

COUNTERTUNE

USER MANUAL

The CounterTune audio effect generates melodic echoes, which can be shaped by **Rhythm** and **Pitch** parameters. The echo texture can be further refined by **Synth** parameters. Overall input and output volumes, as well as stereo panning, are defined in the **Levels** section.



1. Tempo

In beats per minute, sets how fast the system counts pulses.

2. Feel

Sets half-time (0.5x) speed, normal-time (1x) speed, or double-time (2x) speed.

3. Time Signature

The first number sets how many pulses to count to before repeating.

The second number sets the note value of a pulse—for instance, 4 is a quarter note, 8 is an eighth note, 16 is a sixteenth-note; odd values can also be used to experiment with tuplets.

4. Rudiment

Rhythmic patterns borrowed from drum vocabulary that are applied within the duration of generated melodies. For a more detailed reference, see [Vic Firth Rudiments Poster](#).

LIST OF RUDIMENTS	
NAME	REPEATING PATTERN (1 = note on, 0 = note off)
Single Stroke Roll	1, 0
Single Stroke Four	1, 0, 1, 0, 0, 1, 0, 1
Triple Stroke Roll	1, 1, 1, 0, 0, 0
Double Stroke Roll	1, 1, 0, 0
Single Paradiddle	1, 0, 1, 1, 0, 1, 0, 0
Double Paradiddle	1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 0
Triple Paradiddle	1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 0
Paradiddle-Diddle	1, 0, 1, 1, 0, 0
Single Flammed Mill	1, 1, 0, 1, 0, 0, 1, 0
Swiss Army Triplet	1, 1, 0, 0, 0, 1
Inverted Flam Tap	1, 0, 0, 1
Flam Drag	1, 0, 0, 1, 0, 1, 1, 0
Double Drag Tap	1, 1, 0, 0, 0, 1
Lesson 25	1, 0, 1, 1, 0, 1, 0, 1, 0, 0, 1, 0
Single Dragadiddle	1, 1, 0, 1, 1, 0, 0, 1, 0, 0
Drag Paradiddle #2	1, 1, 1, 0, 1, 1, 0, 0, 0, 1, 0, 0
Double Ratamacue	1, 1, 0, 1, 0, 0, 0, 1, 0, 1
Triple Ratamacue	1, 1, 1, 0, 1, 0, 0, 0, 0, 1, 0, 1

In the event that a rudiment pattern exceeds the number of pulses specified in the time signature, it will be cropped to fit. Conversely, if a rudiment is too short, it will be repeated until it fills the specified number of pulses.

5. Delay

Sets how many pulses to wait after detecting input audio before echoes begin.

6. Repetitions

Sets how many times melodic echoes will be generated after input audio ceases to be detected.

7. Root

Sets the root note upon which melodies will be generated. For effective harmonies, align the Root parameter to the key of your song.

8. Octave

Sets the octave of the root note.

9. Scale

Sets which harmonic intervals can be used in building melodies. Intervals are represented numerically in the melody generation process. For a more detailed reference, see <https://pulse.berklee.edu/scales/index.html>

LIST OF SCALES, ROOT C		
NAME	NOTES	NUMERIC
Major (Ionian)	C D E F G A B	0, 2, 4, 5, 7, 9, 11
Natural Minor (Aeolian)	C D Eb F G Ab Bb	0, 2, 3, 5, 7, 8, 10
Harmonic Minor	C D Eb F G Ab B	0, 2, 3, 5, 7, 8, 11
Dorian	C D Eb F G A Bb	0, 2, 3, 5, 7, 9, 10
Phrygian	C Db Eb F G Ab Bb	0, 1, 3, 5, 7, 8, 10
Lydian	C D E F# G A B	0, 2, 4, 6, 7, 9, 11
Mixolydian	C D E F G A Bb	0, 2, 4, 5, 7, 9, 10
Locrian	C Db Eb F Gb Ab Bb	0, 1, 3, 5, 6, 8, 10
Major Pentatonic	C D E G A	0, 2, 4, 7, 9
Minor Pentatonic	C Eb F G Bb	0, 3, 5, 7, 10
Major Blues	C D Eb E G A	0, 2, 3, 4, 7, 9
Minor Blues	C Eb F Gb G Bb	0, 3, 5, 6, 7, 10
Diminished Whole-Half	C D Eb F Gb G# A B	0, 2, 3, 5, 6, 8, 9, 11
Diminished Half-Whole	C Db D# E F# G A Bb	0, 1, 3, 4, 6, 7, 9, 10
Whole Tone	C D E F# G# A#	0, 2, 4, 6, 8, 10
Chromatic	C C# D D# E F F# G G# A A# B	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

10. Chaos

Sets the probability that a note in a generated sequence of notes will be different from its expected place in the sequence of notes in the selected scale. Higher chaos means more disjunct, unexpected note progressions.

11. Range

Sets the number of octaves that generated melodies can span. Can be positive or negative relative to the root.

12. Voices

Sets the number of voices that will play simultaneously. Each voice is assigned its own melody.

13. Offset

Indicates how many pulses of separation there should be between simultaneously playing voices. Useful for separating multiple voices that can play interfering melodies at low Chaos values.

14. Attack

How fast synthesized notes fade in.

15. Decay

How long a synthesized note will maintain its peak volume before dropping down to the Sustain volume.

16. Sustain

How loud the sound stays after Attack and Decay durations.

17. Release

How long a synthesized note takes to fade out after becoming inactive.

18. Visualizer

The visualizer area's y-axis corresponds to all possible pitch names.

The waveform constituting the line across the x-axis is the texture (dynamically updated from input audio) being used in synthesized melodies.

The y-value of the left side of the waveform corresponds to the detected pitch of the derived texture, and the y-value on the right side of the waveform corresponds to the pitch value of the currently playing melody note of a given voice, number of waveforms corresponding to number of voices.

19. Pregain

Sets the volume of the input signal before any processing is applied to it.

20. Separation

Sets the stereo separation among active voices.

21. Mix

Sets the balance between dry original signal and wet processed signal.

22. Volume

Sets the overall volume of the output signal.

Any requests for clarification or improvements can be communicated at <https://countertune.com/pages/contact>