Composers' Desktop Project and Hɪᴛʜᴇʀ Gᴀᴛᴇ Mᴜsɪᴄ present

CDP Workshops CD-1

9 CDP Study Worksheets

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This CD contains Worksheets designed for users new to the CDP software, along with all sound examples, with links from the HTML documentation.

About the Worksheets

This package should speed up the learning curve for the CDP software and help new users to achieve effective results more quickly.

- **Workshops CD-1** has 179 tracks with only 3-4 source sounds used to make many different sound transformations. These can be played in order using a Media Player to listen to the examples one after another and compare the tonal differences. This in itself can provide a very useful overview of the CDP software as well as tune the ear to fine tonal variations.

- The **deeper aim** of the Worksheets is to give clear, precise and step-by-step instructions on how to create these examples via either the *Soundshaper* or the *Sound Loom* GUI (or the Command Line/Terminal). They therefore guide you through the process of accessing and using a great number of the CDP functions.

- The examples are mostly **simple and direct**, in order to be precise and avoid confusion. However, there are also a few that involve sequences of operations, so that the real shaping power of the CDP software is revealed.

- The following **illustration** is from Worksheet 2 on filtering sounds. It guides you through the 6 modes of FILTER BANK. Note that 'SS' stands for *Soundshaper* and 'SL' for *Sound Loom* – these lines are telling you how to access the function in these GUIs, as the naming conventions sometimes differ. On the Command Line, the name is as in the title, in this case, 'FILTER BANK'.

- The **output filenames** below may look strange. Some prefer to describe the sound itself. Here I use shorthand codes in order to enable the filename itself to reveal where it came from. In this case **trcdtfbm1.wav** can be read as **'trcdt'** (name of the input soundfile), **'fb'** (Filter Bank), **'m1'** (Mode 1). **'Trcdt'** itself is a code. The source was a tractor engine sound (**'tr'**) that was CUT (**'c'**) to the desired length and DOVETAILED

('**dt**'). Thus the name is very instructive, even if unpronounceable! I read it to myself as letter groups: **'tr-c-dt-fb-m1'**.

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C.  FILTER BANK - 6 specialised functions
  (SS:  Soundfiles > Filter > Bank)
  (SL:  FILTER > variable > bank)
  ( D-F = 'Double-Filtering')

ST5.  Mode 1:  Filter the harmonic series over a low frequency
  infile  outfile        Q      Gain    Lofreq  Hifreq  otherparam      D-F
  trcdt   trcdtfbm1.wav  150    5       50      10000   -               ON

ST6.  Mode 2:  Filter alternate harmonics over a low frequency
  infile  outfile        Q      Gain    Lofreq  Hifreq  otherparam      D-F
  trcdt   trcdtfbm2.wav  150    5       50      10000   -               ON

ST7.  Mode 3:  Filter the subharmonic series below a high frequency
  infile  outfile        Q      Gain    Lofreq  Hifreq  otherparam      D-F
  trcdt   trcdtfbm3.wav  50     5       50      10000   -               ON

ST8:  Mode 4:  Filter the harmonic series, specifying a linear offset
  infile  outfile        Q      Gain    Lofreq  Hifreq  otherparam      D-F
  trcdt   trcdtfbm4.wav  100    5       50      10000   796 (offset)    ON

ST9:  Mode 5:  Filter with equal intervals, specifying number of filters
  infile  outfile         Q     Gain    Lofreq  Hifreq  otherparam      D-F
  trcdt   trcdtfbm5a.wav  150   5       50      10000   1000(numfilters)ON
  trcdt   trcdtfbm5b.wav  100   5       50      10000   100             ON

ST10.  Mode 6:  Filter with equal intervals, specifying interval size in
semitones (harmonises!)
  infile  outfile         Q     Gain    Lofreq  Hifreq  otherparam      D-F
  trcdt   trcdtfbm6a.wav  50    5       50      10000   3(semitonesize) ON
  trcdt   trcdtfbm6b.wav  25    5       50      10000   12              ON
  trcdt   trcdtfbm6c.wav  25    5       50      10000   7               ON
  trcdt   trcdtfbm6d.wav  25    5       50      10000   6               ON
```

The CD is a data (not an audio) CD. It includes:

- **.doc** copies of the Worksheets themselves (in Word for Windows .doc format)

- All the **source sounds** in .wav format. These source sounds can be converted to .aiff for use on the Mac. Everything is kept as .wav here so that the Media Player doesn't mix things up out of sequence.

- Any **text or breakpoint files** used for a particular example.

- **2 Play Lists** for all the sounds created in the various examples, one for Worksheets 1-5 and one for Worksheets 6-9. When put into the computer, the resident sound player (such as Media Player) will play through all the examples in order (they have special prefixes designed to ensure this).

- Each Play List has its own document that lists all the sounds with a brief description of how they were made so that you can follow along as you listen to the sounds. Individual sounds can also be selected for playback or copied to your hard disk for further transformations.

- This CD is sent out with a printed copy of the **9 Worksheets** and **Play Lists** to make getting started and using the Workshop as easy as possible.

The 9 Worksheet Topics

- **PITCH** – transpositions, glissandi, pitch shifting, distortion involving pitch, ring-modulation

- **FILTER** – high and low-pass, band pass, notch, filter banks with various presets, phasing, iterated and sweeping

- **ROUGHEN-LENGTHEN** – distortion repetition, step-through looping, scramble, brassage, texture and (PC only) *GrainMill*

- **TUNE** – user-defined filterbanks, texture with harmonic grids, spectral tuning

- **TIME** – these are mainly concerned with freeze, hold and step-freeze techniques, but spectral time-stretching is also included

- **TEXTURE** – here we have a number of very precise operations to form a basic introduction to the key functions of TEXTURE SIMPLE

- **TRANSFERS** – this is about envelope replacement in the Time and Spectral Domains, including 'cross-synthesis' (referred to as 'vocoding' in the CDP software)

- **TRANSITION** – cross-fades in the Time and Spectral Domains provide comparison with morphing

- **SPEECH** – 47 alterations of a vocal sound; the changes are usually minimal: to illustrate a very controlled use of sound processing, the ear being very sensitive to alterations in vocal tone

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