

HUMAN

A vowel oscillator for the Korg User Unit by **cain-synthesizer.com**.



The **HUMAN** oscillator aims at mimicking solo- or choir voices. It creates a representation of the glottal impulse and sends the signal through a number of formant filters to achieve that.

Each single voice has a subtle movement in pitch and in the formant spectrum to 'humanize' the final result.

For solo voices it is highly recommended to make use of vibrato and portamento to create a more realistic impression.

For choir sounds it must be played polyphonically. Chose colour 1, 2, or 3 to make use of well timbered formants across the key range. Use shift-shape to add some 'breath' to the voices and send the signal through an ensemble or chorus effect.

In both cases you can use the shape knob to sweep through the sequence of transitions.

The following parameters are available for sound design and interaction:

Controller	Parameter	Range	Comment
Parameter 1	Sequence	1 - 17	<p>There are a number of transition sequences implemented, which morph between two of five possible vowels in each transition step. The vowels are based on the German language. The English equivalents would be A:father, E:bet, I:beat, O:pop, U:boot.</p> <p>The transition sequences are currently:</p> <p>{ <i>A</i>, <i>E</i>, <i>I</i>, <i>O</i>, <i>U</i> },</p>

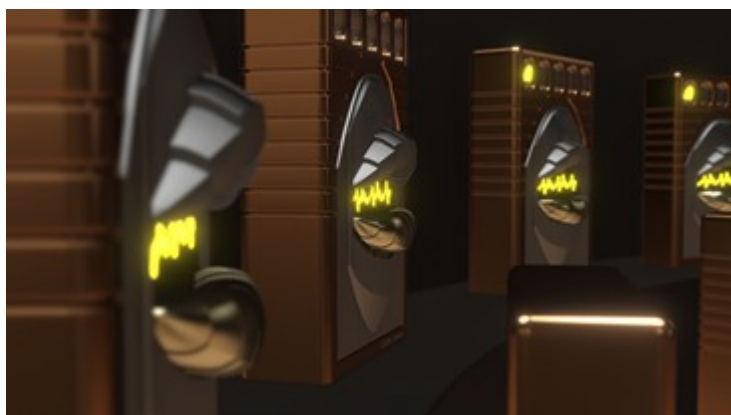
			{ A, U }, { A, O }, { A, I }, { A, E }, { E, U }, { E, O }, { E, I }, { I, U }, { I, O }, { O, U }, { U, A, I }, // why { I, U, A }, // you are { E, I, A }, // Eier!!! wir brauchen Eier { O, A, U }, // wow { E, A, E, I, U, O, A, E, O, I }, { A, E, O, A, I, U, A, O, E, I }
Parameter 2	Low Pass	1 – 5	The higher you go, the more you dampen the signal.
Parameter 3	Character	1 - 12	<p>The character defines the timbre of the voice.</p> <p>The first 3 characters are representing a more natural ensemble, as the characteristics change dramatically in different key ranges.</p> <p>The rest of the characters might sound quite natural in some ranges, but will sound unnatural in others.</p>
Parameter 4	Colour	1 - 7	<p>The colour affects three things, the impulse (glottal impulse, thin pulse (5%), or noise), the global formant settings, and the humanize effect.</p> <p>The humanize effect, adds a very subtle variation to the timbre and pitch.</p> <ol style="list-style-type: none"> 1. glottal impulse, soft formants, humanized 2. glottal impulse, emphasized

			<p>formants, humanized</p> <p>3. thin pulse, soft formants, humanized</p> <p>4. thin pulse, emphasized formants, humanized</p> <p>5. glottal impulse, emphasized formants, not humanized</p> <p>6. thin pulse, emphasized formants, not humanized</p> <p>7. noise impulse, emphasized, humanized</p>
Parameter 5	Attack	1 - 16	Change attack behaviour from a hard vocal attack to a breath attack.
Parameter 6	Portamento	1 - 6	<p>Since the NTS-1 does not have a portamento on board and I recommended to use one I implemented it.</p> <p>It smoothly glides from one note to the next. 1 means there is no glide, 6 moves very slow.</p>
Shape	Vowel		Transition through the sequence of vowels chosen in parameter 1.
Shift Shape	Air		Mixes noise to the selected impulse to mimic a more breathy voice.

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