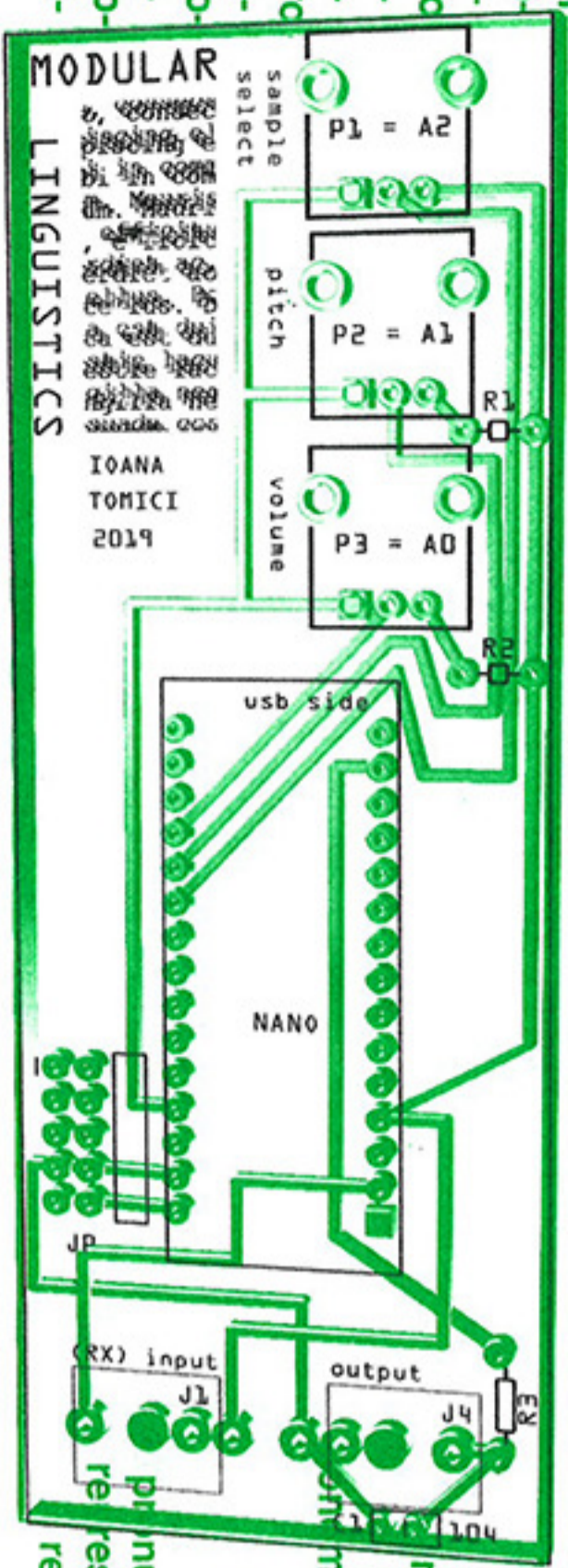


MODULAR LINGUISTICS

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Modular Linguistics is based on a series of electronic objects which are programmed to speak. The words chosen to be part of its vocabularies are spoken in unison, generating new associations between terms.

The following pages contain instructions for hardware assembly, along with a contextual description of the device's uses.



ASSEMBLY

- LIST OF COMPONENTS**
(required for one module)
- 1x Arduino Nano
 - 2x 16 pin male header
 - 2x 16 pin female header
 - 3x 10kΩ rotary potentiometer
 - 2x 0Ω resistor
 - 1x 150Ω resistor
 - 1x C1 106 ceramic capacitor
 - 1x 2x5 pin JP header
 - 2x 3.5mm audio jack
 - 1x Mini USB to USB cable
 - 1x sound output device (headphones/speaker)

INSTRUCTIONS

- Solder the two 0Ω resistors to R22 and R23 marked on the PCB; trim excess metal wires.
 - Solder the 150Ω resistor to R24 marked on the PCB; trim excess metal wires.
 - Solder the ceramic capacitor to C1 104 marked on the PCB; trim excess metal wires.
 - Solder the JP header to JP2 marked on the PCB (on the backside).
- NOTE: pin 7 and 8 need to be bridged; use one of the metal trimmings to solder this bridge together.
- Solder the three 10kΩ rotary potentiometers to P1, P2 and P3 marked on the PCB.
 - Solder the two 3.5mm audio jacks to J4 and J5 marked on the PCB.
 - Solder the male headers to the Arduino Nano and insert the female headers on top.
 - Solder the female headers attached to the Arduino Nano to NANO2 marked on the PCB (on the backside).
 - Plug Mini USB cable into the Arduino Nano and connect to a power source (the red LED on the Arduino will light up).
 - Plug sound output device into the output audio jack.

