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Deca-Dance

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User Manual
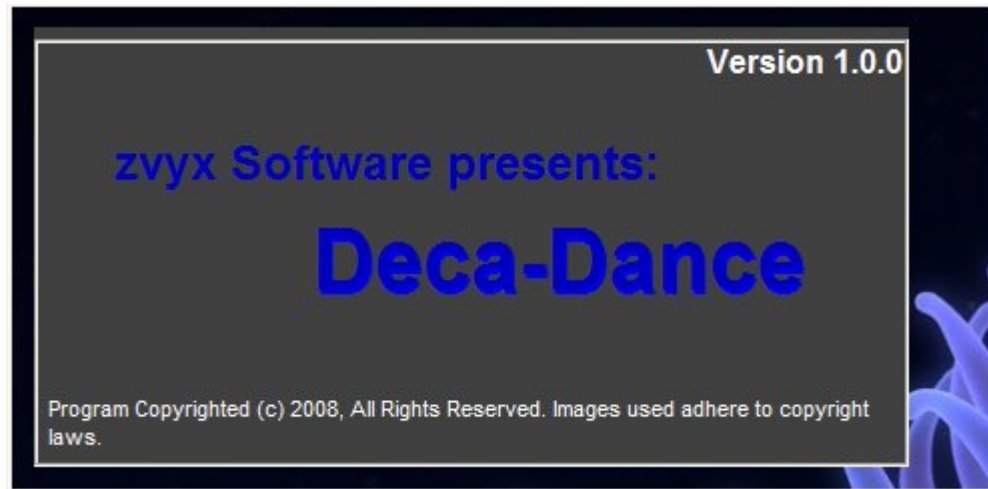
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Start!

Introduction and Foreword

Thank you for installing Deca-Dance and taking the time to read this user manual. After reading through this, you should be able to use Deca-Dance to the fullest. Have fun mixing!

What is Deca-Dance?

Deca-dance is a program that acts as a hardware-replacement for a real-life audio sampler/mixer. Essentially, the program lets you mix one or more different sounds and combine them to record a new piece. Deca-dance has:

- Up to 10 audio channels – Each channel can load one different sound, allowing you to mix up to 10 sounds simultaneously!
- Volume and Panning control for each individual channel – Lower and raise volume for added emphasis on certain channels; move the panning from centre to right so the piece sounds like it's from the right.
- Graphical sound location bar – See exactly how far the sound has played in the channel.
- Sound effects for each individual channel, all of which can be configured –Fade in and Fade out, Loop, Pitch control – it's all there to help your piece stand out!
- Save session at exit feature – Save all the sound effects and other settings on each channel that you meticulously worked on. Save the filenames of the sounds loaded on each channel as well; none of your hard work will be lost!
- Keyboard mapping – Each individual channel has its own "channel" on the keyboard. You can use any 101-key or more keyboard for this to work. This lets you control your channels much easier, allowing for simultaneous timings.
- Master control panel – built into the main screen, and easy to find as the blue channel under 'Settings', you can control the resulting volume of the mix, and reset all channels to the beginning.

Installation

Deca-Dance will come in either two forms, depending on how you get it:

- In a ".rar" file, which is a compressed folder, requiring the free WinRAR application to uncompress and use (http://www.rarlab.com/rar/wrar371.exe), OR
- In a folder, which you can simply run Deca-dance from.

For the .rar file, after installing WinRAR, right-click the file and select "Extract Here". A folder named "Deca-dance 1.0 Final" will appear in the same place as your rar file.
Then double-click on the folder, and double-click on "Deca-dance 1.0.exe", which starts the program!
If you have received Deca-dance in folder form, simply do the last step to start Deca-dance for the first time!

