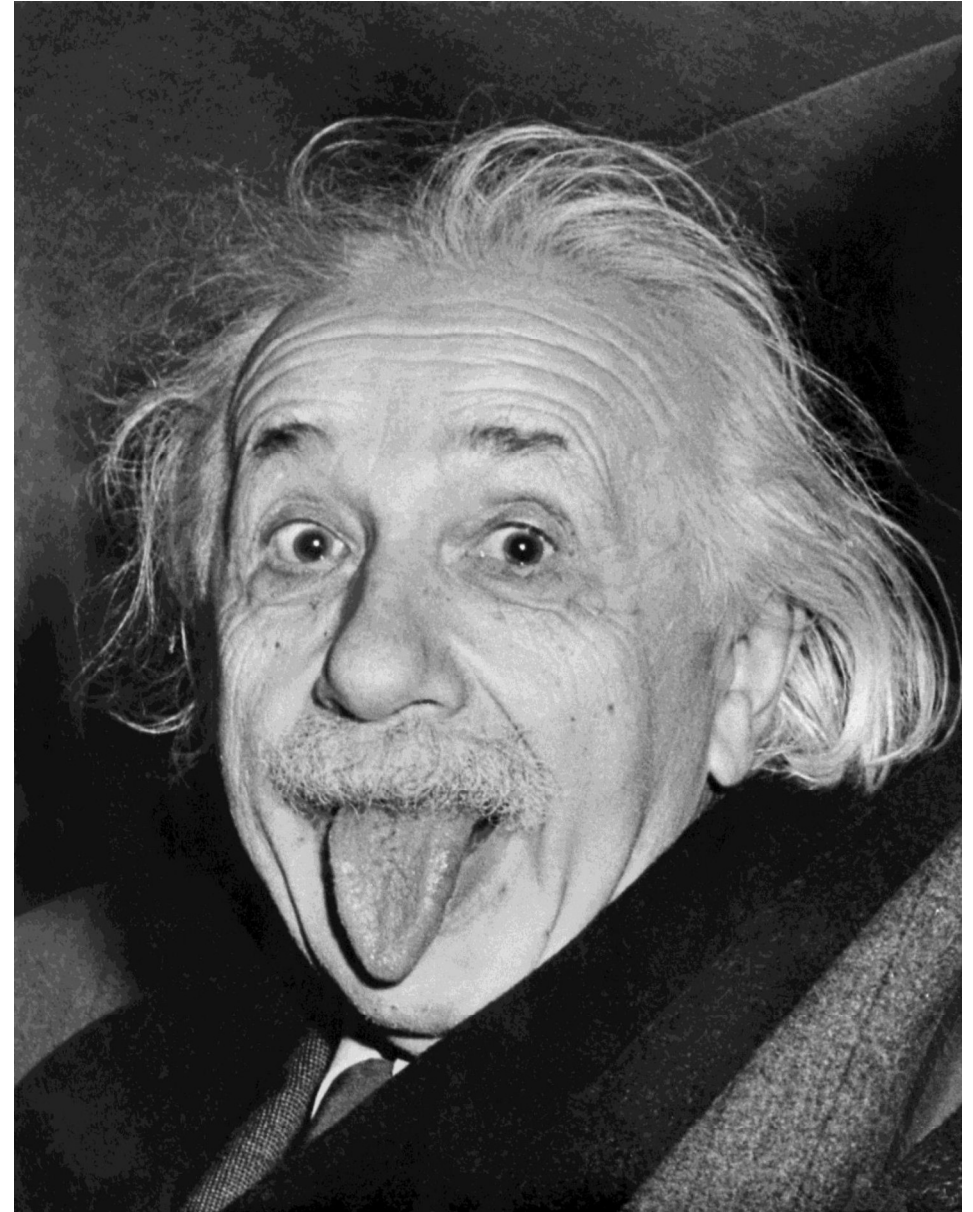


Jouw eigen idee!

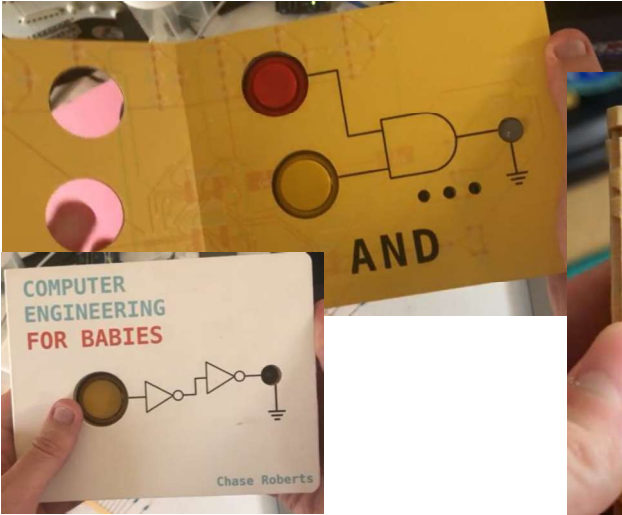
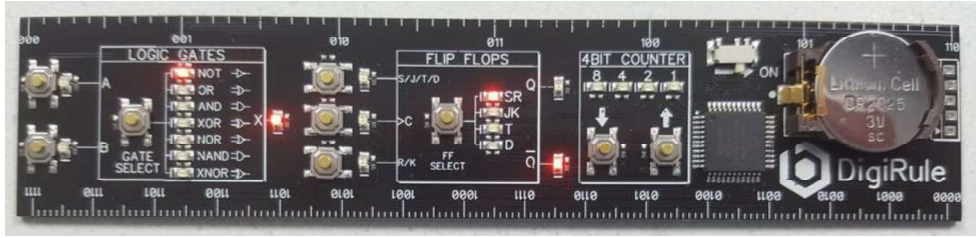


