

Contents: DeeSampler Help



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**If you use the DeeSampler on a recording, please remember to include a credit to "The DeeSampler" www.deelong.com.
Thanks for using the DeeSampler!**

Dee Long.

Start Here:



System Requirements:

100 MHz Pentium PC or better with Windows 95/98
64 Meg RAM, 128 Meg or more preferred
SoundBlaster compatible sound card with a Microsoft Certified DirectX driver
Microsoft DirectX installed, Version 6.1 or higher preferred.
Midi keyboard correctly connected to computer interface.

Optional:

Digital output on sound card

Not Optional:

Lots of available hard disk space. The DeeSampler creates 44.1k Stereo or Mono Wave files, which must be saved before they can be played back.

Source Wave files. There are lots of free Wave files on the Internet, and many Audio and Wave CDs are available for purchase. You may be surprised how many you already have. The DeeSampler will find them when you run the "Library Scan".

How does it work?

The DeeSampler uses Microsoft DirectX to play thousands of samples in real time on a standard PC Audio card. Although the DeeSampler has much in common with a hardware sampler, it is optimized for percussion, especially Drum Loop playback.

Once a Drum Loop has been created by, or imported into the DeeSampler, the user can freely change the tempo setting, and the Drum Loop will remain synchronized, by speeding up, or slowing down the audio of each individual Drum Loop. This usually produces a more natural sound than time stretch solutions.

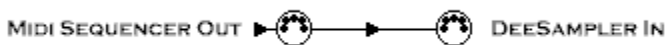
Wave files can be triggered by Midi note commands, as with any hardware sampler, but the DeeSampler can also “merge” Wave files (44.1k Mono or Stereo) in weird and wonderful ways.

The “Wave Merge” section, allows the user to control volume, pitch, pan, EQ and more over time, and merge wave files to create super funky Drum and Percussion Loops. Drum Loops can be created at any tempo, and then, if desired, re-merged at a different tempo to get perfect loops **EVERY** time.

Configurations:

The DeeSampler on a separate computer:

The ideal way to use the **DeeSampler** is to run it on a **separate computer from your main Midi Sequencer**. In this case you can treat it as you would any hardware sampler, with a **Midi cable from the “Midi Out” your Sequencer to the “Midi In” of the DeeSampler** being all that’s required.



I also run a digital output from the **Creative Labs SoundBlaster** card to the **Emagic AudioWerk8** digital input on my main computer.

The DeeSampler will run like a dream on almost any modern PC (I’m currently using a 1.4 Ghz AMD, but my last CD was done with a P1 100Mhz), which can be purchased, with a sound card, for less than many other comparable “Sampling”, and “Looping” devices.

The DeeSampler and your Sequencer on one computer:

It is always a compromise when two or more Midi/Audio programs run on one processor, because Audio processing requires a lot from a computer.

It is possible however, to use the DeeSampler on the same computer as a software Midi Sequencer.

I do this with “**Hubi’s Midi Loopback**”, (more information below).

The configuration remains the same, except you must make sure that no other audio programs are attempting to use **DirectX** at the same time the DeeSampler is running. **This will result in the DeeSampler being heard only when it is the currently selected program (has the focus).**

You will require a SoundBlaster Compatible sound card for the DeeSampler, as well as separate Audio hardware for your Midi/Audio Sequencer.

When I run “**Emagic Logic Audio Platinum**” version 4.1.4 and the DeeSampler on the same computer, the Audio from Logic Audio is output from an AudioWerk8 card, while the DeeSampler uses DirectX, and an inexpensive “**Creative Labs SoundBlaster**” card.

I use “**Hubi’s Loopback**” to create a **virtual midi cable**, in the same configuration, “**Midi Out**” of the Sequencer, and “**Midi In**” to the DeeSampler.

