decaydance.

decaydance is a 2 channel delay system with 2 built in sound processing modules, and with the option of loading in vst plugins. (note that Pluggo plugins cannot be used). the maximum delay time is 10 seconds per delay line, as the programme is intended for short initial delays of between 100 and 1000ms (.01 to 1 second). for longer delays use my program "hudak", which has delay times of up to 2 minutes (depending on available ram).

these instructions assume no knowledge of Max/MSP. so you may need to skip some bits if you know these programmes.

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delay line 1 is fed from the left input of the computer, delay line 2 from the right. this means that you can feed seperate sound sources into each line.
alternatively, by clicking on the [left->both] box, you can feed the left input to both lines.
to change the input source, double click on the [dac~] box (lower left). you can select a different input source in the drop-down menu. (if you start the program and don't seem to be getting any audio input, check here first. switch input to Sound In or Internal Mic - but be careful of feedback if you select the mic!)

midi input is not implemented at the moment.

the maximum length of the delay lines, and any internal buffers, is dependant on the amount of ram allocated to the program. basically - give it all you can (leaving around 5meg for the system to expand in).

if you need to get the Mac menu bar back, click on "decaydance" in the blue background. click again to remove the menu bar.

in any window, click on [front] to bring that window forward. typing numbers directly into boxes is only possible when a window is at the front. apart from that, all the windows are active all the time - you can scroll number boxes, change fader positions, and click on check boxes at any time, irrespective of which window is at the front.

note that if a number box is active (it's in the front window and has been clicked on), you can use the arrow keys (up & down) to change

values. once you have done this - click anywhere else in that window to deselect the box, otherwise you may find values changing unexpectedly!

to start [decaydance], click on the large on/off checkbox. this turns audio processing on and off. some activites (those not involving audio) will continue even with audio off (eg autopan).

next fade up the input faders to about 75%. (if you click on the small button to the left of the faders, they will be set to unity gain).

the left & right inputs can be seperately muted by the green buttons to the right of the on/off button. by default they are off.

click on the small box next to [display]. this opens up a window which gives a rough graphical indication of the delay line and the taps on it. the thick bar represents the total delay time (the same for each line) and the small bars represent the different taps taken from the delay line.

set the maximum delay time using the large number box at the top centre of the main window.

set the individual repeat times by scrolling the leftmost of each set of delay number boxes (the ones that default to 200). these values are in milliseconds. (1ms = 1000secs).
you'll notice that the other boxes scroll proportionally; this means that the repeats will be rhythmic. once you've set the first number box, you can individually scroll the other boxes so that the repeats are non-rhythmic.

if feedback is set to [0.], any sound will play once only through the delay line. as you increase this value (to a maximum of 1.0) more of the sound will be fed back to the beginning of the line, and will be re-repeated. values around 0.8 mean that sounds will repeat for a long time (many minutes!), so you can build up big walls of sound.

the large faders control the level of each tap. the first one of each set of four controls the level of the direct sound and the final tap (when you have feedback above zero, the final tap is actually the first repeat.) to start with set all the faders at around 75%.

next down are the pan controls. use these to set the stereo position of

each delay. if you click on the [autopan] buttons, the pan position will change by itself. the rate at which this happen is set by the number box at the bottom. note that alternate autopans counter-rotate.

above the output faders is a small yellow LED which 'glows' briefly whenever the faders are at unity gain. if you've moved the output faders for somereason, and want to set them back to their default position, move them towards the 80% position until you see the LED light up.

to store a particular group of settings, use the small memory box underneath the [decaydance] title. shift-click on a slot to store settings, single click on a slot to restore settings.
IMPORTANT - settings are not stored when you quit the programme. you will need to click on [write] to save a settings file, and [open] to load in a previously saved set.

VST plugins.

you can load a vst plugin into the output or either/both of the inputs.

to load a plugin, click on [plug].
to open the plugin's editing window, click on [open].
the wet/dry fader crossfades between the clean and the treated signal.

if nothing seems to be happening after you have loaded a plugin - turn audio off and back on again. (this sometimes happens the first time (only) after you load a plugin whilst audio is already running).

built-in effects.

ringmod

click on the checkbox to the right of the ringmod faders (wet/dry) to open the module. the ringmod signal is fed to the delay lines.

[thru] controls the amount of dry signal. (probably best left at zero - use the wet/dry faders to set this. alternatively, put the wet/dry fader to all wet, and use the thru fader inside the module; either will work).
[rm] is the level of the ring modulated signal - it may need to be set quite high (around 85%).
[frequency] controls the frequency of the modulating signal. click and

scroll, or click and type in a value (remember that the window must be front-most for this latter to work).

above each pair of faders is a small button that resets those faders to unity gain.

the [midirange] boxes aren't implemented yet.

grain.

click on the grain checkbox to open the module.

grain is a cutdown version of a patch called Granular Synthesis, written by nobuyasu sakodna.

the output of grain is fed directly to the output faders.

select the input using the menu box in the top right. if there is audio on the selected input, you should see it on the left hand meter. you can adjust the input level using the number box [input].
click on the [rec] box - notice that the on/off and loop boxes in the sequencing section also come on.

after a short while you should hear the audio output of grain. you can change the pitch of the sound output by changing the value in the [pitch] number box.
you can change the playback speed in the box of the same name in the sequencing section.
if you turn playback to off, while still leaving loop checked, then the bit of audio at that playback position will continue to play. change the [grain dur] and notice that the audio loop gets longer/shorter. if you leave playback off while record is still on, then the sound being looped will change every so often as the bit of audio at that point in the record buffer gets overwritten.
slower playback speeds sound better with longer grain durations.
the output of the 4 grain players are spread across the stereo image. if you click on [sep out], the 4 grains are mixed together resulting in a smoother sound. this sometimes sounds better with shorter grain durations (it depends on what effect you want).
if playback is off, you can change the play position by scrolling the position number box directly.
you can also use the [LFO] to control the play position. open the module by click on the [LFO] button. connect the LFO output to the play position

by clicking on the [off] button.

LFO.

(nb - known bug - it seems that it's necessary to change the "grain dur" value before the LFO will contro the play position properly. you can scroll it away from and back to 100. to start with).

there are 2 wave generators in this module: a saw/triangle and a random generator.
use the [source] dropdown to select wave, random, or both.

by dragging in the upper or lower halves of [output range] (in the random section it's the lower of the 2 long boxes) you can set the upper and lower limits of the LFO range.
the [output display] boxes show you what's going on.
[start] starts the LFO.

the [period] number box sets the period of the triangle wave. the dropdown menu to the right selects the waveform.
the [lo] and [hi] number boxes set the range of the random number generator.

grain buffer.

by double clicking on the [buffer~] you open a window which shows you the audio in the buffer. note that this does not update in realtime; it show the audio at the moment the window was opened. to close the window click on the macintosh close box in the top left of the window.

to save the audio currently in the buffer, first turn off (grain) record. the click on [wr]. a standard mac dialogue box will open, allowing you to save the buffer to disc.
click on [N] to normalise the contents of the buffer. note that you can do this whilst in record and/or play. if grain is playing, and the audio in the buffer is low level, the audio output will get much louder immediately you click on [N]. you might want to fade the output of grain down first!
click on [t] to put a little fade on the start and end of the audio in the buffer.
[clear] immediately clears the contents of the buffer.