Ideeënboek

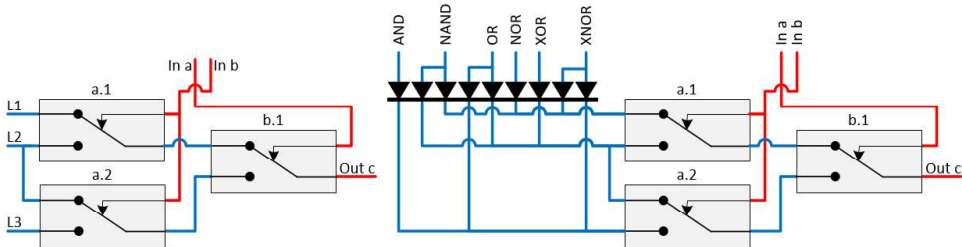


Elektronica

Logic gate demonstrator

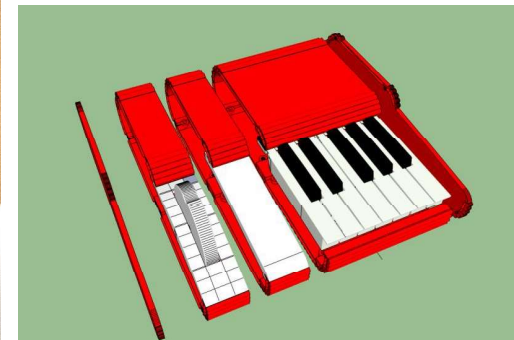
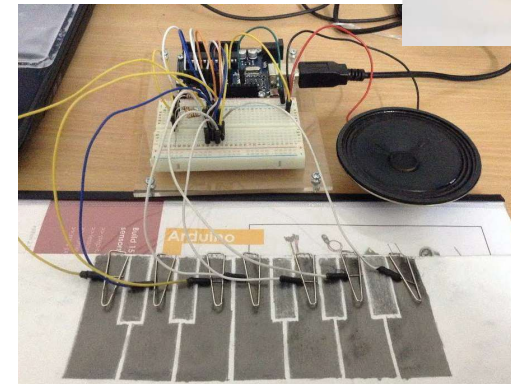
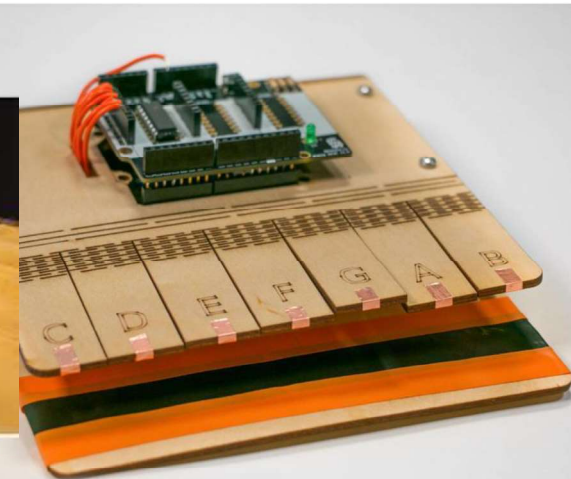
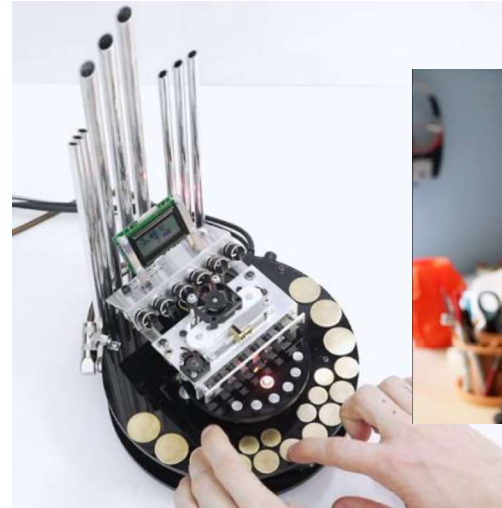


➡ Laat iedereen zien hoe digitale poorten werken (AND, NAND, OR, NOR, XOR, XNOR en NOT).



Arduino piano

☛ Maak je eigen elektronische orgel



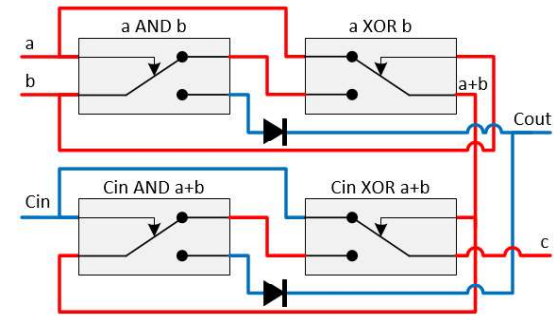
RC Hovercraft



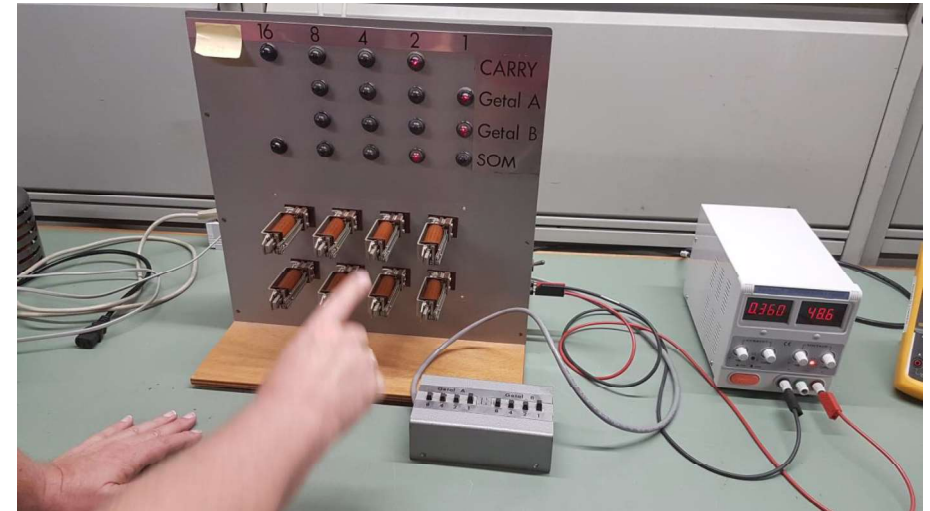
☛ Bestuur je eigen RC hovercraft



Relay adder

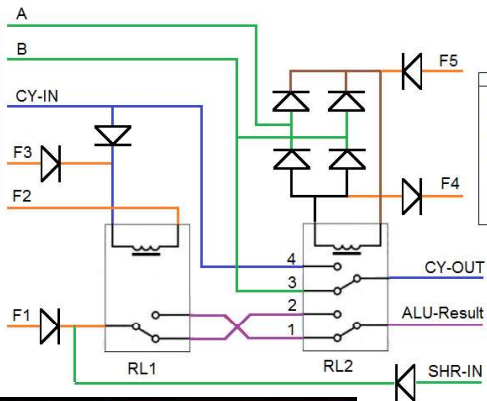
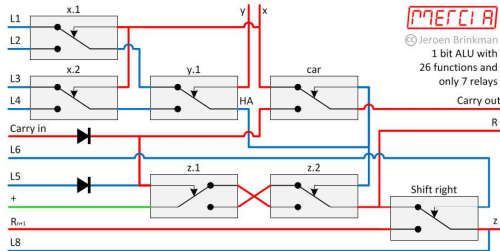


© Jeroen Brinkman



☛ Laat iedereen zien hoe je twee binaire getallen optelt met een relaischakeling.

