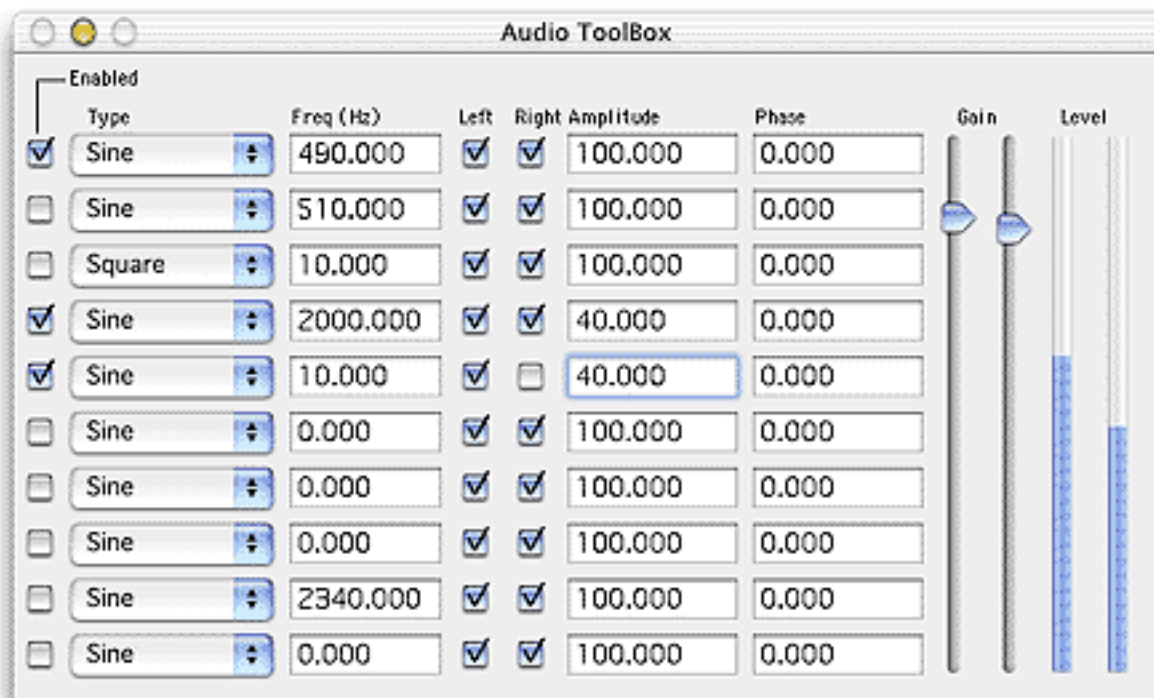


**Mac Audio Toolbox** is an audio function generator for the Macintosh. Using no additional hardware, you can produce sine, square, triangle, and sawtooth waveforms of any frequency up to 22 kHz, as well as generate noise. In addition, there is a sweep generator. The registration fee is only \$19.99.

You can generate up to ten different waveforms. Each waveform can be routed to either the left or right channel, or to both. The amplitude of each waveform may be adjusted, as well as the volume on each channel, which is a mix of any waveforms routed to that channel.

## Function Generator

When the program starts up, you'll see two windows. One window is similar to the following, it's the function generator window:



□

Let's take a look at the various controls and features:

For each waveform, there are six controls:

**Enabled** If this is checked, the waveform is enabled for generation.

**Type** This popup menu selects the type of waveform to be generated

**Freq** This is a text box into which you type the desired waveform frequency, in hertz (Hz).

**Left** When checked, this waveform is routed to the left channel.

**Right** When checked, this waveform is routed to the right channel.

**Amplitude** This is a text box into which you type the desired amplitude of the waveform, ranging from 0 (off) to 100 (maximum).

In addition, there are two sliders, one each for the left and right channels. They adjust the output volume for each channel. There is also a bar graph volume display for each channel. Note that the volume display is only affected by the various waveforms fed to that channel, not by the volume slider for that channel, since that volume adjustment is applied after the Mac's D/A output.

