

Dirty Electronics Thrupenny Synth, 2020 (and Poorman Synth, 2013) JR

The Thrupenny Synth is an analogue synth that takes an alternative approach to electronic circuit construction and uses electricians' terminal block (aka chocolate block). This approach more-or-less eliminates the need for soldering and enables sound-generating circuits to be created in a truly hands-on practical way. The Synth is based on Andrew Bentley's Poorman's Synth, which is documented in *Electronic Music for Schools*, 1981, edited by Richard Orton. Bentley's chapter in the book is titled "Simple equipment for electronic music making" and is presented as a 'survival kit'.

The Dirty Electronics Thrupenny Synth takes Bentley's ideas further, minimising electronic components. Pots are replaced by touch nail electrodes. The circuit has also been modified to incorporate a common-all-garden transistor. The Synth exemplifies Dirty Electronics' idea of low-level electronic instruments: electronic music making at a fundamental level of electronic components, wire and solder. The name of the Synth has also been changed borrowing from Brecht's *Threepenny Opera* that in turn is an adaption of John Gay's *Beggar's Opera*.

The Synth is played by touching all of the three nails to create feedback.

To assemble the Synth, a small flat headed screwdriver is needed. It is recommended that terminal block with a leaf (wire protector) is used.

Acknowledgments

Jim Frize for early prototypes

Playlist

Some music featuring electronic feedback (Oliveros, Nakamura, Tudor), touch instruments (Waisvisz) and authors from *Electronic Music for Schools* (Wishart, Davies).

Spotify

https://open.spotify.com/playlist/5e0j9bSKcOpOpk5mJ3L0C?si=_wXB6qPISpiM-I0R3MVA5g

Other

Michel Waisvisz (Holanda, 1978) - Crackle

<https://www.youtube.com/watch?v=BzAOPvYRlo8>

Luigi Marino

Network 2 (2018)

<http://www.luigimarino.net/works/network2.html>

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Spatter Can (2011)

<https://www.thewire.co.uk/audio/tracks/listen-to-a-track-made-on-the-mute-synth>

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Pioneers of Electronic Music Mix (2013)

<https://soundcloud.com/dirty-electronics/dirty-electronics-pioneers-of>

Reading/References

Circuits and stuff

Anderton, Craig. *Electronic Projects for Musicians*. New York: AMSCO, 1980.

Collins, N. *Handmade Electronic Music: The Art of Hardware Hacking*. Routledge: New York, 2006.

Orton, R. ed. *Electronic Music for Schools*. Cambridge, Cambridgeshire: Cambridge University Press, 1981.

DIY electronic music scene overview

Richards, J. DIY and Maker Communities in Electronic Music. In: Collins, N., and Escrivan, R. J. *The Cambridge Companion to Electronic Music*. 2nd ed. Cambridge: Cambridge University Press, 2017

Transistor pre-amp

<http://hackaweek.com/hacks/the-single-npn-transistor-audio-preamp/>

Dirty Electronics

<https://www.dirtyelectronics.org>

Cracklebox

<https://steim.org/cracklebox/>

<https://www.eam.se/kraakdoos/>

Where to buy components/tools

<https://www.farnell.com/>

<https://www.rapidonline.com/>