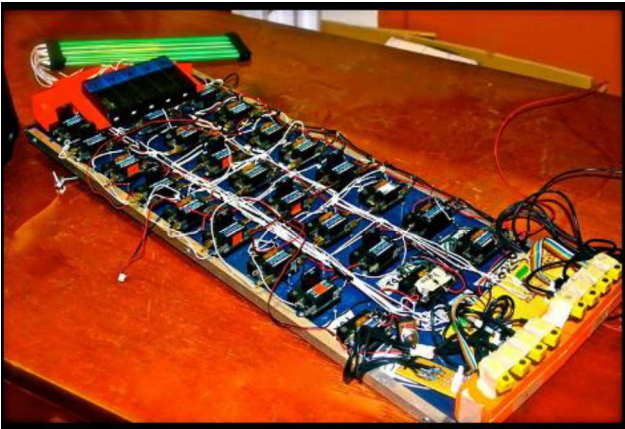
Relay ALU



Simple Relay ALU
10 Functions

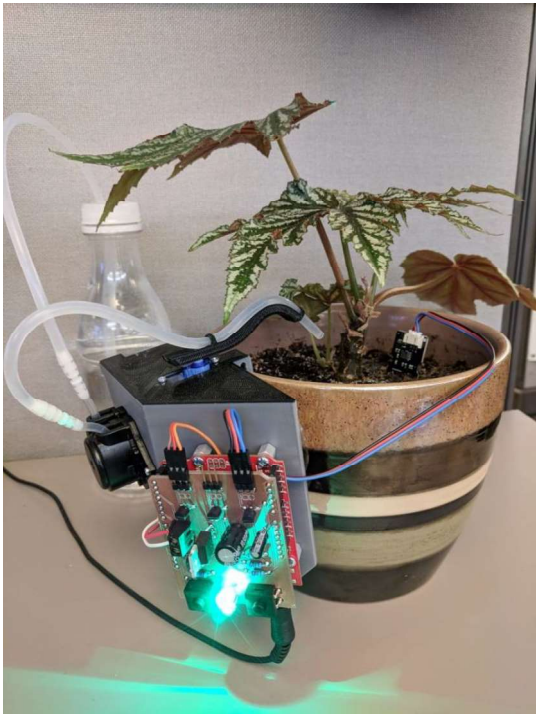
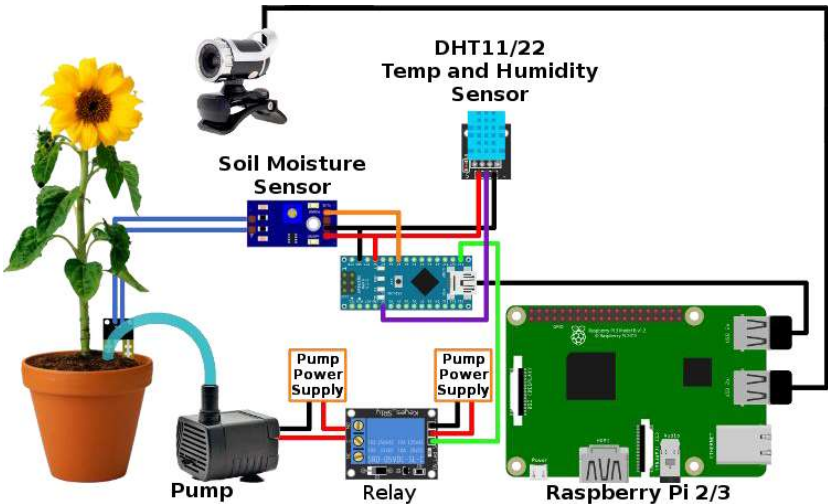
F5	F4	F3	F2	F1	RL1	RL2
0	1	0	0	1	ADD	ON
1	1	1	0	1	AND	OFF
0	0	X	1	1	OR	OFF
0	1	X	1	1	XOR	OFF
1	1	X	1	1	NAND	OFF
0	0	1	0	1	NOR	ON
0	1	1	0	1	XNOR	ON
1	0	X	1	0	SHR	OFF
1	0	1	0	X	CLR	ON
1	0	X	1	1	SET	OFF

ROELH 20181109



Laat iedereen zien hoe computers rekenen en logica doen met een relaiscomputer.

Planten bewateringssysteem



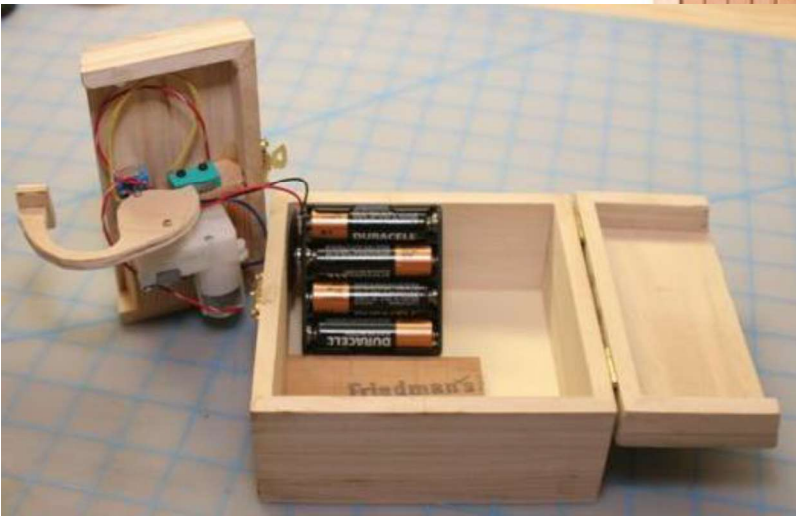
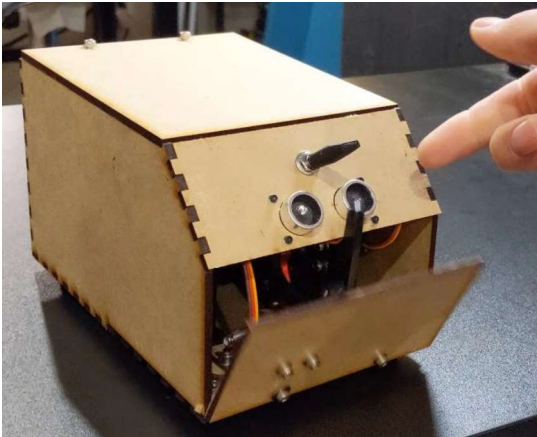
Geen dooie kamerplanten meer!