System Requirements

Required system:

Pentium 3 800mhz or better
5mb free Hard Drive Space
256mb ram
Microsoft Windows Operating System
DirectX 8.0 or later (If using Windows XP or later, DirectX 9.0c is already installed)
Integrated Sound Card
Integrated Graphics Card

Recommended system:

Pentium 4 1.6ghz or better
1024mb DDR-RAM
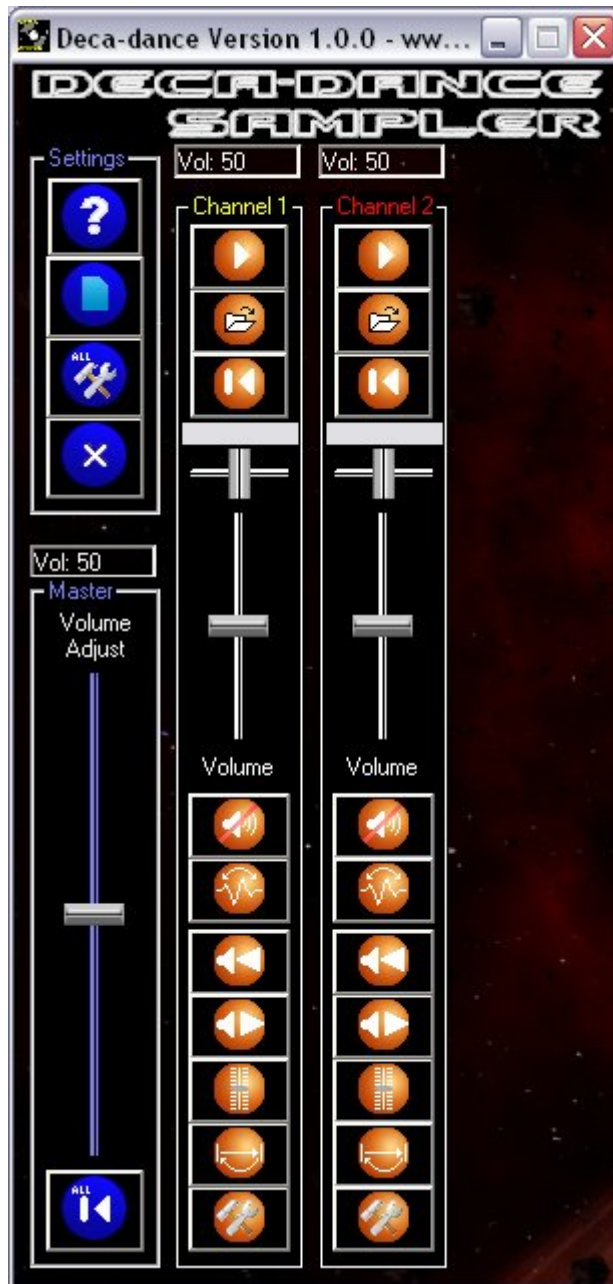1gb free Hard Drive Space for wave samples
Microsoft Windows XP or later
Integrated Sound Card
Integrated Graphics Card

How to begin using Deca-dance

The Main Screen

The first thing you see after the splash screen is the main screen. Here, you can see:

- the Settings panel at the top-left,
- the Master panel at the bottom-left,
- and two Channels.

Let's go into the Settings panel first.

The Settings Panel

The Settings panel has four buttons from top to bottom:

- The "Help" button. Click it to access this user manual from inside the program.
- The "New Session" button. Click it to reset all master and channel settings, including the number of channels visible.
- The "Master Settings" button. Click it to open the Master Settings window, which has settings for the whole program.
- The "Exit" button. Click it to exit and save your session, although if you exit via the Close button on the top-right corner, it will also save your session.

The Settings panel generally controls all other aspects of the program besides individual channel mixing, so it's where you go to if you're looking to change the number of visible channels or set settings that affect all channels.