I also have to de-activate that Midi input on Logic Audio, or I get a feedback loop. This is different with each program. With Logic Audio, you can disable any Midi input like this, in Win.Ini.

```
[logic]
MidiIn_LB1=0
```

I also disable the DirectX “Wave Player” functions in Logic, in the “Audio Hardware and Drivers” section of Logic Audio Platinum.

I have tested The DeeSampler with “**Cakewalk**” with excellent results. No Win.ini modifications were required.

If you have more than one Audio playback device on your computer, you can control which stereo output the DeeSampler uses, by selecting it in the Multimedia control panel as the “preferred” Audio device.

Using the DeeSampler without the Midi Functions:

Even without any Midi hookup, the DeeSampler can be very exciting. You can create unique “**Drum Loops**” and **sound effects**, save them to disk, then open them in any Audio program, including all major Midi Sequencers.

The tempo will always be dead on, so looping is a breeze. If you decide to change the tempo, just “**Re-Merge**” each Wave file at the new tempo.

Anyone who uses “Drum Loops” a lot will appreciate this feature.



Hubi's LoopBack device (v.2.51)

Virtual MIDI driver for Windows3x/95 to connect multiple MIDI programs
by Hubert Winkler

<http://www.geocities.com/SiliconValley/Vista/2872/hmidilb/hmdlpbk.html>

About the author of **Hubi's LoopBack device**

Dipl. Ing. Hubert Winkler

Neunkirchner Str. 17

A-2732 Willendorf

Austria

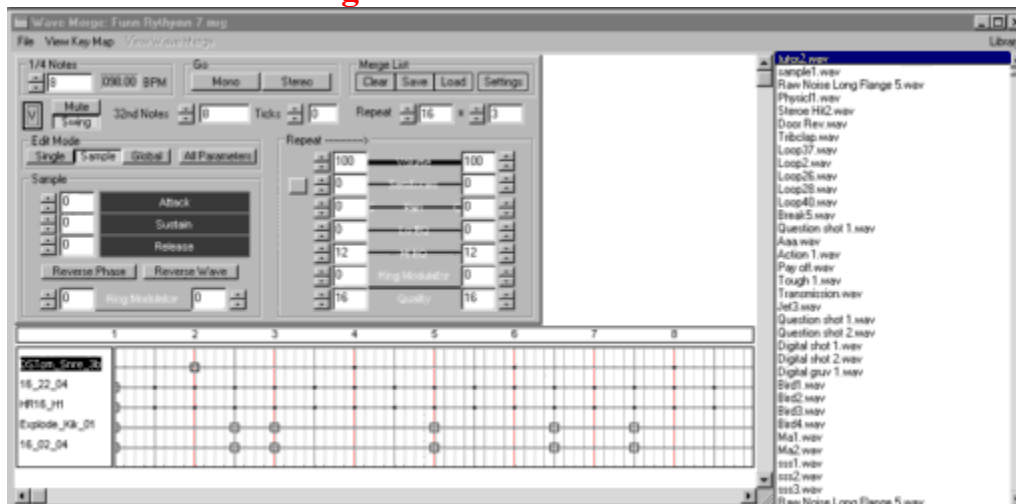
E-mail

winkler@cobra.gud.siemens.co.at (office)

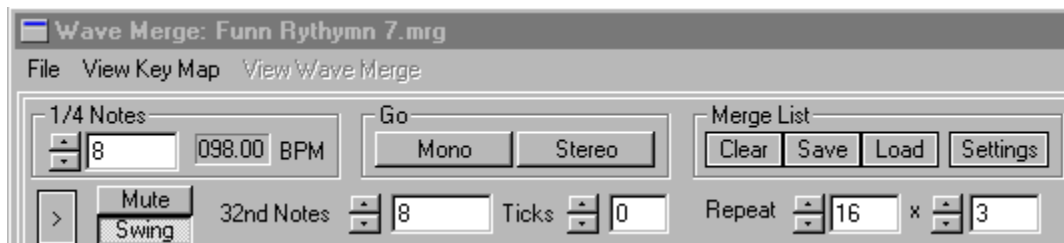
or Hubert.Winkler@siemens.at

Creating Drum Loops:

The Wave Merge

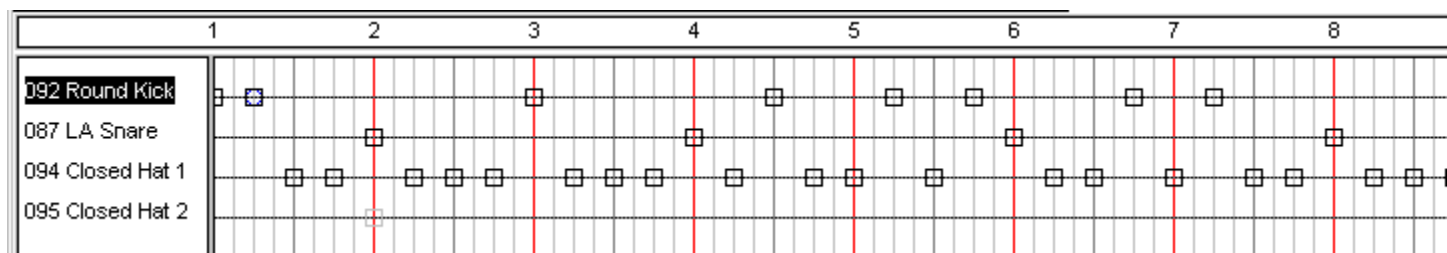


When you first start, the Wave Merge window occupies the lower third of the screen. Let's start with the main control panel shown below...



Pressing “Mono” or “Stereo” under the “Go” section will generate a Mono or Stereo wave file that is 8, $\frac{1}{4}$ notes long (2 bars at 4/4) at a tempo of 92 BPM.

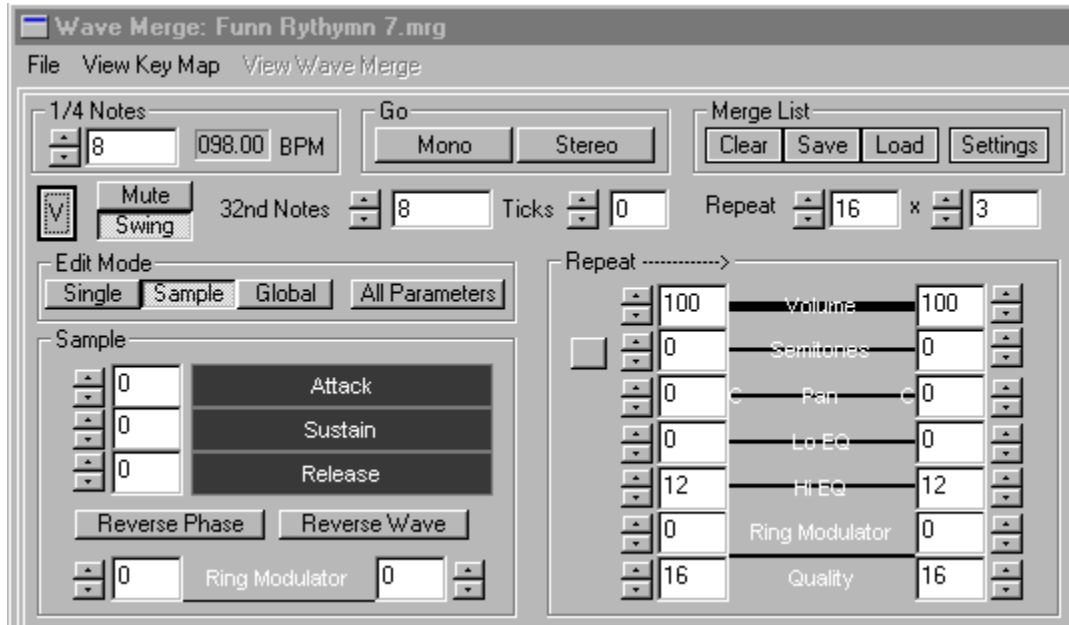
The sounds that will be merged into the new Wave file are listed below in a time-based grid like this.