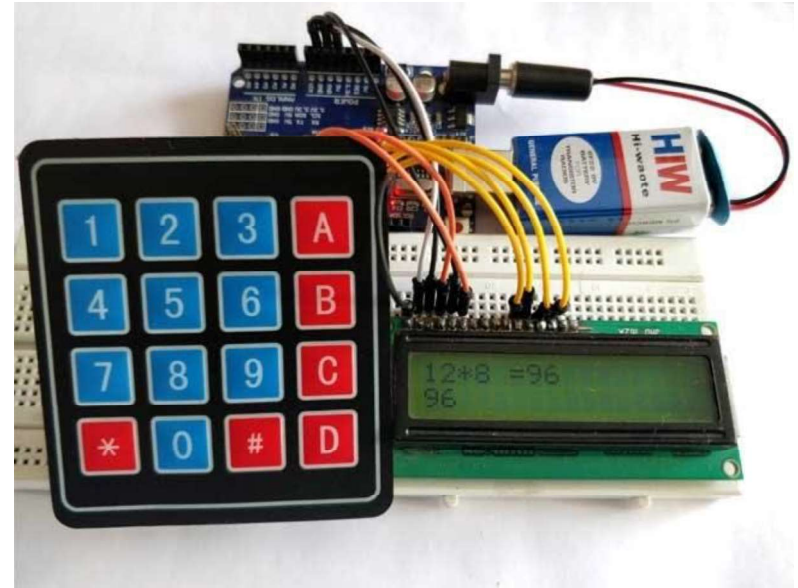
Nutteloze doos



☛ Nutteloos wordt niet meer leuker!



Rekenmachine



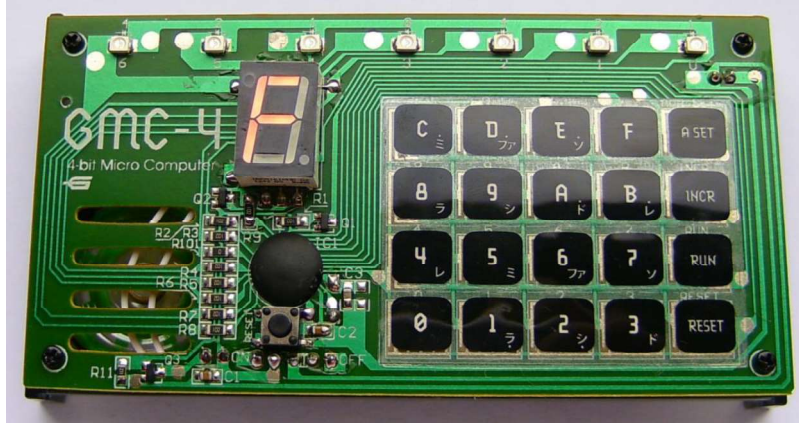
Gewoon



Reverse Polish Notation (RPN) met stack

☛ Bouw een Arduino (RPN) rekenmachine.

4-bit computer

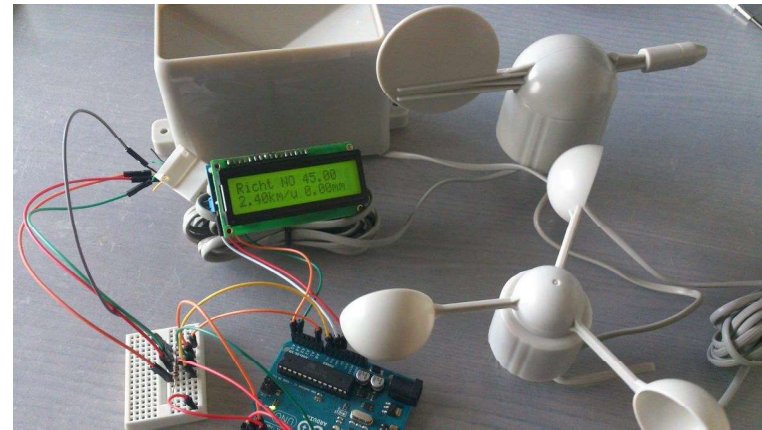


👉 Bouw je eigen 4-bit computer



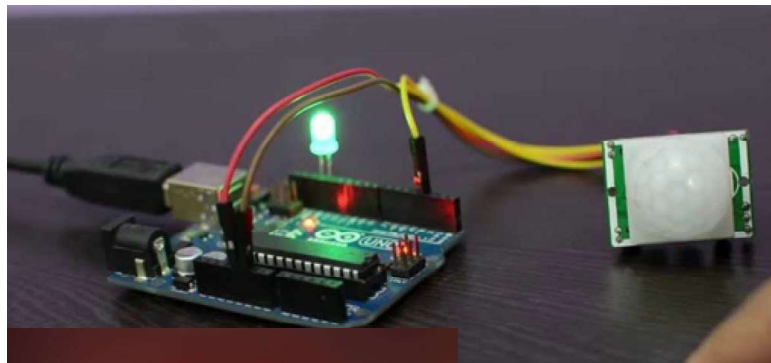
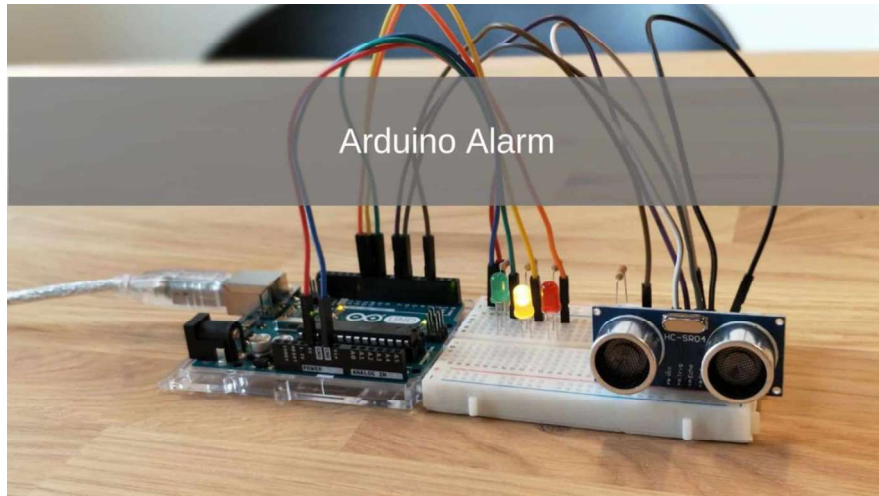
Arduino
Emulator

Weerstation



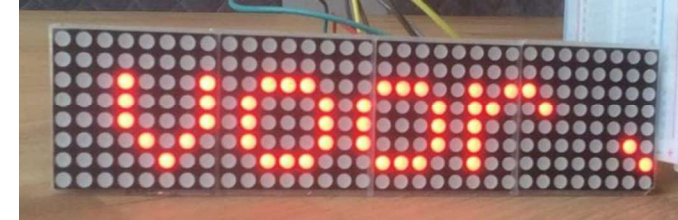
👉 Diss Piet Paulusma met je eigen weerstation!

Kameralalarm



- ☛ Bouw een kameralarm en beveilig je kamer.