The Master Settings Window

The master settings window allows you to configure the program. It includes changes that will affect all channels, some behaviours of buttons, switching on or off features, and increasing performance by changing some aspects of the program.
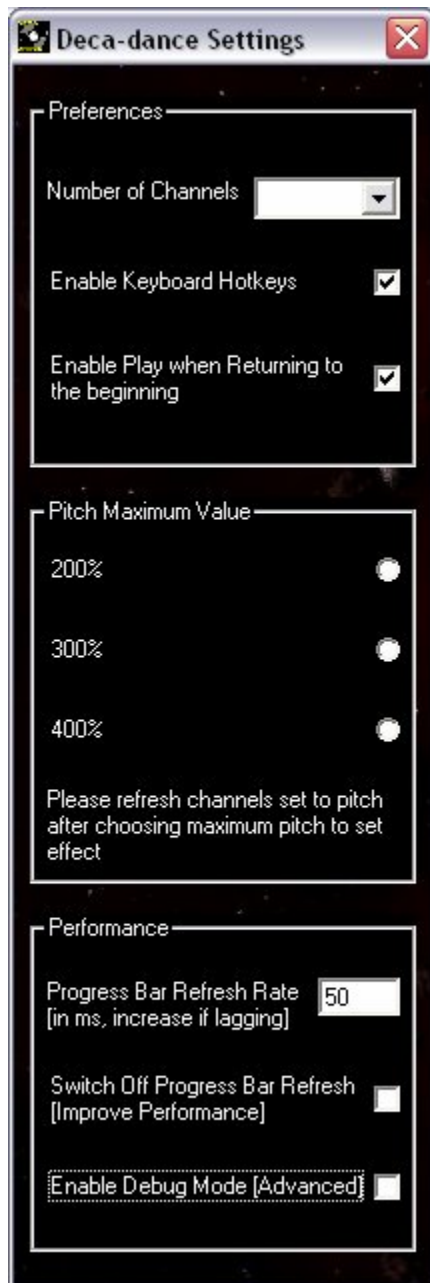
- The number of channels allows you to change how many channels are visible. Note: if you reduce the number of channels visible and there are still sounds playing on the channels about to be hidden, the sounds will still be played.
- Disable Keyboard Hotkeys stops the program responding to keyboard hotkeys.
- Disable Play when Returning to beginning changes the behaviour of Return To Beginning to stop the channel when used. This affects both the Master's Return To Beginning and the Channels.
- The Pitch Maximum Value changes the maximum value that pitch can be. The default is 200%, which allows more precise control, but if you need, you can increase the pitch range to 400%.
- The performance settings should only be accessed if you are experiencing lag in the program.
- Progress Bar Refresh Rate is the rate at which progress bars in each channel are refreshed. Increasing the value may make the Progress Bar appear to stutter, but may also increase program performance.
- If the program performance is such that is unacceptable, you can switch off the progress bar feature, which greatly increases program performance at the cost of the feature.

- Enable Debug Mode is not advised to be used. Enabling Debug Mode sets up error messages to show up when required, and various internal variable details. Enable it if you have found something wrong with the program, and you wish to report the problem for patching.