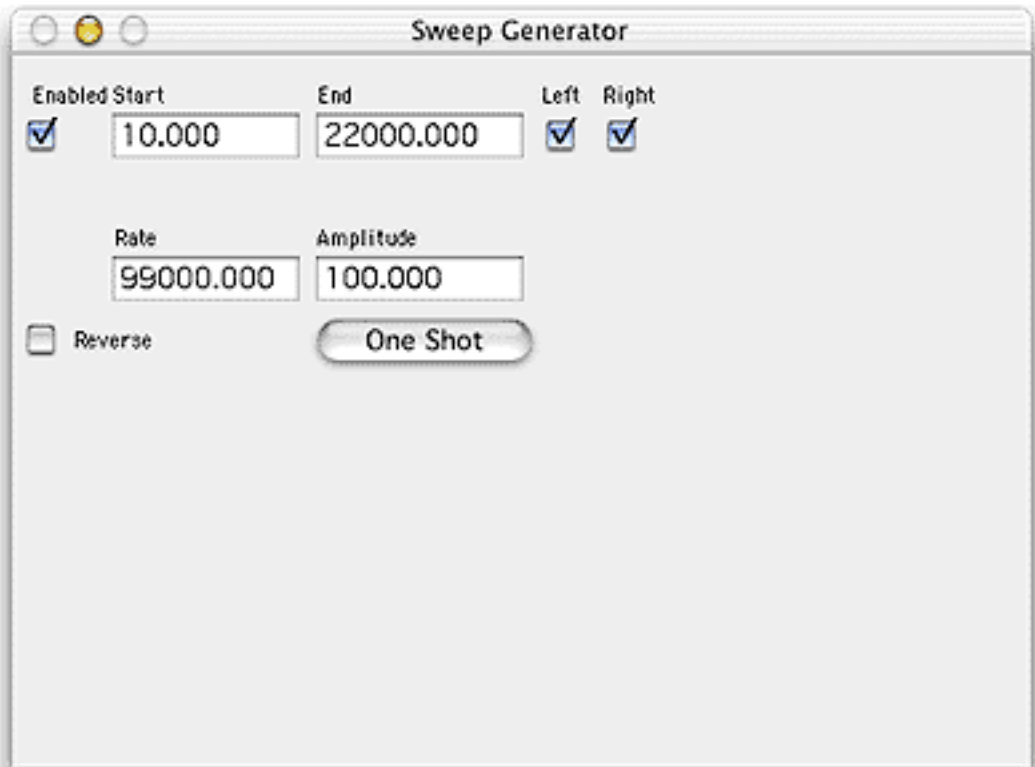
As you add more waveform to a channel, the overall gain of that channel is automatically adjusted, to prevent clipping.

Please note that due to the limited bandwidth of the Mac's audio output, square and sawtooth waveforms will show significant overshoot. This is a function of the Mac's hardware, and cannot be overcome by software.

You can Save your current settings, and restore them later, by using the Save and Open selections under the File menu.

## Sweep Generator

The second window is the sweep generator:



□

The **Enabled**, **Left**, and **Right** controls and the **Amplitude** work just as with the function generator window.

The **Start** and **End** values are the two frequencies between which the generator will sweep. The **Rate** is the sweep rate, in Hz per second.

By selecting **Reverse**, the sweep generator will sweep the frequency back to the low frequency, rather than just jumping there, after it reaches the high frequency.

You can also click on the **One Shot** button, and you will get just one sweep, rather than continuous sweeping.

It's probably best to play around with the various settings, to get a feel for how they interact. It's possible to create some interesting sound effects

using the sweep generator. For example, going from 1000 Hz to 2000 Hz at 8000 Hz/sec produces a sound similar to a police siren.

## Registering

Mac Audio ToolBox is shareware. The registration fee is only \$19.99, allowing the use on a single computer. If you wish to run Mac Audio ToolBox on multiple computers, you must obtain a license for each system, or the appropriate site license.

The online registration using Kagi's secure site is the quickest and easiest way to register your copy. You'll typically get your registration code back from us within minutes of registering. Visit <http://www.blackcatsystems.com/register/audiobox.html> to register online.

Site licenses are also available, allowing copies to be run on multiple computers at a single location (for example, a school or university, or office). Please contact Black Cat Systems for pricing and details about site licensing.

By registering your copy of Mac Audio ToolBox you'll help support our efforts to develop new versions with additional information. When you register, you'll be entitled to use all new releases and updates to Mac Audio ToolBox released over the next year, free of charge.

When you register and receive your registration code, select **Enter Registration...** from the **File** menu, and enter the code. If you register and don't get your registration code within a week, please send us an email at [elmer@blackcatsystems.com](mailto:elmer@blackcatsystems.com).

Thanks again for giving Mac Audio ToolBox a try.

Black Cat Systems  
PO Box 2293  
Westminster, MD 21158

email: [audio@blackcatsystems.com](mailto:audio@blackcatsystems.com)

Web: <http://www.blackcatsystems.com/software/audiotoolbox.html>

## Registering by Check or Money Order Form

To order by check, please fill out and mail the following form, along with your payment. You can pay with a wide variety of cash from different countries but at present if you pay via check, it must be a check or money order drawn in US Dollars. While there is the risk of loss in the mail, currency is also OK, including foreign currency.

Please make sure you include your email address with your payment. That way we can send the registration code to you. If you do not send us a valid email address, we have no way to send you the code.