Click on the square button to the left that looks like this...



Now we can see a more detailed view of this event.



Edit Mode

Under “Edit Mode”, ”Single”, ”Sample” and ”Global” allow for editing one event (Single), all events affecting one sample (Sample), or all events in this Merge (Global). Normally, changing one value in global or sample mode will change the same value in the other relevant events.

Selecting “All Parameters” will cause all values to be copied to the other events, even if only one value is changed.

ASR

Attack, sustain, and release control the length of a sample, default calibrated in 32nd notes, or whatever time base you are using. All zeros turn the ASR off, so the entire Wave will be merged.

Repeat

The other values Volume, Semitones (pitch), pan, etc, affect the sound of the merged Wave file. The values start on the left and finish on the right when a sample is repeated. Clicking and dragging the mouse on any of the value names such as “Pan” allows for quick changing of both start and end values.

Import New Sounds

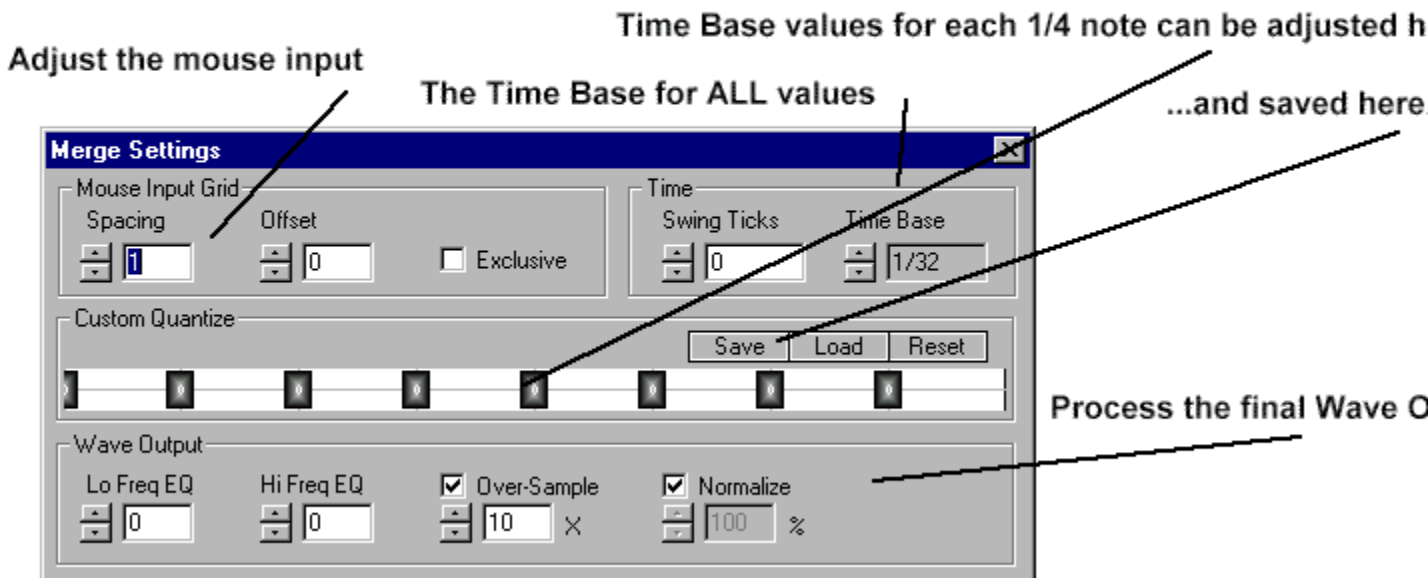
New sounds can be dragged from the “Library List” on the right, directly into the Wave Merge window. **Click inside the grid with the left mouse button to insert an event, and with the right mouse button to delete an event.**

Double Click the Wave File names on the left to choose a new Wave file source, or re-

name the “Sample”.