Arduino lichtkrant



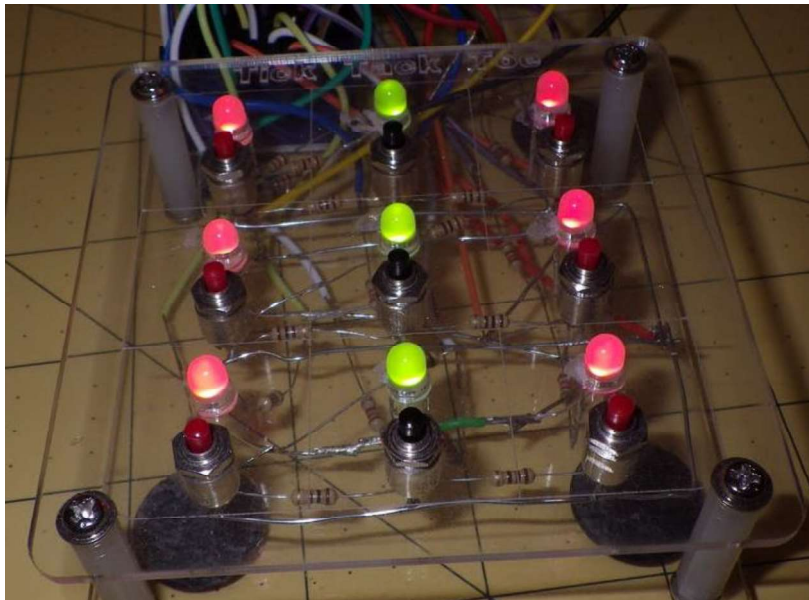
- ☛ Maak een lichtkrant voor op je kamer, t-shirt of in de auto.



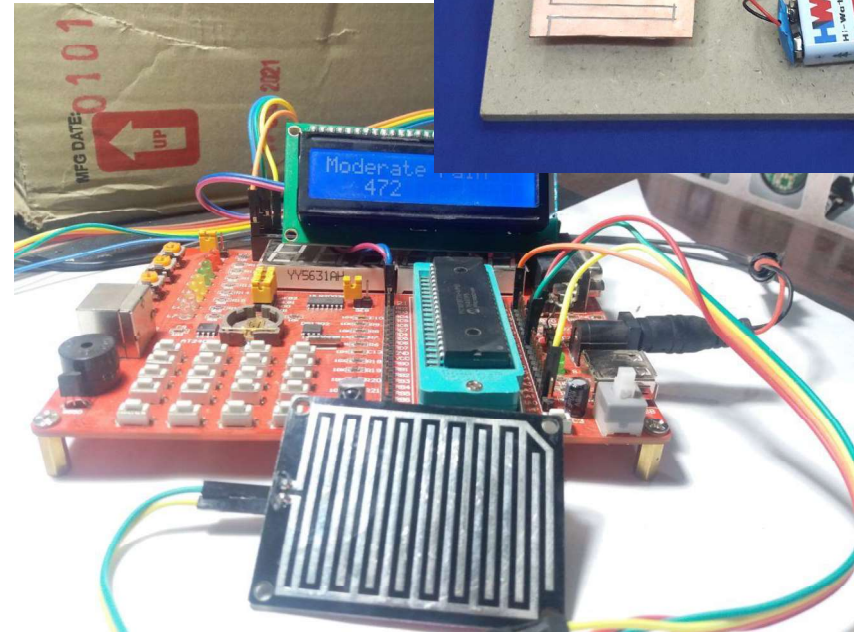
Arduino boter kaas en eieren



- Speel boter-kaas en eieren met een eigen led schakeling onder aansturing van een Arduino.



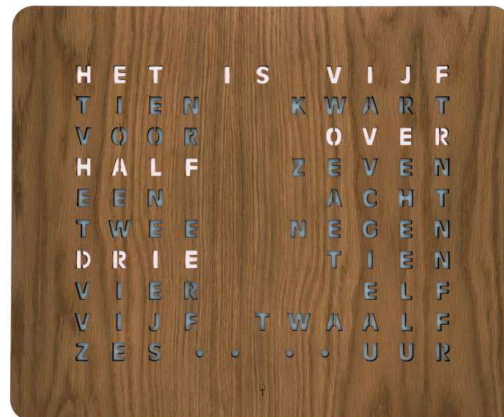
Regenalarm



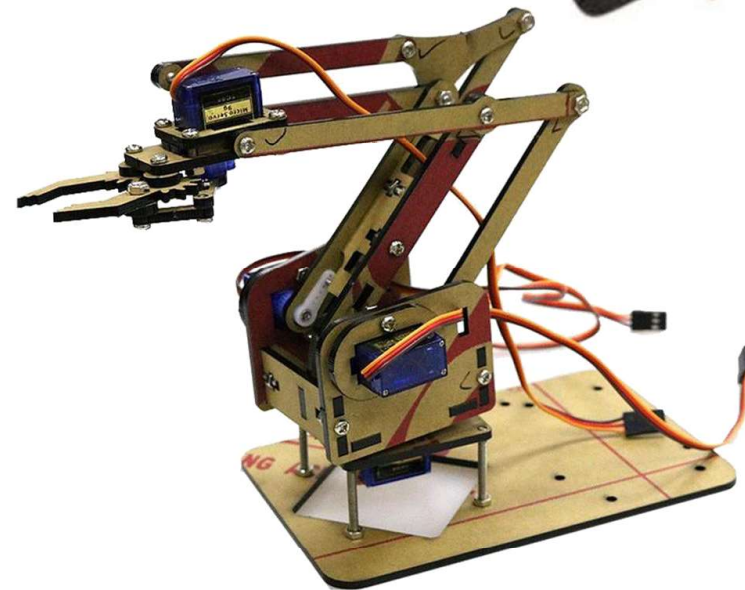
- Weet wanneer het regent!



