

Guide to DVD Chapter 10 Examples: *Eric Lyon*

Algorithmic Patch Design for Synmod

triad

As a first step, all of the code for this section must be copied from the DVD-ROM to your hard drive or other dynamic storage medium, so that you can create new files on your disk (which you cannot do in a directory of a finalized DVD-ROM). This program *triad* is developed in stages in the main text. All of its code is contained in a code file, *triad.c*. Compilation is done in a terminal window as follows:

```
$ gcc -o triad triad.c
```

Once *triad* has been compiled, it may be executed as follows, also in a terminal window, where “datafile” contains data in a format described in the main text. We also include the program *synmod* developed in *A Modular Synthesizer Simulation Program* found in the main text. That program is compiled in a similar fashion.

```
$ gcc -o synmod synmod.c
```

Both programs are run from a Unix command window as shown below.

```
$ triad < datafile
```

The first version of *triad* is found in the folder **take1**. After compiling *triad* as shown above, execute *triad* in a terminal window as follows:

```
$ triad
```

The second version of *triad* is found in the folder **take2**. After compiling *triad* as shown above, execute *triad* in a terminal window as follows:

```
$ triad
```

The third version of *triad* is found in **take3**. Compile it as shown above. Also compile the *synmod*, found in **take1** and move the executable file *synmod* to the current directory. Execute *triad*, routing its output to *synmod* over a Unix pipe to create a valid Csound file. See below.

```
$ triad | synmod > patch2.csd
```

Then play it with Csound. You should hear a triad.

```
$ csound -odac patch2.csd
```

The fourth version of *triad* is found in **take4**. Compile it as shown above.

```
$ triad | synmod > patch3.csd
```

Then play it with Csound. You should hear a complex chord.

```
$ csound -odac patch3.csd
```

The fifth version of *triad* is found in **take5**. This produces a complex chord.

```
$ triad | synmod > patch4.csd  
$ csound -odac patch4.csd
```

The sixth version of *triad* is found in **take6**. This produces a complex chord, with a greater variety of spacings.

```
$ triad | synmod > patch5.csd  
$ csound -odac patch5.csd
```

The seventh version of *triad* is found in **take7**. This introduces amplitude modulation to the synthesis method.

```
$ triad | synmod > patch6.csd  
$ csound -odac patch6.csd
```

The eighth version of *triad* is found in **take8**. This introduces frequency modulation to the synthesis method.

```
$ triad | synmod > patch7.csd  
$ csound -odac patch7.csd
```

The ninth version of *triad* is found in **take9**. This introduces LFO to the synthesis method.

```
$ triad | synmod > patch8.csd  
$ csound -odac patch8.csd
```

If you would like to permanently install *triad* for further experimentation with Csound, simply copy this last version of file *triad* to `/usr/local/bin`; but you will need root permission to do so.

If you are reading this book, you will almost certainly have Csound installed on your computer; but just in case you don't, the current version of Csound can be downloaded from:

<http://www.csounds.com/>