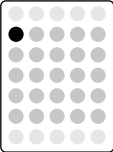
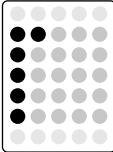
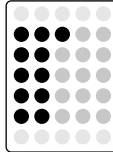
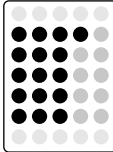
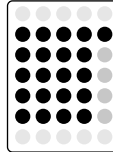
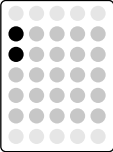
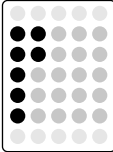
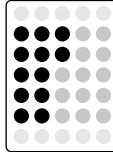
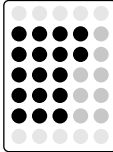
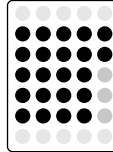
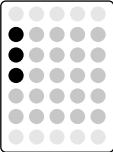
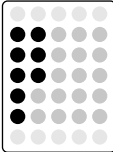
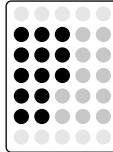
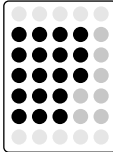
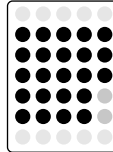
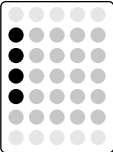
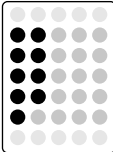
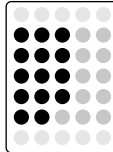
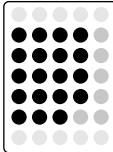
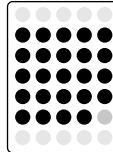
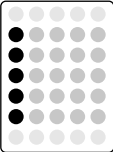
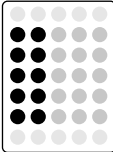
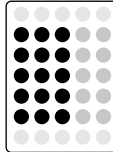
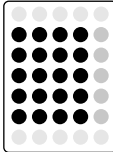
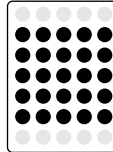


# Algorithm Reference

User data accepted

Grayscale Helix • grayscale.info/helix

 <p><b>01. Dual oscillator</b>          Timbre: Pulse width          Harmonic: Detune ratio          Morph: Tri/saw shaper</p>	 <p><b>06. Four-note chords</b>          Timbre: Invert/Transpose          Harmonic: Chord type          Morph: Waveform type</p>	 <p><b>11. Wavetable oscillator</b>          Timbre: Row (X-axis)          Harmonic: Bank select          Morph: Column (Y-axis)</p>	 <p><b>16. String machine</b>          Timbre: Chorus/VCF          Harmonic: Chord type          Morph: Waveform type</p>	 <p><b>21. Analog bass drum</b>          Timbre: Lowpass filter          Harmonic: Attack/drive          Morph: Decay time          Trig: Initiate envelope</p>
 <p><b>02. Waveshaping osc.</b>          Timbre: Waveform          Harmonic: Wavefolder          Morph: Asymmetry</p>	 <p><b>07. Classic waves + VCF</b>          Timbre: Filter freq/cutoff          Harmonic: Filter res/slope          Morph: Waveform mix</p>	 <p><b>12. Waveterrain</b>          Timbre: Terrain smoothing          Harmonic: Phase shift          Morph: Terrain offset</p>	 <p><b>17. Chiptune synth</b>          Timbre: Chord/arp type          Harmonic: Chord type          Morph: Pulse width          Trig: Arpeggiator clock</p>	 <p><b>22. Analog snare drum</b>          Timbre: Modal morphing          Harmonic: Harm/noise          Morph: Decay time          Trig: Initiate envelope</p>
 <p><b>03. Two operator FM</b>          Timbre: Mod index          Harmonic: Freq ratio          Morph: Feedback</p>	 <p><b>08. Granular supersaw</b>          Timbre: Grain density          Harmonic: Freq rand.          Morph: Duration/overlap</p>	 <p><b>13. Six operator FM (A)</b>          Timbre: Mod amount          Harmonic: Preset select          Morph: Envelope</p>	 <p><b>18. Speech synthesis</b>          Timbre: Vocal model          Harmonic: Model xfade          Morph: Phoneme/word          Trig: Speak words</p>	 <p><b>23. Analog cymbal</b>          Timbre: Highpass filter          Harmonic: Harm/noise          Morph: Decay time          Trig: Initiate envelope</p>
 <p><b>04. Granular formant</b>          Timbre: Formant freq          Harmonic: Freq ratio          Morph: Formant shaper</p>	 <p><b>09. Phase distortion</b>          Timbre: Distortion level          Harmonic: Dist frequency          Morph: Dist asymmetry</p>	 <p><b>14. Six operator FM (B)</b>          Timbre: Mod amount          Harmonic: Preset select          Morph: Envelope</p>	 <p><b>19. Inharmonic strings</b>          Timbre: Exciter filter          Harmonic: (ln)harmonics          Morph: Decay time          Trig: Excitation source</p>	 <p><b>24. Filtered noise</b>          Timbre: Clock frequency          Harmonic: Filter morph          Morph: Filter resonance</p>
 <p><b>05. Harmonic oscillator</b>          Timbre: Num. harmonics          Harmonic: Emphasis          Morph: Emphasis width</p>	 <p><b>10. Lo-fi oscillator</b>          Timbre: Sine/saw shaper          Harmonic: Bit rate          Morph: Sample rate</p>	 <p><b>15. Six operator FM (C)</b>          Timbre: Mod amount          Harmonic: Preset select          Morph: Envelope</p>	 <p><b>20. Modal resonator</b>          Timbre: Exciter filter          Harmonic: Material          Morph: Decay time          Trig: Excitation source</p>	 <p><b>25. Particle noise</b>          Timbre: Particle density          Harmonic: Random freq          Morph: Filter type</p>

# Quantizer Scales

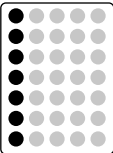
**Bank A:** Includes various octave-based traditional and microtonal scales, plus a unique harmonic series (overtone) option.

**Bank B: Heptatonic.** Includes scales with 7 notes per octave, covering some common major and minor scales.

**Bank C: Heptatonic (Obscure).** Also includes scales with 7 notes per octave but covers more obscure musical territory.

**Bank D: Hexatonic.** Includes scales with 6 notes per octave.

**Bank E: Pentatonic.** Includes scales with 5 notes per octave.

 <p><b>01. Octaves</b>          02. 12-EDO          03. 12-UDO          04. 19-EDO          05. 24-EDO          06. 31-EDO          07. Harmonic Series</p>	 <p><b>08. Major</b>          09. Romanian Major          10. Hungarian Major          11. Hungarian Minor          12. Natural Minor          13. Harmonic Minor          14. Melodic Minor</p>	 <p><b>15. Neapolitan</b>          16. Persian          17. Double Harmonic          18. Purvi Theta          19. Enigmatic          20. Diminished          21. Acoustic</p>	 <p><b>22. Whole Tone (6-EDO)</b>          23. Tritone          24. Major Hexatonic          25. Minor Hexatonic          26. Augmented          27. Blues          28. Mothra[6] (31-EDO)</p>	 <p><b>29. Pentatonic Major</b>          30. Pentatonic Minor          31. Pentatonic Dominant          32. Pentatonic Neutral          33. Balinese          34. Hirajoshi 1          35. Hirajoshi 2</p>
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