# Overtone Cheat Sheet (Overtone 0.2.1)

# **Documentation & Examples**

Clojure doc find-doc

Overtone example examples get-example

## **Synths**

Design definst defsynth
Examples defexamples
CGens defcgen
Control ctl kill

## **Event Handling**

Add on-event on-sync-event

Remove remove-handler remove-all-handlers

Trigger event sync-event

Synth Triggers on-trigger remove-trigger

## **Sound Data**

#### **Buffers**

Create & Free buffer buffer-free

Read & Write buffer-read buffer-write! buffer-fill!

buffer-set! buffer-get buffer-save

buffer-data buffer-read

Info buffer-info num-frames buffer-id

#### Samples

Create load-sample sample defsample
Playback mono-player stereo-player

### **Busses**

Create & Free control-bus audio-bus free-bus

Modify bus-set! bus-set-range!

## Nodes & Groups

Create node group node-free group-free

group-clear

Manipulate node-run node-stop node-place node-control

node-control-range node-map-controls

prepend-node append-node

Info node-tree

# **Algorithmic Composition**

# Chance

Choice choose weighted-choose
Dice weighted-coin ranged-rand

### **Scaling**

Range scale-range

Rounding closest-to round-to

## Pitch

Ratios unison octave fifth sixth third

fourth min-third min-sixth

Note Shifting shift flat sharp invert

resolve-degree degree->interval

degrees->pitches

resolve-degrees scale resolve-chord chord nth-octave

nth-equal-tempered-freq

interval-freq

Frequencies cent midi->hz hz->midi

Amplitude db->amp

# Studio

#### Instruments

Drums kick small-hat c-hat o-hat round-kick snare

snare2 tom

Piano piano Sampler granular

Synth tick ping tb303 mooger rise-fall-pad pad

buzz bass grunge-bass ks1 ks-stringer fm-demo

harmonic-swimming whoahaha bubbles

IO mic

#### **Effects**

Mixer volume pan inst-volume inst-out-bus inst-fx

clear-fx

FX fx-noise-gate fx-compressor fx-limiter fx-sustainer fx-reverb fx-echo fx-chorus

fx-distortion fx-rlpf fx-rhpf

## Metronome

Create metronome

bps beat-ms

#### Visualisation

### Scope

Create & Reset scope pscope reset-scopes

# **B Equalization Suit UGens**

b-low-pass b-hi-pass b-all-pass b-band-pass b-band-stop b-peak-eq b-low-shelf b-hi-shelf

### **Buffer IO UGens**

play-buf t-grains buf-rd buf-wr record-buf scope-out local-buf max-local-bufs set-buf clear-buf

### Chaos UGens

quad-n quad-l quad-c cusp-n cusp-l gbman-n gbman-l henon-n henon-l henon-c latoocarfian-n latoocarfian-l latoocarfian-c lin-cong-n lin-cong-l lin-cong-c standard-n standard-l fb-sine-n fb-sine-l fb-sine-c lorenz-l

## Compander

amplitude compander normalizer limiter

### **Delay UGens**

delay1 delay-n delay-l delay-c comb-n comb-l comb-c allpass-n allpass-l allpass-c buf-delay-n buf-delay-l buf-delay-c buf-comb-n buf-comb-l buf-comb-c buf-allpass-n buf-allpass-l buf-allpass-c

# **Demand UGens**

demand duty t-duty demand-env-gen dseries dgeom dbufrd dbufwr dseq dser dshuf drand dxrand dswitch1 dswitch dwhite dbrown dibrown dstutter donce dpoll

# **Envelope Ugens**

done free-self pause-self free-self-when-done pause-self-when-done pause free env-gen linen i-env-gen

### **Fixed Frequency Oscillator UGens**

f-sin-osc klang klank blip saw pulse p-sin-grain

#### **FFT UGens**

fft ifft pv-mag-above pv-mag-below pv-mag-clip
pv-local-max pv-mag-smear pv-bin-shift pv-mag-shift
pv-mag-squared pv-mag-noise pv-phase-shift90
pv-phase-shift270 pv-conj pv-phase-shift
pv-brick-wall pv-bin-wipe pv-mag-mul pv-copy-phase
pv-copy pv-max pv-min pv-mul pv-div pv-add
pv-mag-div pv-rand-comb pv-rect-comb pv-rect-comb2
pv-rand-wipe pv-diffuser pv-mag-freeze
pv-bin-scramble fft-trigger

#### Extra FFT UGens

pv-conformal-map convolution convolution2
convolution2-1 stero-convolution2-1 convolution3
pv-jenson-andersen pv-hainsworth-foote running-sum

### Filter UGens

resonz one-pole one-zero two-pole two-zero apf integrator decay decay2 lag lag2 lag3 ramp lag-ud lag2-ud lag3-ud leak-dc rlpf rhpf hpf bpf brf mid-eq lpz1 lpz2 hpz1 hpz2 slope bpz2 median slew sos ringz formlet detect-silence

### **Grain UGens**

grain-sin grain-in warp1

#### Information UGens

sample-rate sample-dur radians-per-sample control-rate control-dur subsample-offset num-output-busses num-input-busses num-audio-busses num-control-busses num-buffers num-running-synths buf-sample-rate buf-rate-scale buf-frames buf-samples buf-dur buf-channels check-bad-values poll

# Input UGens

mouse-x mouse-y mouse-button key-state

# **IO UGens**

disk-out disk-in v-disk-in in local-in lag-in in-feedback in-trig shared-in out replace-out offset-out local-out x-out shared-out

# Line Ugens

line x-line lin-exp lin-lin amp-comp amp-comp-a k2a a2k t2k t2a dc silent

## **Machine Listening UGens**

beat-track loudness onsets key-track mfcc beat-track2 spec-flatness spec-pcile spec-centroid

# **MDA UGens**

mda-piano

# Miscellaneous UGens

pitch-shift pluck part-conv hilbert freq-shift g-verb free-verb free-verb2 moog-ff spring ball t-ball check-bad-values gendy1 gendy2 gendy3

# Noise UGens

white-noise brown-noise pink-noise clip-noise gray-noise crackle logistic lf-noise0 lf-noise1 lf-noise2 lf-clip-noise lfd-noise0 lfd-noise1 lfd-noise3 ldf-clip-noise hasher mantissa-mask dust dust2

# Oscillator UGens

osc sin-osc sin-osc-fb osc-n v-osc v-osc3 c-osc formant lf-saw lf-par lf-cub lf-tri lf-gauss lf-pulse var-saw impulse sync-saw wrap-index index-in-between detect-index shaper degree-to-key select vibrato index

## Pan UGens

pan2 lin-pan2 pan4 balance2 rotate2 pan-b pan-b2 bi-pan-b2 decode-b2 pan-az x-fade2 lin-x-fade2

#### Random UGens

rand-seed rand-id i-rand t-rand ti-rand n-rand
exp-rand t-exp-rand coin-gate lin-rand

#### **STK UGens**

stk-pluck stk-flute stk-bowed stk-mandolin stk-saxofony stk-shakers stk-banded-wg stk-voic-form stk-modal-bar stk-clarinet stk-blow-hole stk-moog stk-bee-three

## **Trig UGens**

tw-index trig1 trig t-delay send-trig send-reply latch gate pulse-count set-reset-ff peak running-min running-max stepper pulse-divider toggle-ff zero-crossing timer sweep phasor peak-follower pitch in-range fold clip wrap schmidt in-rect trapezoid most-changed least-change last-value

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