Composers Desktop Project and HITHER GATE MUSIC present

About CDP Workshop 3

Transposition, Shifting & Combinations

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Contents of the Transposition, Shifting & Combinations Workshop

A considerable amount of background and experience is useful in order to get the most out of these programs, many of which are delve deep into sounds to extract features and then combine them in numerous ways. The **Transposition, Shifting & Combinations Workshop** is designed to provide this information and auditory experience. It therefore includes

- A general introduction to the Workshop and a suitable working environment.
- Explanations of the key technical terms involved, in **Q**uestion and **A**nswer format.
- A section on formant extraction, with a comparative listening table.
- An overview of the different types of processing function, along with an inputs and outputs chart for the REPITCH programs.
- Six more 'Listen & Compare' sections for the various types of transposition, frequency shift and combinations of pitch trace files.
- The Workshop also contains batch files for running the routines that created the examples (**.bat** – PC, **.sh** –MAC). These batch files are in the main folder where the other supplementary breakpoint and textfiles are located. You can use these to explore making the sounds with different soundfiles as sources, or with parameter alterations. The original batch files are also stored in a separate folder so that they can be restored in the main folder as required. This Workshop does not have Presets or Patches.
- The MAC and PC versions are in separate folders. They are, however, virtually the same except for the batch files.

The Programs

The CDP software has a variety of programs that alter pitch/frequency. The programs illustrated and discussed in this Workshop include:

- ➢ MODIFY SPEED is the basic time-domain program for raising and lowering
- ➢ the pitch of a sound, creating glissandos, acceleration and deceleration.

- ➢ The DISTORT routines have two programs, HARMONIC and MULTIPLY that change and overlay transpositions.
- ➢ Basic pitch alteration in the spectral domain is handled by OCTMOVE and TRANSP in the PITCH Group, PCHSHIFT and TRANSPOSE in the REPITCH Group. The latter has a 'preserve formants' option (TRANSPOSEF), with utilities to GET and PUT formants separately.
- ➢ STRANGE SHIFT squeezes or expands frequency relationships, thus creating inharmonic frequency complexes.
- ➢ HILITE BAND enables you to work with specific bands within the frequency range of a sound.
- ➢ REPITCH GETPITCH extracts the pitch trace (up and down pitch movement) of a sound, creating a binary pitch data file (.frq). Other REPITCH functions can process this pitch trace, such as exaggerating its contour or transposing it. The REPITCH COMBINE functions then enable you to combine pitch traces in various (complex) ways, thus creating various unique relationships between sounds.

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