The Master Panel

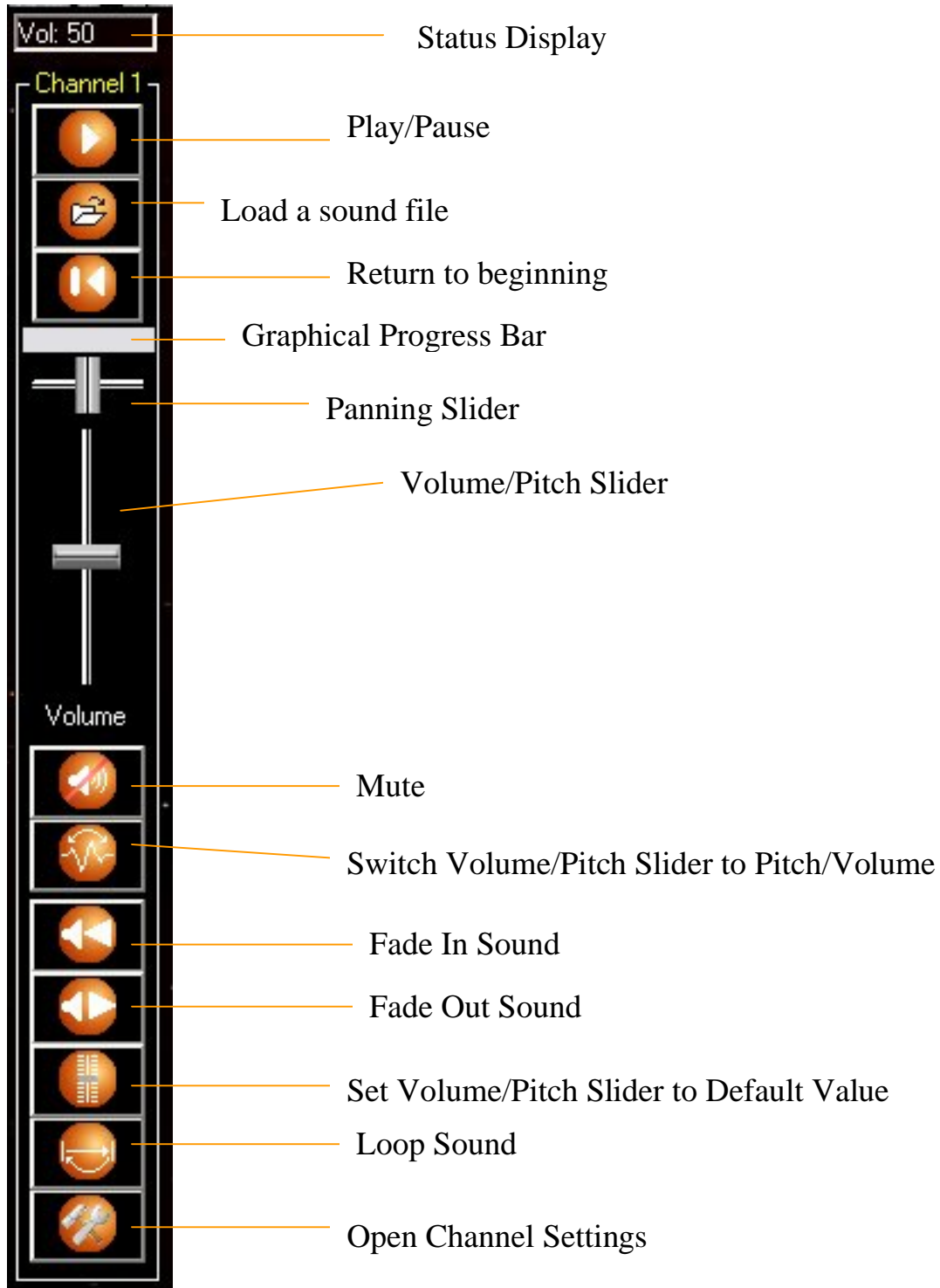The Master Panel contains the key controls of the program in relation to mixing music, these are:

- The "Volume Adjust" slider. This controls the system volume; not just the program but the overall sound output as well. This affects all channel sounds.
- The "All Return To Start" button. This sends all the channels back to the start of the sound regardless of whether they are playing or not.

The Individual Channels

The channels are the heart and soul of the Decadance program. Each channel operates independently and you can load a different song on each channel.

Status Display

Play/Pause

Load a sound file

Return to beginning

Graphical Progress Bar

Panning Slider

Volume/Pitch Slider

Mute

Switch Volume/Pitch Slider to Pitch/Volume

Fade In Sound

Fade Out Sound

Set Volume/Pitch Slider to Default Value

Loop Sound

Open Channel Settings

Status Display

The Status Display shows either the current Volume, Panning, or Pitch value of the channel, based on the last slider you used. For example, if you change the volume of the channel, the Status display would switch to display the volume of the channel, and if you change the panning of the channel, the Status display would switch to display the panning value of the channel.

Play / Pause

This button starts playing the channel's sound if there is a sound loaded on the channel. Clicking it while playing causes the channel to pause, but not stop and go back to the start of the sound.

Load a sound file

The first thing you should do with a channel is load a sound. Click this button brings up a window to select the desired sound file to load onto the channel. Without loading a sound, the channel is useless.

Return to beginning

Clicking this makes the channel go back to the beginning. After going back to the beginning, the default is to start playing the channel again, but you can change this in the master settings to simply stop the channel and go back to the beginning.

Graphical Progress Bar

This is a display that shows how much of the sound has been played so far. It is similar to a seek bar in other media players, with the exception that clicking it does not change where the sound is playing.

Panning Slider

This is a slider that controls the direction of sound output from the individual channel. A value of 0 means the direction of the sound comes from the left; 50 means the direction is centred, and 100 means the direction of sound comes from the right.

Volume/Pitch Slider

This slider controls either the volume or pitch, depending on the "switch slider" button. The default is volume, and the text below the slider tells you which control it is. Volume is default at 50 and can be increased to a maximum of 100 or decreased to a minimum of 0. Pitch is in percent, and ranges from 200% to 1% - at 0%, the sound is set to default pitch. Note

that changing the pitch also changes the speed of playback as well; when increasing pitch you also increase the speed of playback, and vice versa.

