

Synth DIY Workshop

February 2020

Hosted by Trevor Pinch and Jordan Aceto

A brief description of what we're building: In this workshop we'll build a simple square wave oscillator controlled by a light dependent resistor. This oscillator drives a small audio power amplifier which drives a tiny speaker. A rotary control acts as a combo volume and kind-of-sort-of tone control. During the workshop, we'll build the circuit together, step by step.

All the documentation for this workshop, including layout images, schematics, a powerpoint presentation of the step-by-step construction of the circuit, and detailed information about ordering parts can be found at this website:

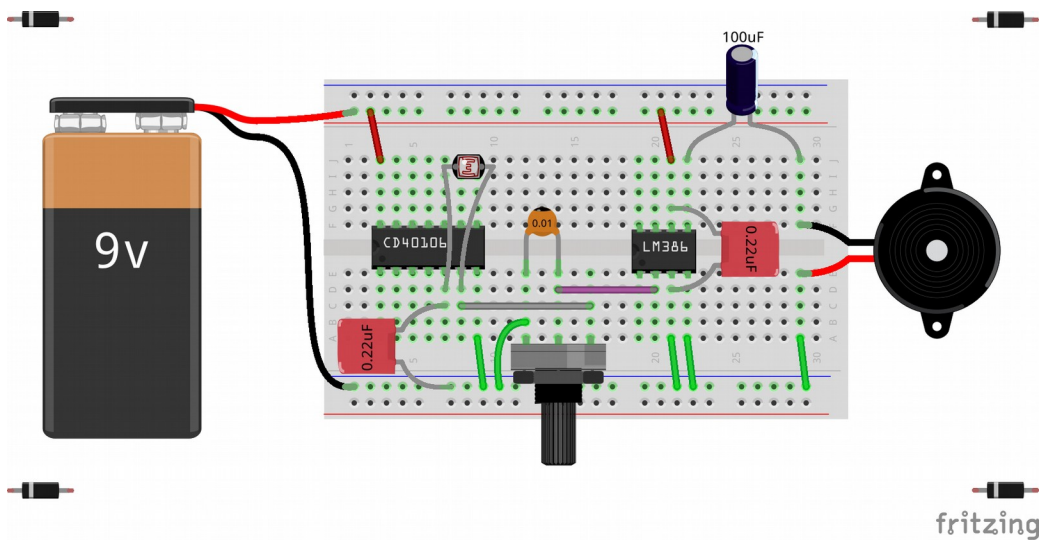
www.github.com/JordanAceto/DIY_Synth_Workshop_2020

Questions or comments can be directed to this email address: jordanaceto@gmail.com

Parts List:

Description	Distributor	Distributor Part Number	Quantity	Price
Audio Amplifier IC	Mouser	926-LM386N-4/NOPB	1	\$1.17
Hex Schmitt Trigger IC	Mouser	595-CD40106BE	1	\$0.52
Breadboard	Mouser	474-PRT-09567	1	\$4.95
9V Battery Snap	Mouser	123-5118-GR	1	\$0.82
100K ohm Linear Rotary Potentiometer	Mouser	858-P160KN0QC15B100K	1	\$0.76
0.22uF Non-Polarized Capacitor	Mouser	505-MKS2D032201C00KI	2	\$0.52
0.01uF Non-Polarized Capacitor	Mouser	75-1C10Z5U103M050B	1	\$0.18
100uF Electrolytic Capacitor	Mouser	667-ECA-1EHG101	1	\$0.30
16 ohm 500mW Dynamic Speaker	Mouser	497-SM360616-1	1	\$2.19
9V Battery	Mouser	658-6LF22XWA/C	1	\$2.35
Light Dependent Resistor	Small Bear	2506A 9200	1	\$0.89

Layout diagram of the completed circuit:



Schematic diagram of the circuit:

