



## CDP Release 8 – New Additions

CDP's eighth software release (2023) introduces over 70 new processes, covering a wide variety of spectral, multi-channel, segmentation, waveset and synth functions, among others. Some are updates or alternatives to previous processes; some are at the more 'experimental' end of sound processing.

All of the new (documented) processes have been assigned to the various Function Groups.  
You can view them in detail from within the HTML documentation: see the Home Page for links.

### **Edit Soundfile:**

ENVCUT	Cut sound into elements with falling envelope
WAVEFORM	Generate a wavetable from existing sound

### **Envelope:**

FLATTEN	Equalise level of sound elements
SPIKE	Envelope the sound to spike at the peak
TREMENV	Tremolo a sound, with width narrowed after peak

### **Extend/Segment:**

DVDWIND	Shorten a sound by read, skip, read, skip procedure
BOUNCE	'Bounce' a sound: accelerating repeats, decaying in level
ENVSPEAK	Process speech 'syllables'
HOVER2	Move through a file, zigzag reading it at a given frequency, with inverted copies
MOTOR	Create faster pulse-stream within slower pulsed envelope
PULSER	Iterate a sound to create a stream of enveloped & pitched sound-packets
REPEATER	Play source, with specified elements repeating
ROTOR	Generate note-sets that grow and shrink in pitch-range and speed
SORTER	Chop sound into elements, then reorganise by loudness or duration
STUTTER	Randomly repeat segments cut from elements
TESSELADE	Create repeating patterns with shift in space and time

### **Filter:**

PHASOR	Introduce phasing into (mono) signal
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### **Housekeep:**

PAIREX	Extract any pair of channels from a multichannel sound
REPAIR	Join a list of mono sounds into stereo or multi-channel outputs
TOSTEREO	Diverge from mono to stereo, in a stereo file

### **Modify:**

VERGES	Play source, with specified brief moments glissing up or down
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### **Multi-channel:**

BROWNIAN	Generate texture of sampled elements following brownian motion in pitch and space
CASCADE	Successive segments are repeat-echoed, and the echo-sets are superimposed on the source
CRUMBLE	Project segments spatially over progressively smaller groups of channels
CRYSTAL	Generate sound-events based on the position of vertices of a crystal, then rotate the crystal in 3-D space, etc.
SPIN STEREO	Spin a wide stereo image across stereo / multichannel space, with possible doppler-shift



SPIN QUAD Spin two wide stereo-images across a 5-channel-wide sound image

**Pitch-sync Grains:**

FOFEX EXTRACT Extract FOFs to a file or to separate soundfiles

FOFEX CONSTRUCT Superimpose FOFs to make output FOF

TWEET Replace FOFs in vocal sound by synthetic tweets or noise

**PVOC:**

ANA2PVX Convert CDP analysis file (.ana) to PVOC-EX file (.pxv)

PVOCEX2 Stereo phase vocoder based on CARL pvoc (Mark Dolson)

FTURANAL ANAL Extract spectral features from an analysis file and output to a textfile

FTURANAL SYNTH Use spectral features data to reassemble MONO source file

**SPECTRAL:**

**Blur:**

CALTRAIN Time-blur the upper spectral channels

SUPPRESS PARTIALS Suppress the most prominent partials in the frequency band indicated

**Focus:**

SPECFOLD Fold, invert or randomise the spectrum

**Formants:**

SPECENV Extract the spectral envelope of file 2 and apply it to file 1

SPECFNU Modify spectral shape in relation to formant peaks, or show formant data  
(23 functions)

**Specnu:**

FRACTAL SPECTRUM Fractally distort spectrum by transposition

SPECULATE Generate versions of source with channel data progressively permuted

MATRIX Matrix manipulation of spectrum of sound

**Pitch:**

SPECTUNE Find most prominent pitch and transpose file to it

**Stretch:**

SPECTSTR Time-stretch analysis file, suppressing artefacts when stretch > 1

**Synthesis:**

CLICKNEW Make clicktrack using times listed in textfile

IMPULSE Create a stream of impulses

MULTIOSC Nested FM-style oscillations

MULTISYNTH Synthesize several sound-streams from a score

NEWSCALES Synthesise a series of short tones with defined frequency and timbre

NEWSYNTH Synthesise complex spectra (new modes)

PULSER SYNTH Iterate synthesized wave-packets defined by partials data

SYNfilt Noise filtered by time-varying filterbank, with time-variable Q

SYNSPLINE Synthesise waveforms by smoothly joining randomly generated points

TS OSCIL Create sound from time-series text data

TS TRACE Create sound from time-series data treated as a pitch-trace

TS CONVERT Convert input data to specified range and format

**Utils:**

ASCIIGET      Display the contents of a text file as a list of characters with ASCII decimal code

**Waveset / Distort:**

CLIP            Clip a signal  
DISTCUT        Cut sound into elements with falling envelope  
DISTMARK        Interpolate between waveset-groups at marked points  
DISTMORE BRIGHT Reorder sound segments in order of average zero-crossing rate  
DISTMORE DOUBLE Double (quadruple etc.) frequency of each waveset  
DISTMORE SEGSBKWD Reverse certain (sets of) segments  
DISTMORE SEGZIG   Zigzag across tail segments or across whole soundfile  
DISTORTT       Repeat wavesets within given duration  
DISTREP        Timestretch soundfile by repeating wavesets  
DISTSHIFT      Time-shift or swap wavecycles  
DISTWARP       Warp wavecycles by a multiplier  
FRACTAL WAVE Fractally distort an input sound or wavecycle  
QUIRK          Distort signal by raising sample values to a power  
SCRAMBLE       Scramble waveset order randomly or by size and level  
SPLINTER       Create splinters by repeating & shrinking selected waveset-group

**CURRENTLY UNDOCUMENTED:**

CHIRIKOV       Synthesize potentially chaotic Chirikov Standard map, or Circle map,  
                  or create time & MIDI-pitch breakpoint file from either  
FEATURES        Use an analysis file to find the most prominent features in a sound source  
REFOCUS         Generate envelopes for a set of sounds bringing each into focus in turn  
STRANDS         Generate pitch data for several pitch threads to cycle around one another