Mute

Press this button to mute the channel – i.e. even if the sound is loaded on the channel and is playing, no sound will be produced. Note: the mute doesn't change the volume value. So if you un-mute the channel, the channel volume is set to the value on the volume slider.

Switch Volume/Pitch to Pitch/Volume

Pressing this switches the volume slider to adjust the pitch. If the slider is already set to pitch, then this switches the slider back to volume control.

Fade In

This switches the Fade In effect on the channel on or off. A fade in is when the channel starts at complete silence, and builds up to the volume of the channel at the time that the Fade In effect is switched on.

Fade Out

This switches the Fade Out effect on the channel on or off. A fade out is when the channel starts at the current volume and slowly quietens to an eventual silence.

Set Volume/Pitch Slider to Default Value

This switches the volume/pitch slider to its default value; for volume it's 50, for pitch it's 100%. This depends on which value the current slider is adjusting; it will set the value back to default for the one currently displaying.

Loop Sound

This button switches the looping feature of the channel on or off. Looping a channel means when the channel reaches the end of the loaded sound, instead of stopping, it goes back to the beginning and plays the sound again. By default, all channels are set to not loop.

Open Channel Settings

This button brings up the window for individual channel settings, which allows you to configure more aspects of each channel in detail. It will only open to set up one channel's settings at a time though.

A Final Note on Channels

For all the buttons on each channel except "Return To Back", "Load", "Set Volume/Pitch to Default Value", and "Open Channel Settings", the

picture used indicates what will happen when you press the button. For example, the mute button by default, has a slash across it, which means that if you press it, the channel will mute. Another example is the Loop Sound; if the icon shows looping, it means that you should press the button to enable looping.

In addition, you may notice the background colour of the channel when its channel settings show up; the selected channel is the active channel. When a channel is active, the cue hotkeys are used on that channel.

Keyboard Hotkeys

One of the main elements of Deca-Dance is that the program is very much keyboard centralised; that is, most of the time using the program should be controlled using the keyboard. This is the keyboard map that Deca-dance uses – it shows you what each key on the keyboard does.

Deca-Dance Keyboard Hotkey Layout
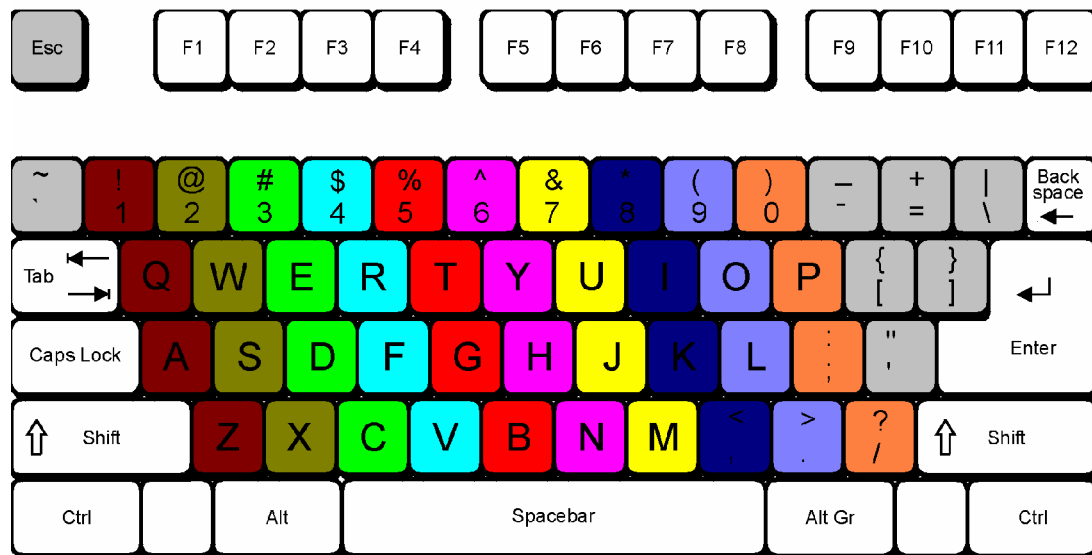
LEGEND		
	Channel 1		Channel 6
	Channel 2		Channel 7
	Channel 3		Channel 8
	Channel 4		Channel 9
	Channel 5		Channel 10
	Miscellaneous		

What The Buttons Do

There are 4 hotkeys for each channel, and each channel is represented by a colour. Each hotkey also has another shortcut or action, activated by using Shift + Button.

