Guide to BOOK Chapter 11 Examples:
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Spectral Opcodes

There are two plug-in opcodes that have been used as examples for this chapter: **pvsarp** and **pvstranspose**. Depending on whether you are on Linux, OS X or Windows, these opcodes can be built using one of the following commands:

Linux

```
gcc -02 –shared pvsarp.c -o pvsarp.so  –I/usr/local/include
    –I/usr/local/include/csound
```

OS X

```
gcc -02 –dynamic pvsarp.c -o pvsarp.dylib
    –I/Library/Frameworks/Csound.framework/Headers
    –I/usr/local/include
```

Windows

```
gcc -02 –shared pvsarp.c -o pvsarp.dll –I/usr/local/include
    –I”C:/Program Files/Csound/include”
```

You will have to have **libsndfile** installed (or at least the header file *sndfile.h*), because the Csound headers depend on it. It's very simple to install, just get it from www.mega-nerd.com/libsndfile and follow the instructions for your platform that come with it.

pvsarp.c and pvstransp.c

These implement the two transformations described in the text. Once you've built them, just copy the output files (**.dll**, .**so** or .**dylib**) to your plug-ins directory (**OPCODEDIR**), then you will be able to try them out.