sequence buttons, select Load Default Tone Sequence from the File menu. The tone sequence currently selected will be reset to the factory default, over-writing the current settings, which can not be recovered.

14. Clicking the **Play** button starts a tone sequence. The name of the button changes to **Stop** confirming that the play mode has been activated. Click the **Stop** button anytime you want to stop playing, and reset the playing sequence to the start position. The name of the button changes to back to **Play** showing that you are ready to start play again from the beginning. The progress indicator will be reset to zero.
15. The **progress indicator** shows the progress you make during a tone sequence. Each tone sequence lasts ten minutes.
16. The **Pause** button lets you pause in the middle of a tone sequence. When you click the **Pause** button, its name will change to **Resume**, confirming that the pause mode has been activated. Click the **Resume** button to resume playing again. When **Pause** has been activated, the progress indicator will stop moving. When you click the **Resume** button, the name of the button will change back to **Pause**, the tone sequence will continue from where you paused, and the progress indicator will start up again.

While a tone sequence is in progress, three indications appear between two separator lines, which are located below the adjust overall volume and adjust balance controls. The tone being played is shown in the centre as **low tone, mid tone,** or **high tone in** white text. To either side of the text, the volumes being played are shown. The left number shows the volume being played at the left ear, and the right number shows the volume being played at the right ear. The value of each volume number reflects the combined impact of the settings of the **adjust overall volume** slider, the **adjust balance** slider, the **cut or boost ... tone** sliders, and the current left-right or on-off training status. The minimum volume is 0, which represents silence. The maximum volume is 100.

# ***Tinnitus Tamer Menus***

## ***Tinnitus Tamer Menu***

### **About Tinnitus Tamer**

Select this item to get information about the Tinnitus Tamer, such as the web site to check for updates.

### **Quit**

Select this menu item to quit the Tinnitus Tamer.

## ***File Menu***

### **Save Current Tone Sequence**

Select this menu item any time you want to save the currently active tone sequence. If no changes have been made to the currently active tone sequence, this menu item is greyed out.

### **Load Default Tone Sequence**

Select this item if you want to load the default values for the currently active tone sequence. You might do this as a starting point for making a new custom sound set. Loading the default set does not erase the values that existed before you loaded the default tone sequence, if you switch to another tone sequence without saving the new tone sequence. To make the loaded default set part of your custom set, you must save it before switching to another tone sequence or exiting the Tinnitus Tamer.

### **Disable Save Alert / Enable Save Alert**

Select this menu item to turn the Save Alert on or off. When the save alert is turned on, the menu item shows **Disable Save Alert** to allow you to turn the save alert off again. When the save alert is disabled, the menu item shows **Activate Save Alert** to allow you to turn the save alert on again.

### **Select Basic Tone Mode / Select Advanced Tone Mode**

Select this menu item to show either the basic tone controls or advanced tone controls. When **Basic Tone Controls** are selected, the three buttons in any row are locked together. The tone mode you select, by clicking on any button in a row, applies to all three frequencies. When **Advanced Tone Controls** is selected each of the nine buttons acts on its own, and selects the tone mode for corresponding frequency only.

When basic tone controls are turned on, the menu item shows **Select Advanced Tone Controls** to allow you to switch back to advanced tone controls. When advanced tone controls are turned on, the menu item shows **Select Basic Tone Controls** to allow you to switch back to basic tone controls.

### **Create File from Current Tone Sequence**

Select this item to create a sound file from the currently selected tone sequence.

## ***Help Menu***

### **Tinnitus Tamer Help**

Select this item to get on-screen help while the Tinnitus Tamer application is open. The on-screen help is an HTML version of the information in this user guide.

### **Check for Updates**

Select this item to connect to the VAVsoft download site to check if a new update is available.

## ***Tinnitus Tamer Keyboard Shortcuts***

Keys **1 to 9** will select the corresponding tone sequence.

**Option-1 to Option-9** will select the corresponding tone mode.

Note: The tone mode numbers correspond to the numbers shown on the select tone sequence buttons, e.g., **Option-1** will select the left button in the top row (pure tone for the low frequency).

**Command-A** will toggle the save **alert** setting between on and off.

**Command-L** will **load** the default tone sequence replacing the currently active tone sequence.

**Command-S** will **save** the currently active tone sequence.

**Command-M** will toggle the tone **mode** between basic and advanced.

**Command-?** will load the on-screen help.

**Command-H** will **hide** the Tinnitus Tamer.

**Command-Q** will **quit** the Tinnitus Tamer.

## ***Installation***

1. After you have uncompressed the download file—your download application may do this for you automatically—you can drag the TinnitusTamerXXX folder to any location on your hard disk. The preferred location is the **Application Files** folder. Make an alias of the Tinnitus Tamer application icon, and place it at a convenient location for daily use.

*Note: the XXX in TinnitusTamerXXX is the version of the Tinnitus Tamer.*

2. If this is the first time you install the Tinnitus Tamer, a new preference file will be created in the User's Preferences folder. If you had a previous version of the Tinnitus Tamer installed, your existing preference file will be updated. Check out the ReadMe file for details.
3. Run the Tinnitus Tamer as you would any other application.
4. The files and folders installed by the Tinnitus Tamer are all located in the TinnitusTamerXXX folder. If you want to uninstall the Tinnitus Tamer, you need only delete the TinnitusTamerXXX folder.

## ***How to Register***

The Tinnitus Tamer is distributed as shareware. All features of the Tinnitus Tamer 4 are functional during the trial period, except the ability to create sound files. You may evaluate the Tinnitus Tamer for fourteen days to find out how it works. Once the trial period has expired, you must purchase a license to continue the use of the Tinnitus Tamer.

A single user license is \$35 (US). Please consider that this price is less than you would have to pay for just one habituation training session at a clinic, assuming that you had convenient access to a clinic near where you live. After purchasing a licence, you will receive a registration code. Registered users will receive upgrades and technical support.

If you are using the Tinnitus Tamer to treat other persons, you must purchase a site license for \$750 (US). A site license allows you to use the Tinnitus Tamer on one or more computers at one location. After paying for a site licence, you will receive upgrades and technical support. You can also request a version of the Tinnitus Tamer that has a lock feature preventing the change of settings. On this version, settings can only be changed after entering your own password.

You can purchase the Tinnitus Tamer via mail, e-mail, fax, or online through a secure or regular web server. You can pay by cash, check, VISA, MasterCard, Discover, American Express, First Virtual, or Money Order.

To purchase your licence, click on the [Purchase License](#) button in the flash dialogue that appears when you open the unregistered copy Tinnitus Tamer.

You can purchase your license now by connecting to the [Kagi Store](#)

## ***Disclaimer***

The information contained in this user guide is intended as a guide for the use of the Tinnitus Tamer. It is not a comprehensive description of what should or should not be done if you have Tinnitus. You should not alter, discontinue, or refrain from having any medication or other medical treatment because of information contained in this user guide. VAVsoft expressly disclaims liability for anything done, or omitted to be done, by any person in reliance, whether whole or partial, upon any part of this user guide.