Woordklok

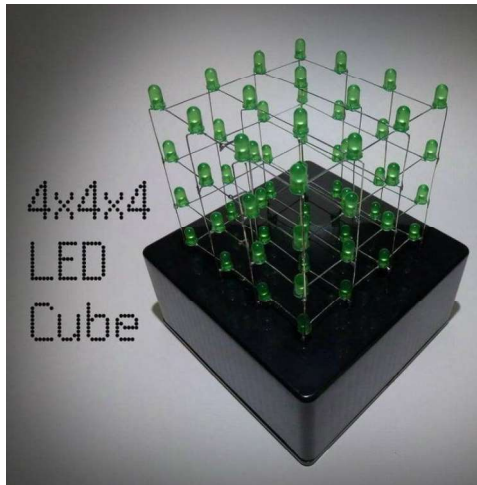


Robot arm

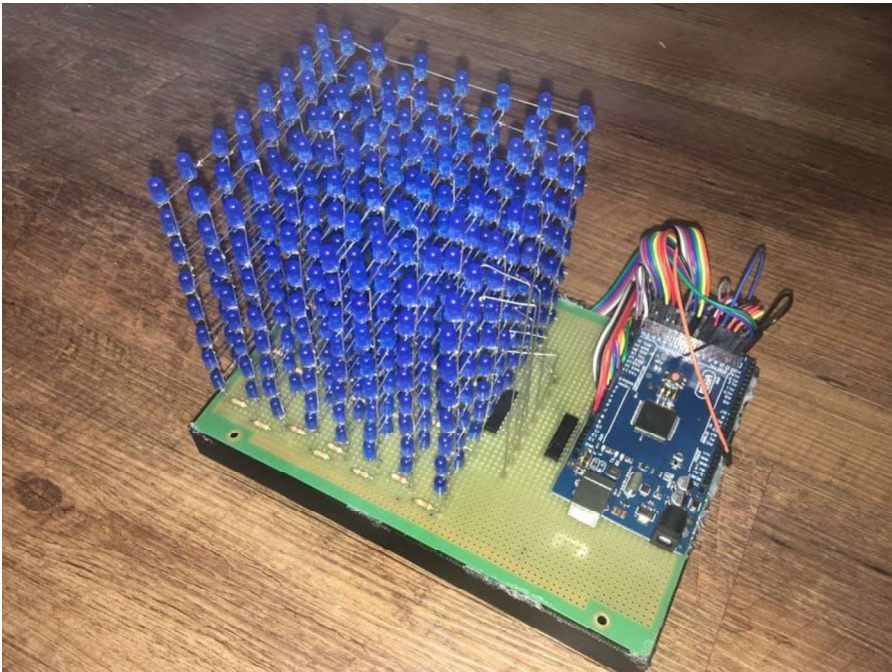


- Maak of koop een robotarm en bestuur deze met een Arduino met servo drivers.

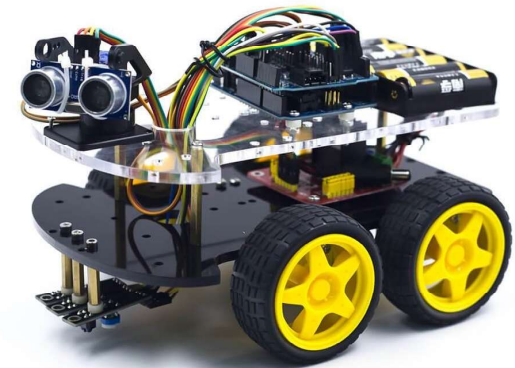
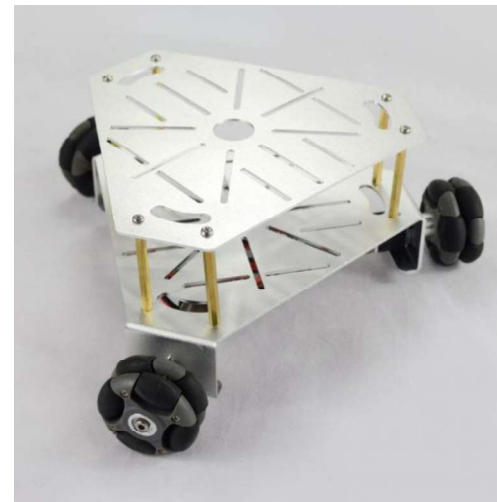
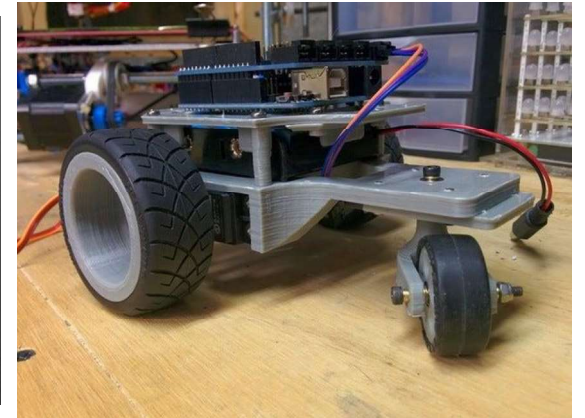
LED cube



- Laat prachtige lichtpatronen zien met een LED-cube en een Arduino.

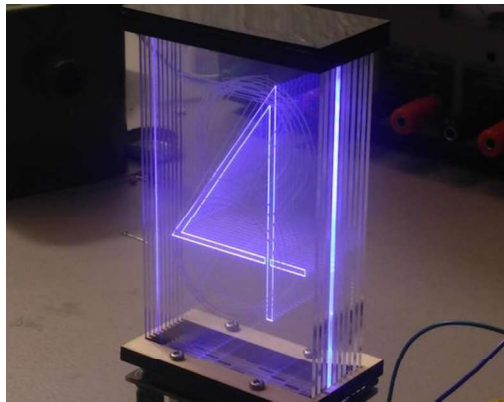


Robotauto



- Bouw een robot-auto die zelf door de ruimte rijdt en navigeert.

Lixie klok



🔑 Bouw je eigen Lixie-klok!

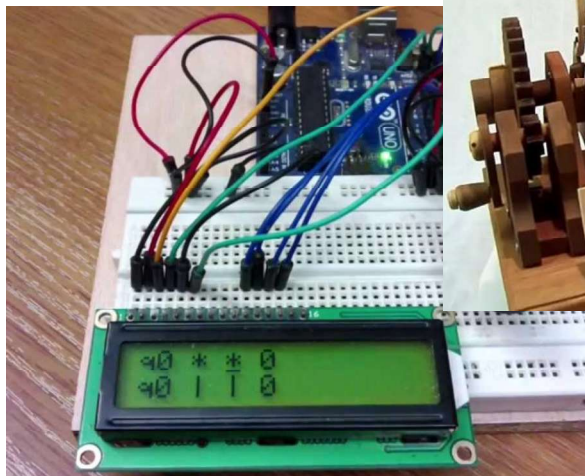
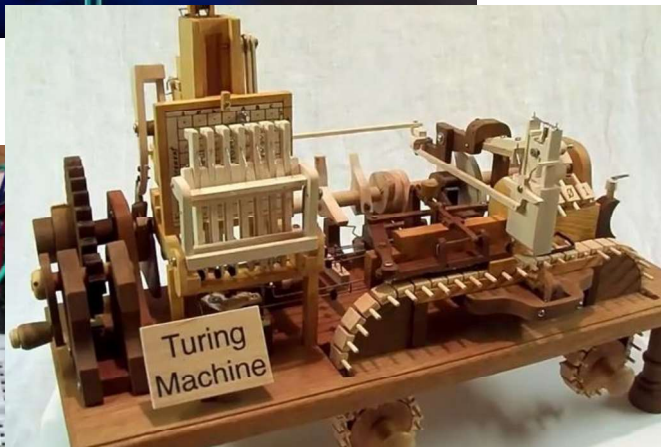
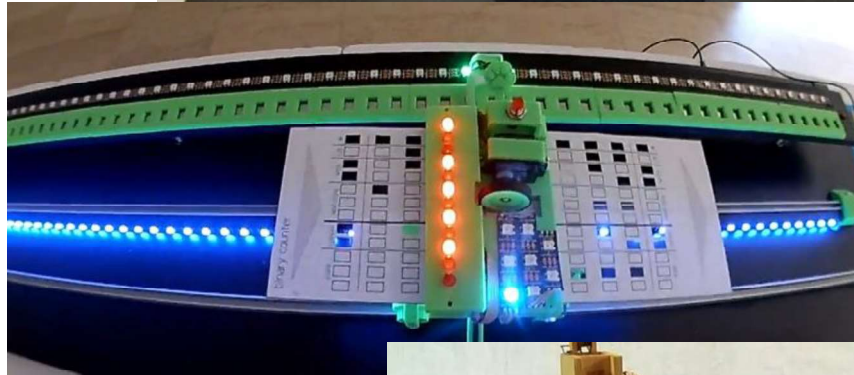
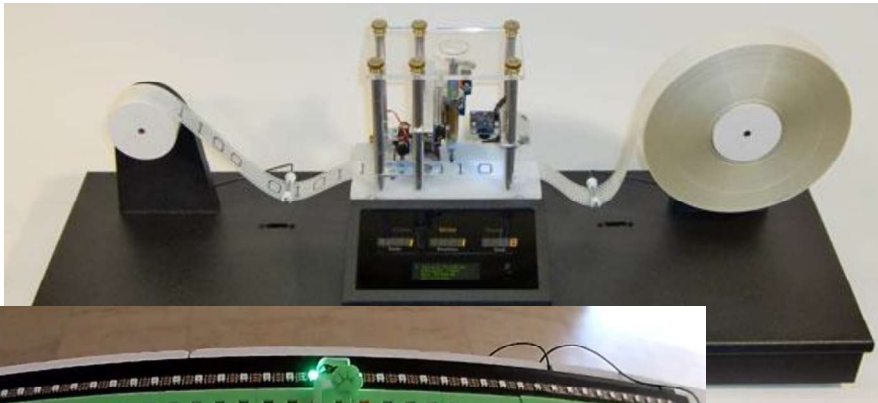