I would like to order \_\_\_\_\_ copies of Mac Audio ToolBox at \$19.99 US each.

If you'd like a copy of Mac Audio ToolBox (as well as demos of all of our other programs) on a CDROM, please order one:

I would like to order \_\_\_\_\_ Black Cat Systems CDROMS at \$5 US each. (incl shipping)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_

ZIP/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Email Address: \_\_\_\_\_

Macintosh Model: \_\_\_\_\_ System Version: \_\_\_\_\_

Enclosed, please find my check / money order / cash in the amount of \$\_\_\_\_\_

**Mail this form, along with payment, to:**

**Black Cat Systems**  
**PO Box 2293**  
**Westminster, MD 21158**  
**USA**

## Registering By Credit Card Online

To register online with a credit card, go to the following URL:

<http://www.blackcatsystems.com/register/audiobox.html>

You will be sent to our order page at Kagi. Kagi handles our credit card payment processing.

Please make sure you include your email address when you register online. That way we can send the registration code to you. If you do not send us a valid email address, we have no way to send you the code.

## Registering by Credit Card Offline (by mail or fax)

Note, if you'd like to register by credit card online, please read the previous section.

Open the Register program that accompanies Mac Audio Toolbox. Enter your name, your email address, and the number of single user licenses you desire for each program you wish to purchase.

You can either Copy the data from Register and paste into the body of an email message or you can Save the data to a file and you can attach that file to an email message. There is no need to compress the data file, it's already pretty small. If you have a fax modem and would like to fax the data to Kagi, just print the data to the Kagi fax number.

Payments sent via email are processed within 3 to 4 days. You will receive an email acknowledgement when it is processed. Payments sent via fax take up to 10 days and if you provide a correct internet email address you will receive an email acknowledgement.

If you are mailing your credit card payment to Kagi, send it to:

Kagi  
1442-A Walnut Street PMB #392-SZ  
Berkeley, California 94709-1405  
USA

You can fax your order to 1-510-652-6589

Please make sure you include your email address with your payment. That way we can send the registration code to you. If you do not send us a valid email address, we have no way to send you the code.



## Revision History

April 10, 2002 - 1.0.0:

Release for Mac OSX and MacOS 8/9

Added single shot feature to sweep generator

November 4, 2000 - 0.3.0:

Added sweep generator

Changed name to Audio Toolbox

October 14, 2000 - 0.2.0:

Added ability to save/restore settings

Tab now moves between the various fields, as well as the arrow keys.

Fixed a bug where the sound could start clicking when the volume was adjusted (maybe!)

October 9, 2000 - 0.1.0:

Initial Release

# Software License Agreement

This is a legal agreement between you and Black Cat Systems, covering your use of Mac Audio Toolbox (the "Software"). Be sure to read the following agreement before using the Software. BY USING THE SOFTWARE (REGARDLESS IF YOU HAVE REGISTERED THE SOFTWARE OR NOT), YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, DO NOT USE THE SOFTWARE AND DESTROY ALL COPIES IN YOUR POSSESSION.

The Software is owned by Black Cat Systems and is protected by United States copyright laws and international treaty provisions. Therefore, you must treat the Software like any other copyrighted material (e.g., a book or musical recording). Paying the license fee allows you the right to use one copy of the Software on a single computer. You may not network the Software or otherwise use it or make it available for use on more than one computer at the same time. You may not rent or lease the Software, nor may you modify, adapt, translate, reverse engineer, decompile, or disassemble the Software. If you violate any part of this agreement, your right to use this Software terminates automatically and you must then destroy all copies of the Software in your possession.

The Software and its related documentation are provided "AS IS" and without warranty of any kind and Black Cat Systems expressly disclaims all other warranties, expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Under no circumstances shall Black Cat Systems be liable for any incidental, special, or consequential damages that result from the use or inability to use the Software or related documentation, even if Black Cat Systems has been advised of the possibility of such damages. In no event shall Black Cat Systems's liability exceed the license fee paid, if any.

This Agreement shall be governed by the laws of the State of Maryland. If for any reason a court of competent jurisdiction finds any provision of the Agreement, or portion thereof, to be unenforceable, that provision of the Agreement shall be enforced to the maximum extent permissible so as to effect the intent of the parties, and the remainder of this Agreement shall continue in full force and effect.

The Software and documentation is provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subdivision (b)(3)(ii) of the Rights in Technical Data and Computer Software clause as 252.227-7013. Manufacturer is Black Cat Systems., 4708 Trail Court, Westminster, MD 21158, United States of America.

The name "Black Cat Systems", and "Mac Audio Toolbox" are trademarks of Black Cat Systems.

Mac Audio Toolbox is ©2002 by Black Cat Systems. All rights reserved worldwide.