There are also the miscellaneous hotkeys, coloured in grey. The cues are for the active channel selected; you can select a channel by opening its settings.

1 to 0	Play		Esc	Quit The Program
! to)	Load File		`	Show Master Settings
q to p	Mute Channel		-	Go To Cue 1
Q to P	Toggle Fade Out		=	Go To Cue 2
a to ;	Return To Beginning		\	Go To Cue 3
A to :	Slider -> Pitch or Volume		[	Set Cue 1
z to /	Toggle Loop		]	Set Cue 2
Z to ?	Set Slider value to Default		'	Set Cue 3

Most of the keyboard is dominated by the coloured vertical strips. These vertical strips are controls for each channel, and each channel is represented by the strip starting with the channel number.
For example, channel 4 is represented by the aqua coloured strip, since the number of the aqua strip is 4.
Channel 9 is represented by the light blue coloured strip,
Channel 3 is represented by the green coloured strip, and so on.
The exception to the channel hotkeys are the grey coloured buttons.
The keys -, = and \ are hotkeys for playing the active channel from the positions of cue 1, cue 2 and cue 3 respectively.

The keys [,] and ' are hotkeys for setting the positions of cue 1, cue 2 and cue 3 respectively.

The Escape key is used to exit the program, and the ` key is used to quickly access the master settings window.

The white coloured keys are not used in Deca-Dance, except for Shift, which is used to access the second command of a key.

Only channel hotkeys have two commands, and they are accessed by holding Shift and the desired key.

Channel Settings Window

The channel settings window allows you to configure a selected channel in more depth than in the main window.
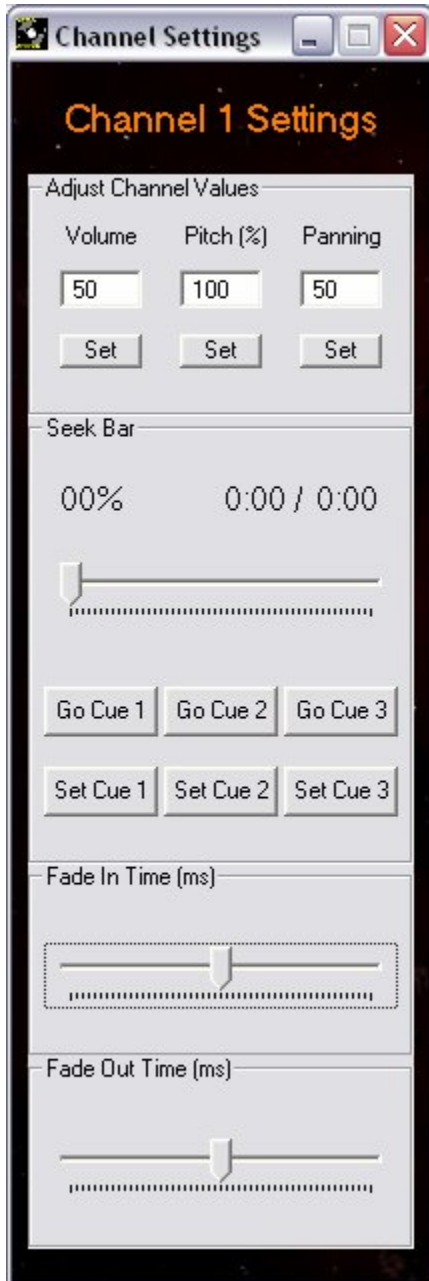
- Adjust Channel Values allows you to precisely adjust the values of the active channel by typing it in. Note: it does not take effect until you have pressed 'Set' under the value you wish to adjust.
- The Seek Bar allows you to adjust the progress of the active channel. It only takes effect when you have let go of the slider.
- Below the Seek Bar are six buttons; the two commands for each cue point on the channel. Pressing the 'Set' buttons will set the cue position to the current playing position. Pressing the 'Go' buttons will move the active channel to the cue's position and start playing from there.
- Fade In and Fade Out adjusts their respective value in milliseconds (ms).