Bluetooth speaker



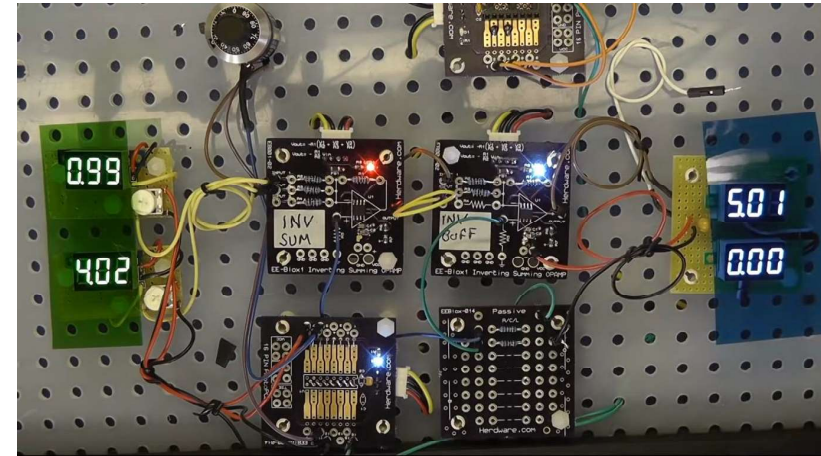
🔑 Speel je favoriete muziek op een eigengemaakte bluetooth speaker.

Turing machine implementatie

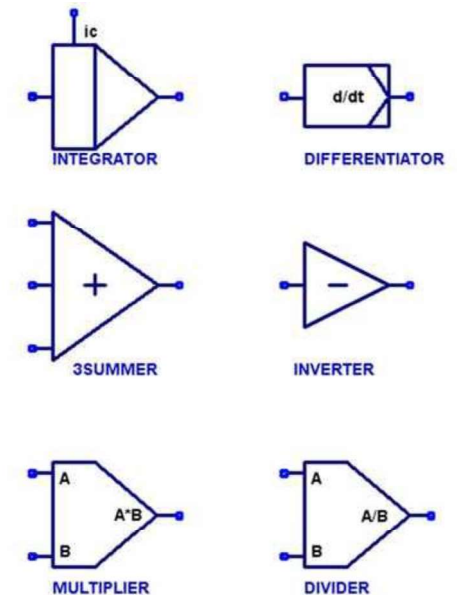
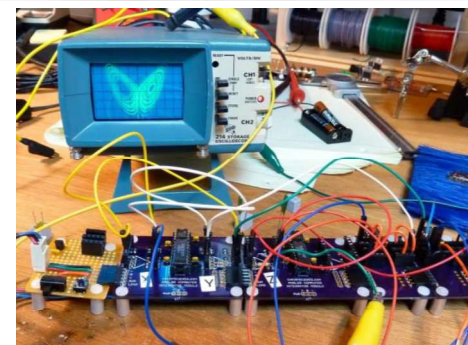


☛ Bouw een eigen Turingmachine implementatie.

Analoge computer



☛ Reken met voltages in een Analoge computer!



Smiley counter

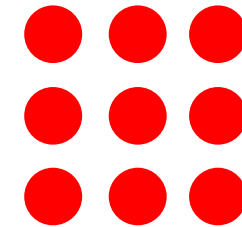
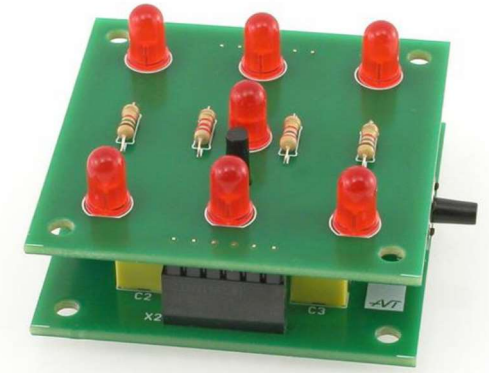


🔑 Hoe tevreden zijn ze?