Right Click on the File Name to solo, or delete a Sample.

Click on the “**Settings**” button to add a **grid** to the mouse input, **create Custom Quantize “Grooves”**, EQ the mix output, or modify other output settings.



Save the Wave

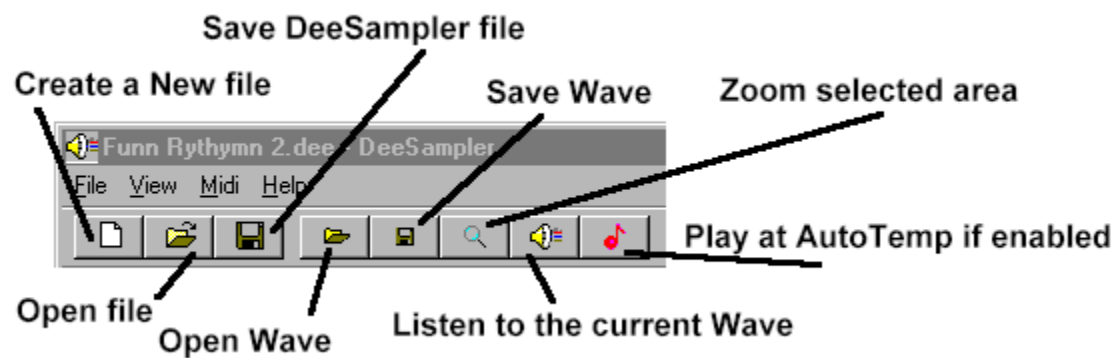
When you’ve created a Drum Loop you want to keep, click on the “Save” icon in the upper main toolbar, or double click the waveform itself.



The “Wave Save” icon looks like a smaller floppy disk than the main DeeSampler file “Save” toolbar icon. Save the Wave file under a new name. The DeeSampler will automatically save the Wave “Merge” file in the same folder as the Wave file, but with a .mrg extension. It will then prompt you to add the new Wave file to the Midi Key Map.

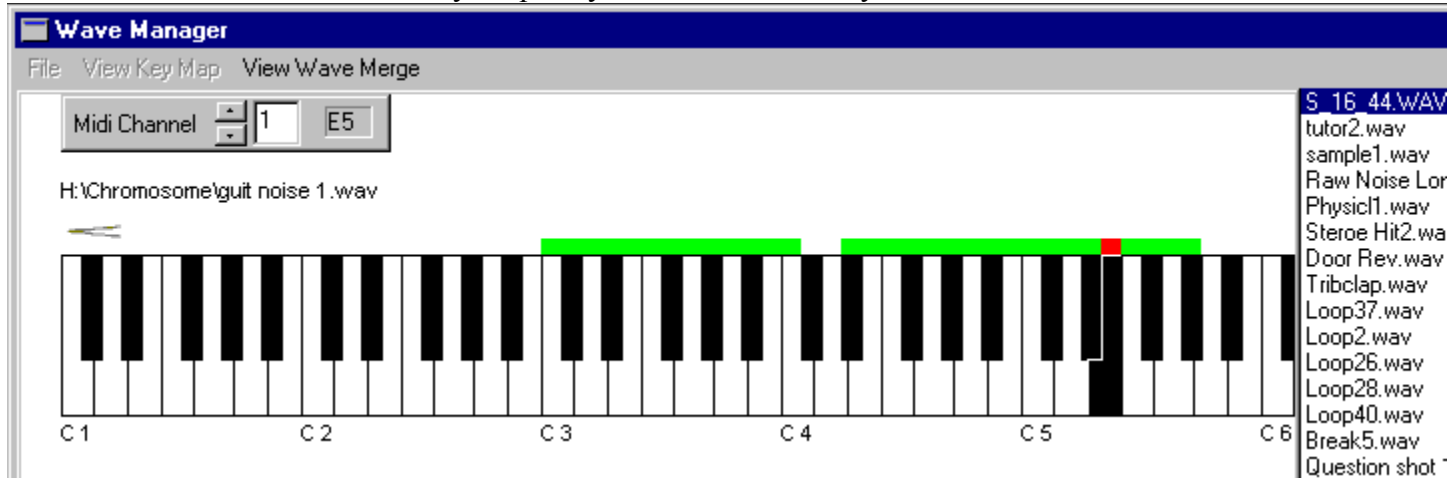


After clicking OK, select the larger floppy disk icon in the upper toolbar to save your complete song setup file.