Frequently Asked Questions (FAQ)

What exactly is a channel?
Imagine you have two cd players, and each has its own sound system. Each cd player and its sound system is, essentially, a channel. So in this example you have two channels. Channels are independent sources of sound; in Deca-dance, channels act almost as separate programs, each with its own settings.

What type of audio files can I load?
At the moment, Deca-Dance only loads audio files in wave format.

What are the maximum values for some functions of the program?
The volume must be from 0 to 100, Panning from 0 to 100, Pitch from 0 to 400; on the slider, the maximum value for pitch can be 200, 300 or 400%. Fade In and Fade Out timings range from 0 to 10000 milliseconds.

The Program has an error or problem. What should I do?
Please look at the Troubleshooting Page for help; if your problem is not listed, contact me at my email address for support.

I know what everything does, but how do I use Deca-Dance to it's full effectiveness?
First of all, how much this program can do for you depends on how much time you invest into mixing, and your developing skill at mixing. The basis of Deca-Dance relies on good wave files to mix. Without good audio files, the program is next to useless.
Second of all, use the functions in the program judiciously. There is no need to have a channel at 400% pitch all the time, unless of course you're trying to reach that effect.
Another program to use alongside Deca-Dance is Audacity. Audacity is a free audio conversion program that can convert many types of common audio files, such as mp3, ogg and compressed wave to uncompressed wave files, which can be read by Deca-Dance.
In addition, using Audacity, you can record your mix to store.

Trouble Shooting – Any problems?

If you have found a problem with the program, please refer to this table.

Problem	*Solution*
When the channel is muted, I can't fade in or fade out at the same time.	When a channel is muted, fade in or fade out is not compatible. The channel must not be muted to use fade in or fade out on the channel.
When I press Fade In or Out and I've switched the slider to pitch, it switches automatically to volume.	Fade In / Fade Out Requires the Volume from the Slider, and so must be called.
When I put the volume to 0 and press Fade In, there is an error/nothing happens.	That's because you can't fade in to 0, since you start at 0.
I have a small wave file. When I try to load and play it, it won't play.	Deca-dance cannot play sounds that are shorter than 0.1 seconds in length. This is equivalent to about 25 kilobytes.
I have a wave file but I can't play it.	Deca-Dance only accepts wave files in uncompressed PCM format. This is the most common format of wave files, and can be converted to the format via another program, such as Audacity.

Glossary

Here are a list of definitions of important words you must understand in order to understand and use Deca-dance to its fullest capabilities.

Channel – An independent audio player with its own settings

Sample – A piece of sound used to create a mix.

Fade In – Starting at silence and increasing the volume of the channel gradually.

Fade Out – Starting at the current volume and decreasing volume gradually until channel is silent.

Cue – A certain position in the channel that you can start playback from.

Active Channel – The channel which setting's panel is currently visible.

Pitch – The shrillness of the channel. In Deca-Dance, pitch also affects the speed of playback.

Pan – The direction of sound. 0 is left, 50 is centred and 100 is right.

Slider – An object that allows control of a value by dragging the cursor.

Hotkey – A key that, when hit, acts as a shortcut to a program's function.

Mix – A piece of music created by mixing two or more sounds together.

Session – The whole program's settings. It encompasses all the channel settings and master settings.

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Credits

This was a solo project; however, many people have helped me, even if they didn't know they did!
Thanks to the following people:

You! Thank you for using Deca-Dance, and I hope you use it to its full effectiveness and capabilities!
Mr. John Chung – Head of Computing, Girraween High. Helped me through some sticky coding situations when none could.
Esmat Outim/Arlen Huang/Chrishan Fernando/Trevor Ovens – My Software Design and Development classmates. Good work guys!
Dean Dusenbery for his genius code for the Windows Mixer API. Without him, there wouldn't be any master volume slider.
Clint Lefever and his VCSlider. Without him, the channel sliders wouldn't look so nice.
Microsoft. Enormous props for developing the Visual Basic 6 Development Environment and DirectX. Thousands of hours of work into those projects, and even though it was done for profit, I admire your collective genius.

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- after visiting the site, click on Donate to find out how to thank me.

Thank you!