The Modular Linguistics device is now ready to be flashed through Arduino IDE.

articulate chat coherence colloquial concept dialect dialogue dictation expression fluency intonation language literacy literal literature message metaphor narration onomatopoeia orality phonetic phrase pronunciation representation rhetoric script semantic signifier sonic speech statement suggestion tongue verbal vernacular vibration vocal word

uggestion-ultra-vernacular-counter-dictation-macro-dialogue-topo-narration-hydro-speech-

MODULAR LINGUISTICS: Playing Neologisms

anti-vocal astro-semantic audio-orality bio-literacy cardio-verbal chemico-sonic chrono-word co-coherence counter-speech crypto-expression geo-fluency hetero-literal homo-articulate hydro-phonetic hyper-script hypo-narration inter-language lexico-chat litho-colloquial logo-statement macro-rhetoric meta-concept micro-phrase mini-signifier mono-message multi-dictation neo-dialogue post-dialect proto-literature pseudo-vernacular psycho-suggestion radio-tongue stereo-resonance techno-intonation topo-pronunciation trans-vibration ultra-representation uni-description video-metaphor onomatopoeia

The process of constructing language, both written and spoken, has always been modular. Modularity presupposes a certain compatibility between interlocking parts—this is the crux of language. Modular Linguistics then, is not a claim for the discovery of a new function within the field of linguistics, but simply an emphasis on its constructibility instead of its descriptive abilities.

However, orality is strictly interlinked with sound as a carrier of language, which invests the act of speech with multitudes of aesthetic qualities. The sonic and phonetic dimensions of language are what articulates speech, while simultaneously imposing its ephemerality. As Walter Ong fundamentally states:

"All sensation takes place in time, but sound has a special relationship to time unlike that of the other fields that register in human sensation. Sound exists only when it is going out of existence. It is not simply perishable but essentially evanescent, and it is sensed as evanescent. When I pronounce the word 'permanence', by the time I get to the '-nence', the 'perma-' is gone, and has to be gone."¹

It is then important to consider the recording of language as not only a practice of writing, but also one of speaking and listening.

voice.say(spFUNCTION);

The voice appears here as an electronic anomaly: a synthetic placeholder for a missing vocal anatomy. You are now faced with a device which is able to speak—a disembodied voice sounding from an electronic circuit. The voice struggles to articulate through the constraints of a lo-fi sound output. Some sounds fade and are left to exist only as the memories of certain phonemes in the listener's cognitive effort. Although, listening is performed without the ability to localize the precise source of the sound. It is therefore an acousmatic voice with origins unknown. As Mladen Dolar puts it in *What's in a Voice?*:

"In this universe it is more appropriate to say that the voice, far from being a self-expression, a harbinger of interiority and

individuality, is more like an intruder, a foreign body, a prosthesis, a bodily extension, an artificial limb – it is never 'authentic', it is never just an expression. The voice has like a spectral autonomy, it never quite belongs to the body we see, the voice never sounds like the person emitting it, there is always a gap, a *Verfremdung*, a mismatch, a ventriloquism."²

The possibility of producing new words with distinct speculative qualities is why the construction of neologisms is a practice that proposes to constantly reinvent and revise the use of language as pertinent to a certain time. A neologism can manifest as a cut-up: a swift or abbreviated manner of swapping and shifting connotations. Or in other words, the (un-)intentional clumsiness of hot-gluing a semantically loaded prefix to an unsuspecting root-term.

What comes out of the device is a relentless noise which proposes a different kind of deep listening: a low fidelity practice of cutting-up, sampling and mixing prefixes, roots and suffixes. The cultural theorist Kodwo Eshun writes about this act of mixing and sampling, in his book *More Brilliant Than the Sun: Adventures in Sonic Fiction*:

"The cut is a command, a technical and conceptual operation which cuts the lines of association. [...] The stammer of the new. Each cut magnifies the words so you hear in closeups which expand space until it blows up."³

Without the presence of written language, listening becomes a translation of the practice of developing neologisms into an aesthetic experience. And therefore allows for the phonetic process of tapping into the production of neologisms. Or, in other words, this device favors homophonic relations over homographic relations: playing neologisms instead of writing neologisms. The act of listening to the words being produced allows for the possibility of different ways to write.

¹ Ong, Walter J. *Orality and Literacy*. Routledge, 2002.
² Eshun, Kodwo. *More Brilliant than the Sun*. Verso, 2018.
³ Dolar, Mladen. "What's in a Voice?" *Resonant Bodies, Voices, Memories*. Revolver, 2009.

coherence-hypo-chat-psycho-speech-radio-concept-mini-tongue-chrono-literature-pseudo-