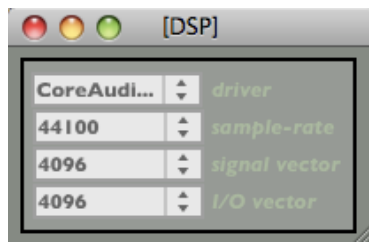


1- First click on the DSP button to open the setup dialogue. Here you can choose your driver, sample-rate and vector sizes. Note that the sample rate must be the same as your sound file's sample rate.



The csound code uses 96Khz and that is the minimum I would recommend for best quality but the application will run at lower resolution too. To run at higher resolution or if you are consistently using a particular sample-rate other than 96Khz then you can change the default sampling rate of the csound code easily by following these steps:

- a. Before launching the application open the files pvswarp.csd and pvswarpBatch.csd in a text editor.
- b. Change the sample rate value at the very top (sr=96000) to your desired value.

```
<CsoundSynthesizer>
<CsOptions>
</CsOptions>
<CsInstruments>

sr=96000
ksmps=64
nchnls=2
0dbfs=1
```

- c. Save the file (as plain text files), exit and start Warp.app.

Also it is important to set the signal and I/O vector sizes to relatively high values. Certainly no less than 1024.

2- Here you can turn the DSP processing on and off.

3- Drag and drop audio-files or folders containing audio-files here. When the file is loaded you can press the space-bar to play them (do not forget to turn the DSP on first!).

4- Adjust the FFT settings.

Win sets the analysis window size which can be changed independently of the FFT size. The *Win* value is multiplied with the FFT-size to set the window size.

OL stands for overlap. The FFT size is divided with the value of *OL* to set the overlap size (so the higher *OL* the better the time resolution of the FFT analysis/re-synthesis).

WT stands for window type. 0 is Hamming and 1 is von Hann.

For further information see here: <http://www.csounds.com/manual/html/pvsanal.html>

5- This number sets the speed of your sound-file playback.

6- This shows which function table is on top: EQ or Warp. You can change the table by pressing the tab key (first you need to click outside the table).

7- Read or write the table values as presets.

8- Spectral smoothing factor. 0 is freeze and 1 denotes no smoothing.

9- Enter a string here with no spaces (NOT a number alone) to be automatically added to the original file-name. The result is then given to the processed out-file (see next).

10- Press here to process the file in non-real time. The original file is not overwritten. The result is saved with a new name (see above) in the same location as the original.

11- Show information about the name, length and sample-rate of the currently loaded audio-file. Click on the name of the file to open a wave-form view.

12- The vertical zoom slider. Hold down the L key as you drag this slider and the horizontal zoom will change in sync. Press the z key to zoom out.

13- The horizontal zoom slider. Hold down the L key as you drag this slider and the vertical zoom will change in sync. Press the z key to zoom out.

14- The frequency range selected by the horizontal zoom slider. This can be directly edited to change the zoom view.

15- Here you can enter two types of text commands to write table data.

Enter pairs of numbers separated with commas to add new points. The first number denotes the horizontal value and the second denotes the vertical (e.g. the default warp table is 0 0, 20000 20000).

miscellaneous

It is known that FFT processes can distort the original phases of your FFT bins if the frequency values are changed. This is certainly the case with the GRM tools plug-in, and unfortunately here as well. However with the warp application as soon as you hear the blurry effect of phase loss press the R key to reset the FFT processing. Of course this blurriness is desired if you are setting the *smooth* slider to less than 1.

Installation

Note that the latest version of csound is required for this application to work. Just download and run the installer. <http://sourceforge.net/projects/csound/files/>

If the non-real-time write to disk function is not working then maybe csound-double is not installed in its default path on your machine (/usr/local/bin/csound-double). You can open the file warpScr in a text editor and change this path to refer to your copy of csound 5 (could be double or single versions but for optimum quality I recommend double), save the file and exit.

```
#!/bin/csh
```

```
cd "$argv[8]"
```

```
set fx = "$argv[9]"
```

```
set f = "$argv[7]"
```

```
/usr/local/bin/csound-double -O "$argv[8]warpLog" -d -3 -o "$f:r_$fx.aif" --  
omacro:Filename="$f" --omacro:Fftsize=$argv[1] --omacro:Ol=$argv[2] --omacro:Win=  
$argv[3] --omacro:Wt=$argv[4] --omacro:Wet=$argv[5] --omacro:Dry=$argv[6] --  
omacro:Speed=$argv[10] --omacro:Smooth=$argv[11] "$argv[8]pvswarpBatch.csd"
```

```
"$argv[8]getLine" "$argv[8]warpLog"
```