

Overtone Cheat Sheet (Overtone 0.7.0)

REPL helpers	
Documentation	odoc ugen-doc find-ugen find-ugen-doc
Examples	examples example get-example
Shell	ls grep

Synths	
Design	definst defsynth
Examples	defexamples
CGens	defcgen
Control	ctl kill
Auditioning	demo run

Server	
Startup	boot-server boot-internal-server
	boot-external-server
	connect-external-server
Shutdown	kill-server
Control	stop
OSC Communication	snd rcv clear-msg-queue
Diagnostic	server-status server-info
	server-connected?
	server-disconnected?
	connection-info server-sample-rate
	server-num-output-buses
	server-num-input-buses
	server-num-audio-buses
	server-num-buffers
	sc-osc-log-on sc-osc-log-off
	sc-osc-log sc-debug-on
Debug	sc-debug-off external-server-log
	sc-osc-debug-on sc-osc-debug-off

Event Handling	
Add	on-event on-sync-event
Remove	remove-handler remove-all-handlers
Trigger	event sync-event oneshot-event
	oneshot-sync-event
Synth Triggers	on-trigger remove-trigger
Debug	event-debug-on event-debug-off

Sound Data	
Buffers	
Create & Free	buffer buffer-free
	buffer-alloc-read
Generate Buffer Data	data->wavetable
	create-buffer-data
Read & Write To Server	buffer-read buffer-write!
	buffer-fill! buffer-set!
	buffer-get buffer-save
	buffer-data buffer-read
Write To Filesystem	write-wav
Streaming In & Out	buffer-stream buffer-stream?
	buffer-stream-close buffer-cue
	buffer-cue? buffer-cue-pos
	buffer-stream-close
	buffer? buffer-info?
Query	file-buffer? buffer-out-stream?
	buffer-in-stream?
Info	buffer-info num-frames buffer-id
Samples	
Create	load-sample load-samples sample defsample
Playback	mono-player stereo-player
Busses	
Create & Free	control-bus audio-bus free-bus
Modify & Read	bus-set! bus-set-range! bus-get
	bus-get-range
Query	bus? control-bus?
Info	bus-id

Studio	
Instruments	
Drums	kick small-hat c-hat o-hat round-kick
	snare snare2 tom
Piano	piano
Sampled Piano	sampled-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
Mixer	
Control	volume input-gain
Effects	
Instrument	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
Manipulate	metro-start metro-tick metro-beat
	metro-bpm
bps	beat-ms
Scope	
Create & Reset	scope pscope reset-scopes
Recording	
Stop & Start	recording-start recording-stop
Query	recording?

Algorithmic Composition	
Chance	
Choice	choose choose-n weighted-choose
Dice	weighted-coin ranged-rand
Scaling	
Range	scale-range
Rounding	closest-to round-to
Trig	
Scaled	cosr sinr tanr

Nodes & Groups	
Create & Free	node group node-free group-free
	group-clear group-deep-clear
Manipulate	node-start node-pause node-place
	node-control node-control-range
	node-map-controls node-map-n-controls
	group-prepend-node group-append-node
Info	node-tree

External Assets	
Generic URLs	
Auto cache & Return Path	asset-path asset-seq
	asset-bundle-path
	asset-bundle-dir
Freesound.org	
Auto cache & Query	freesound-info freesound-path
	freesound-pack-info
	freesound-pack-dir
	freesound-search freesound-searchm
	freesound-search-paths

Music

Pitch

Ratios	unison octave fifth sixth third fourth min-third min-sixth
Note Shifting	shift flat sharp invert inc-first dec-last
Notes	note octave-note nth-octave nth-equal-tempered-freq canonical-pitch-class-name note-info mk-midi-string match-note
Scales	scale resolve-scale scale-field nth-interval resolve-degree degree->int degree->interval degrees->pitches resolve-degree resolve-degrees interval-freq
Chords	chord resolve-chord rand-chord invert-chord
Discovery	find-scale-name find-note-name find-pitch-class-name find-chord
Frequencies	cents midi->hz hz->midi
Amplitude	db->amp

CGens

Audio In	sound-in
Buffer Playback	scaled-play-buf scaled-v-disk
Control	hold
Oscillators	pm-osc square
Mix	mix splay
Tapping	tap

UGen Helper Constants

Done Actions	NO-ACTION PAUSE FREE FREE-AND-BEFORE FREE-AND-AFTER FREE-AND-GROUP-BEFORE FREE-AND-GROUP-AFTER FREE-UPTO-THIS FREE-FROM-THIS-ON FREE-PAUSE-BEFORE FREE-PAUSE-AFTER FREE-AND-GROUP-BEFORE-DEEP FREE-AND-GROUP-AFTER-DEEP FREE-CHILDREN FREE-GROUP
FFT Windows	SINE HANN RECT
Lines	LINEAR LIN EXPONENTIAL EXP
Onset Analysis	POWER MAGSUM COMPLEX RCOMPLEX PHASE WPHASE MKL
Infinity	INFINITE INF

Unary UGens

neg not-pos? abs ceil floor frac sign squared cubed sqrt exp reciprocal midicps cpsmidi midiratio ratiomidi dbamp ampdb octcps cpsoct log log2 log10 sin cos tan asin acos atan sinh cosh tanh distort softclip rect-window han-window wel-window tri-window

Binary UGens

+ - * / mod = not= < > <= >= min max and or xor round round-up round-down atan2 hypot hypot-aprox pow ring1 ring2 ring3 ring4 difsqr sumsqr sqrsum sqrdif absdif thresh amclip scale-neg clip2 excess fold2 wrap2

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 stereo-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
```