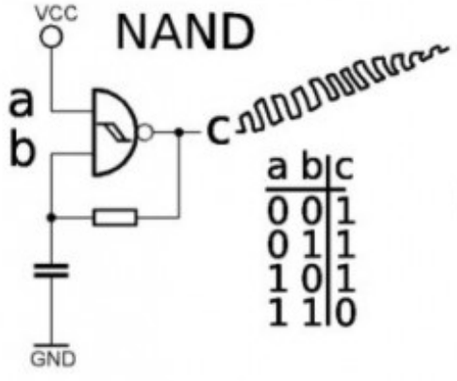
diy makeaway

Krachmacher bauen mit der Schweizerischen Gesellschaft für Mechatronische Kunst

micro_noise 9.90

NAND Schmitt Trigger Oscillator

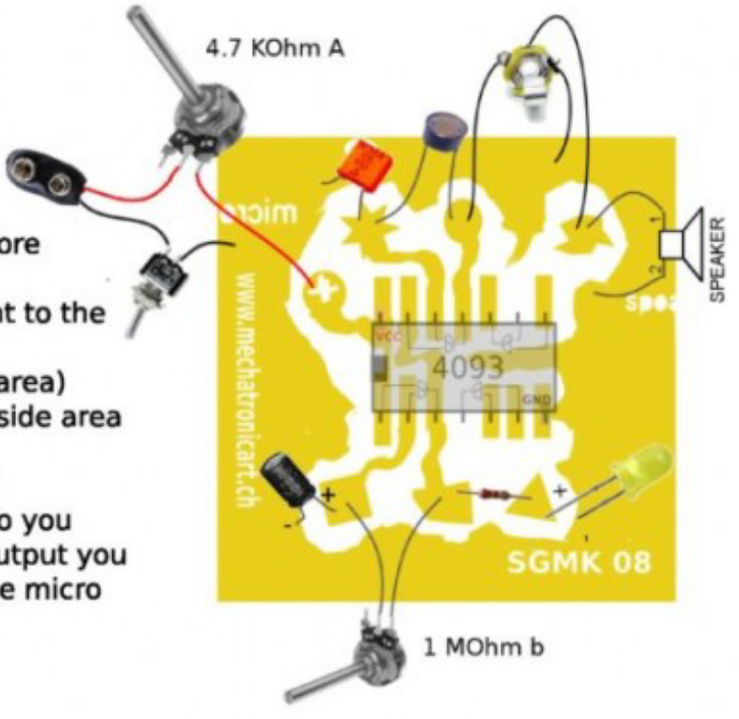


The NAND gate is a logical circuit and plays a very important role in all digital technologies. Its purpose is to compare ones and zeros and a resulting output!

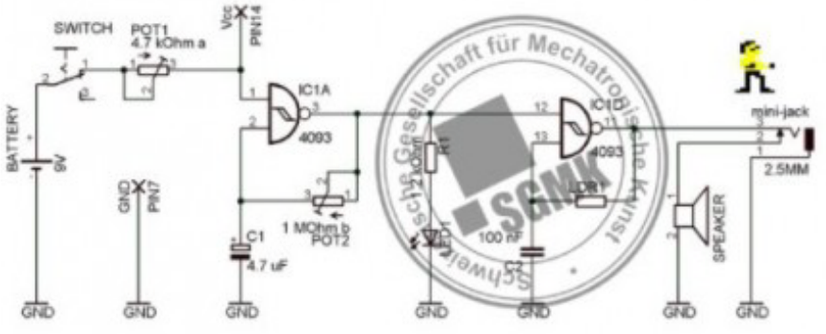
The abuse of the NAND gate by a feeding back an oscillating R-C circuit makes the Schmitt Trigger to oscillate at an audible frequency. A sound is generated!

Assembly Plan

Ok, let's try this
go for some soldering action...
Tips: melt some tin onto the copper pads before soldering. Do one thing at a time.
-> IC-chip, the groove on the chip has to point to the right
-> Battery-clip, red is +, black GND (outside area)
-> Attention C1 is polarized, + = top, - = outside area
-> LED is also polarized, long leg to the left
-> mini-jack, inner ring is GND (outside area)
Now mount everything into a nice little box so you can make real music with it. Using the jack output you can connect it to an amplifier and listen to the micro noise for real!



Schematics



SGMK's micro_noise uses two NAND gates, where the first one (LFO) turns on and off the second one, which generates the tone modulated by the photosensor.

POT1 is reducing the current to the chip in a non-conformal way, which makes it scream and noise...

more info on www.mechatronicart.ch/diymakeaway