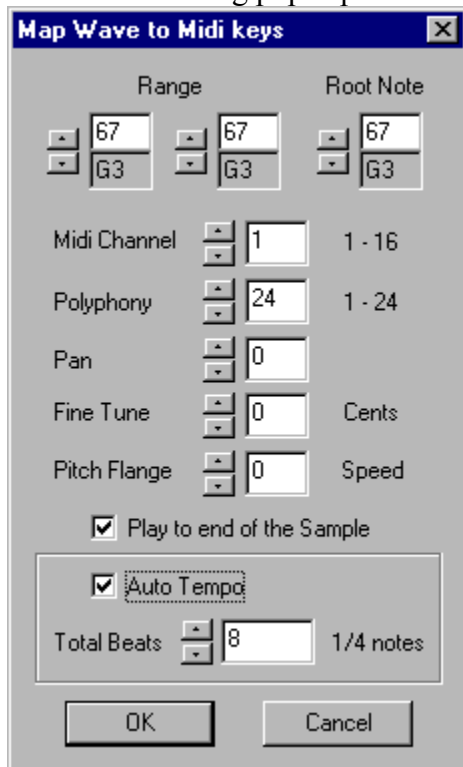
Creating Music:

Left click on the “Wave Key Map” keyboard to audition any loaded sounds.



Left click and drag a sound from the Library list on the right, onto the key you wish to assign the sound to.

This dialog pops up...



Here, you can assign a Midi channel, key range, choose the number of voices etc.

For most percussion use it's best to keep “Play to end of the sample” checked.

Unless there's a specific reason to reduce the number of voices, always set this to 24. The extra voices use an insignificant amount of memory and resources.

If the sound is a Drum Loop, selecting “Auto Tempo”, and selecting the correct number of beats, will force the Drum Loop to always remain in time, at any tempo setting. This is especially effective with Drum Loops created by the “Wave Merge”, because they are perfectly in tempo to start with.

It is not possible to overlap midi key assignments, and there is no ADSR, pitch bend, or real time modulation available with the DeeSampler.

These features are possible, but not required for percussion performance, and would drastically increase the computer processor power required to run the DeeSampler.

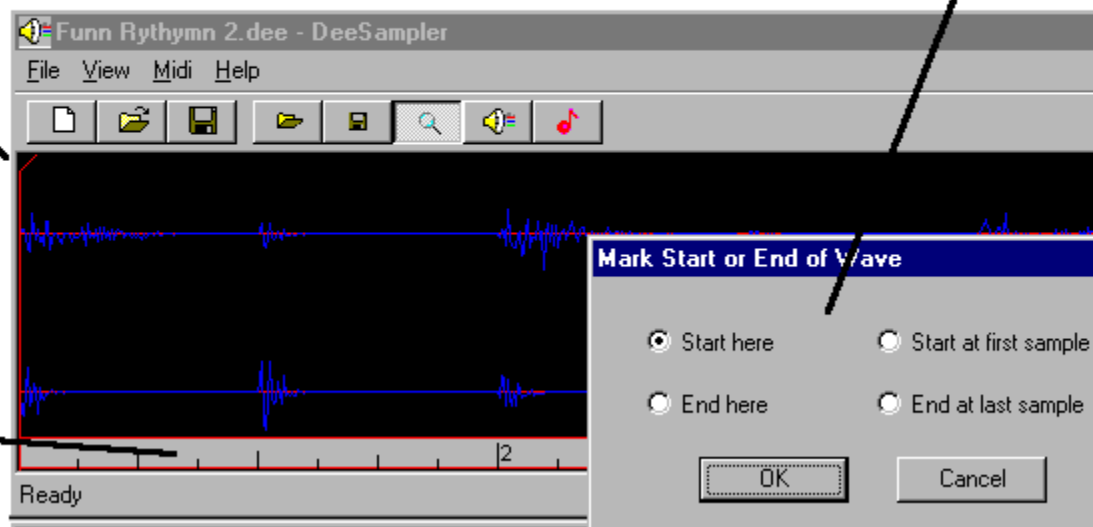
You can trim the start and end points of any loaded Wave file by selecting the vertical red drag bar at the beginning or end of the waveform display. Alternatively, Right click on the waveform to assign start and end points.

