Guide to DVD Chapter 11 Examples: *Eric Lyon*

More Automated Patch Design

autosyn

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 *autosyn* is developed in stages in the main text. All of its code is contained in a code file, *autosyn.c*. Compilation is done in a terminal window as follows:

```
$ gcc –o autosyn autosyn.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.

```
$ autosyn < datafile
```

The first version of *autosyn* is found in the folder **take1**. After compiling *triad* as shown above, execute triad in a terminal window as follows. You will notice that we first generate a CSD file for Csound, then execute Csound on this file. This version creates a canonic effect with sample-and-hold units.

```
$ autosyn | synmod > test.csd ; csound –g -odac test.csd
```

The second version of *autosyn* is found in the folder **take2**. After compiling *triad* as shown above, execute triad in a terminal window as above. The result is a complex FM texture.

```
$ autosyn | synmod > test.csd ; csound –g -odac test.csd
```

The third version of *autosyn* is found in **take3**. Compile it and execute it as above. The result will be a more complex FM texture.

The fourth version of *autosyn* is found in **take4**. Compile it and execute it as above. The result will be a random selection of a synthesis method.

The fourth version of *autosyn* is found in **take5**. Compile it and execute it as above. The result will be a random selection of a synthesis method.

The fifth version of *autosyn* is found in **take5**. This version of *autosyn* also requires a new version of *synmod*, found in the same directory. Recompile *synmod* and either leave it in place or install it where you put your older copy of synmod. Then execute autosyn as before. The texture will be an unpredictable combination of elements described earlier.

```
$ gcc –o synmod synmod.c

$ autosyn | synmod > test.csd ; csound –g -odac test.csd
```

The final version of *autosyn* is found in **take6**. Processors are further randomized, and run in parallel.

If you would like to permanently install *autosyn* for further experimentation with Csound, simply copy the final version of file *autosyn* 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/