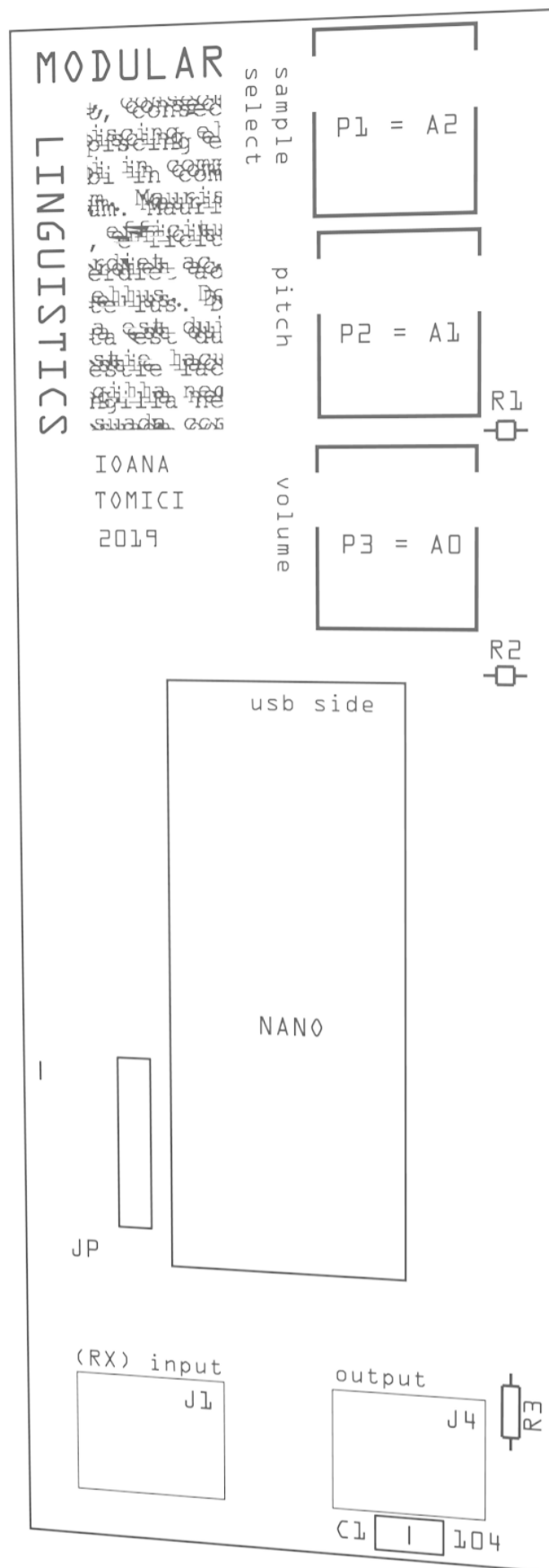# IOANA TOMICI
SPECIAL ISSUE X
2019

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.

MODULAR
LINGUISTICS

sample select

P1 = A2

pitch

P2 = A1

R1

volume

P3 = A0

R2

IOANA
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2019

usb side

NANO

I

JP

(RX) input
J1

output
J4

R3

C1 I 104

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
1. Solder the two 0Ω resistors to R22 and R23 marked on the PCB; trim excess metal wires.

2. Solder the 150Ω resistor to R24 marked on the PCB; trim excess metal wires.

3. Solder the ceramic capacitor to C1 104 marked on the PCB; trim excess metal wires.

4. 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.

5. Solder the three 10kΩ rotary potentiometers to P1, P2 and P3 marked on the PCB.

6. Solder the two 3.5mm audio jacks to J4 and J5 marked on the PCB.

7. Solder the male headers to the Arduino Nano and insert the female headers on top.

8. Solder the female headers attached to the Arduino Nano to NANO2 marked on the PCB (on the backside).

9. Plug Mini USB cable into the Arduino Nano and connect to a power source (the red LED on the Arduino will light up).

10. Plug sound output device into the output audio jack.

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