A Drum Loop that has been created with the “Wave Merge” will have a scale of $\frac{1}{4}$ note beats along the bottom of the waveform display. Clicking on this scale will set start or end points (whichever is closer) too precise time values.

Vertical Start Point adjustment

Right Click to open this dialog

$\frac{1}{4}$ note scale



Left click and drag the mouse to select an area of the Wave. 2 Yellow markers appear.

Click on the “Zoom” icon (the magnifying glass) to Zoom in on the Waveform between the 2 yellow markers.



The Wave Library:

The Wave Library Scan dialog

When the DeeSampler is first installed, you are presented with a dialog box asking you to allow the DeeSampler to scan your system for all Wave files.

You should answer “Yes” and allow the scan to be done, but if you say “No” to this dialog, you can simply run the DeeSampler again, and select “**Scan my computer**” from the “**Library**” menu at the top of the Wave Merge window. This should be done periodically anyway, to insure the Library is up to date.



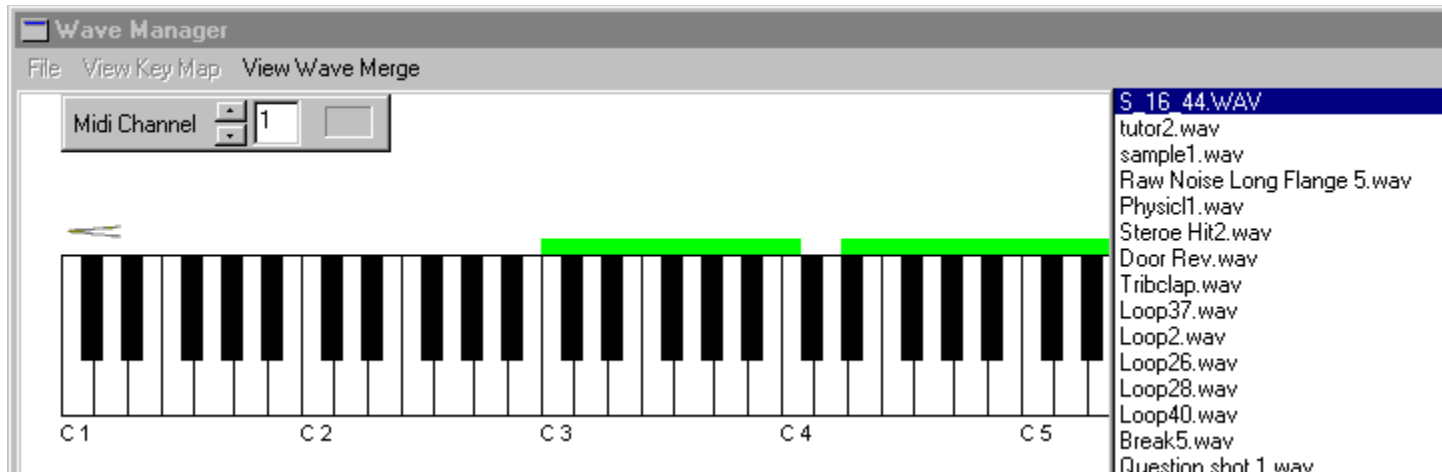
The picture above shows the preferred settings for a complete system scan. This is recommended whenever you create new folders that include relevant Wave files on your computer.

The DeeSampler uses this information to present you with a complete list of all the useable wave files on your computer, and to locate Wave files if they have been moved.

Should you attempt to load a DeeSampler song, and some of the Wave files are missing, the DeeSampler will search your system to find the missing files. Because this scan is done before the problem occurs, it is much faster than most comparable systems. It is important to name your Wave files and Drum Loops descriptively, and uniquely.

If all files have a unique name, (you can safely use at least 128 characters for a file name), then a lost file will be easily re-located by the program, unless it's been permanently deleted.

Using the Wave Library



Left click and drag a file from the Wave library into the Wave merge window to add it to the Wave Merge list.

Left click and drag a file onto a key in the Wave Key Map, or just into the Wave Key Map window to add the file to the Midi keyboard playback map.

Right click on a Wave file in the library list to load it into the “Edit buffer” to audition sounds.

To quickly audition sounds, press the up and down arrows to select a sound, and “Enter” to load it. Press “.” on the numeric keypad to start and stop the audition playback.

The Previous File List:

The “Previous File List” keeps a record of all the DeeSampler files you load or create. If you want to clear the Previous File List, the text file can be found in the same folder as the DeeSampler.exe file, and is called “File MRU.lst”. You can safely delete or edit this file with any text editor.



Troubleshooting:

DirectX:

If DirectX is not installed the DeeSampler will fail to run.

If you are running an “**uncertified**” DirectX driver on your sound card, the DeeSampler will sound like a drunken drummer, with an extremely high latency, or delay before each sound is produced.

To use the DeeSampler you **MUST** have a sound card with a “**Certified DirectX driver**”.

All sound cards made by “**Creative Labs**” seem to work perfectly with the DeeSampler and DirectX, but many others will work just as well. You should get a latency of 20 milliseconds or less, as good as many hardware samplers.

The “Wave Merge” feature in the DeeSampler has a timing and tempo accuracy of 1/44,100 of a second, much more accurate than any hardware Drum Machine, or Sampler.

You can check your DirectX driver by holding “F9” while the DeeSampler is starting. This should show the DirectX driver list, and allow you to try a different driver, if there is one on your system. The DeeSampler should be used with the Primary DirectX driver.

If your sound card does not have a proper driver available, consider purchasing a **SoundBlaster compatible sound card**, which can be purchased for as little as \$25.

MIDI Input and Output:

The DeeSampler will start without Midi Input, but all Midi functions will be disabled. Most sound cards have a built in Midi input and output. You may require a special cable to hook this up, please check your manual. The DeeSampler is not as useful without the Midi functions, but can still merge wave files into a new “Drum Loop” which can be loaded into almost any Audio capable sequencer, such as “Emagic Logic Audio”, “Cubase”, or “CakeWalk”.

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Key Commands:

Wave Library

| | |
|---------------------------|--|
| Arrow up/down | Select new Library Wave file |
| Enter | Load file into edit buffer. (Same as right click on filename). |
| . (Numeric Keypad) | Start/stop edit buffer playback |

Edit Buffer

| | |
|------------------------------|---|
| Ctrl-0 (Control Zero) | Move red start marker to the end of a string of Zero values. |
| Ctrl-1 (Control One) | Pressing Ctrl-1 to Ctrl-8 will set the loop length to the corresponding number of 4/4 bars, at the current tempo. |
| Ctrl-Arrow left | Shift loop to the left (if there's room). |
| Ctrl-Arrow right | Shift loop to the right (if there's room). |
| Ctrl-Arrow up | Double loop length (if there's room). |
| Ctrl-Arrow down | Cut loop length in half. |

Wave Merge Grid

| | |
|-------------------------|-----------------------------|
| Arrow up/down | Move selection, up/down. |
| Arrow left/right | Move selection, left/right. |
| Ctrl-Q | Quit. |