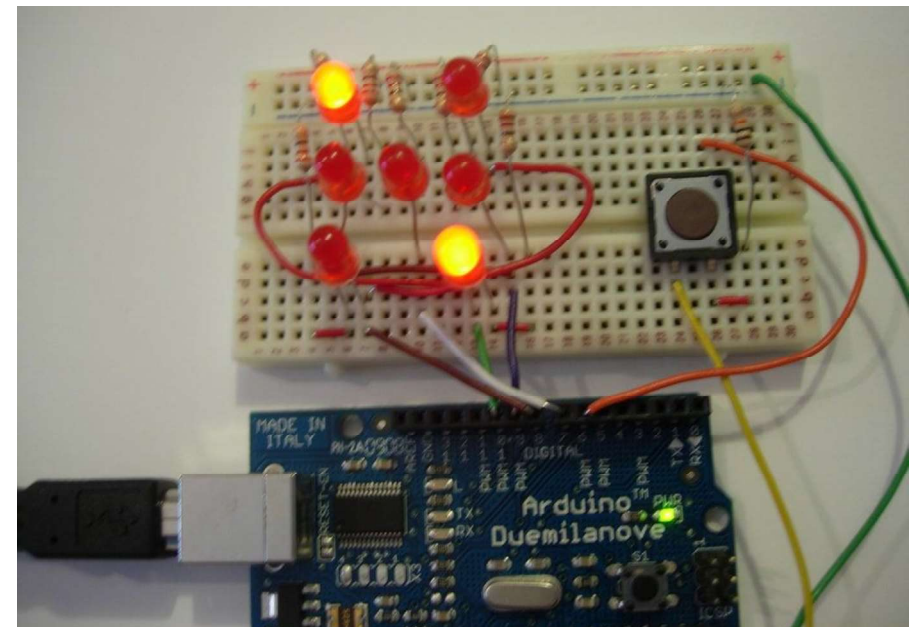
YOUR FEEDBACK



Elektronische dobbelsteen

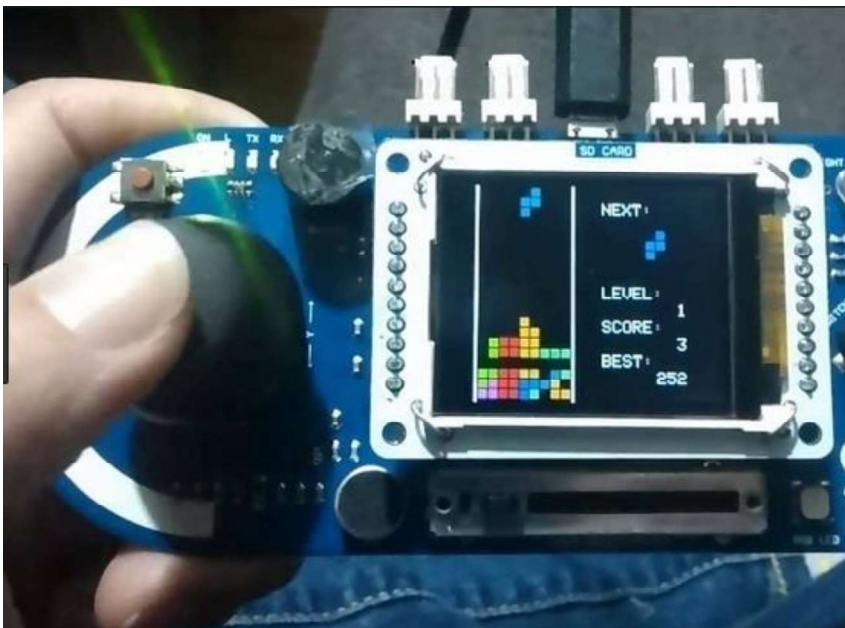


Niet met zes
maar met
negen posities



🔑 Maak een LED- dobbelsteen met net zo veel ogen als je wilt en stuur deze aan met een Arduino.

Arduino Tetris



☛ Maak je eigen Tetris game boy.

Arduino USB game button box



☛ Bedien je favoriete spel met een eigen USB knoppenkast.

Arduino game computer

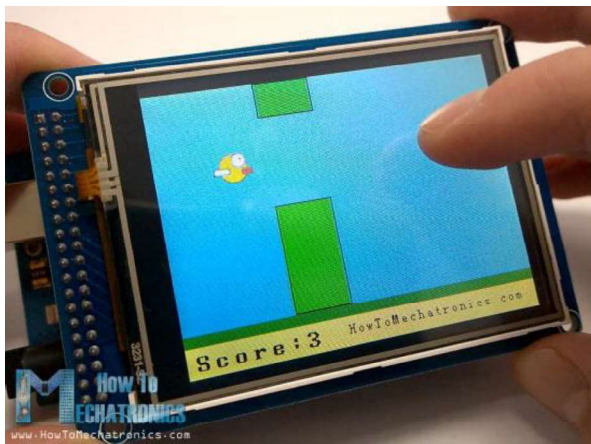
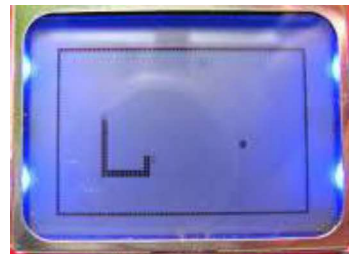


LCD Run & Jump Man Game

☛ Maak je eigen Arduino gamecomputer!

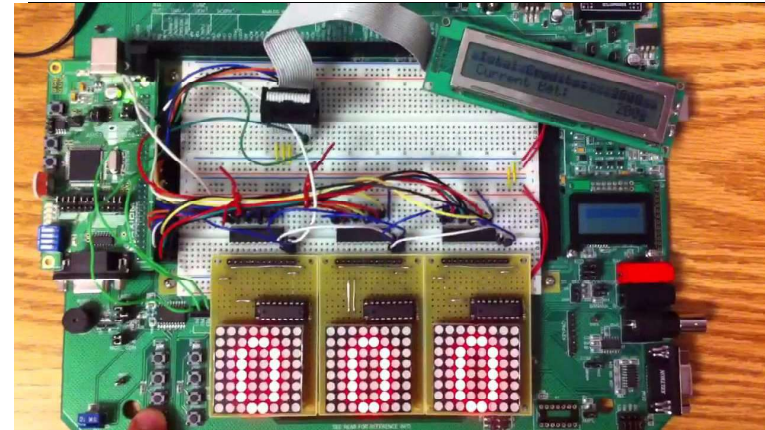


Snake



Flappy bird

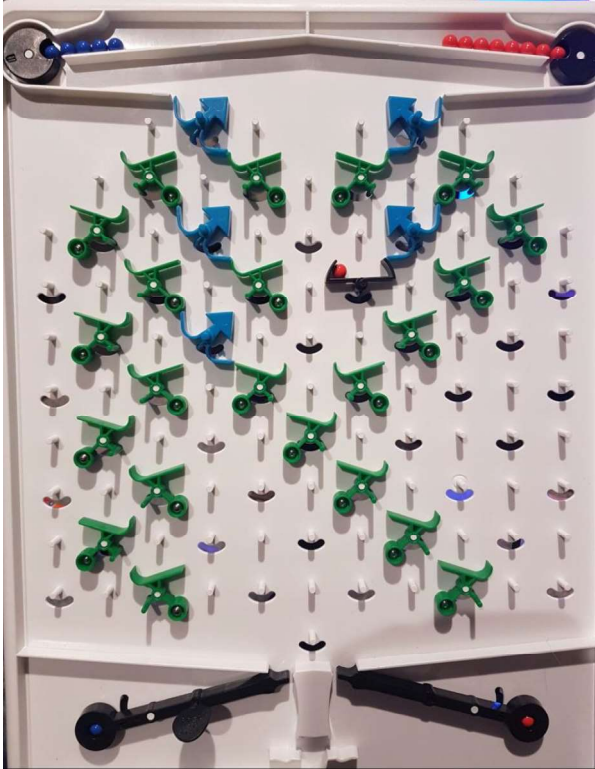
Gokmachine



☛ Maak een gokmachine die met punten of met stuivers werkt.

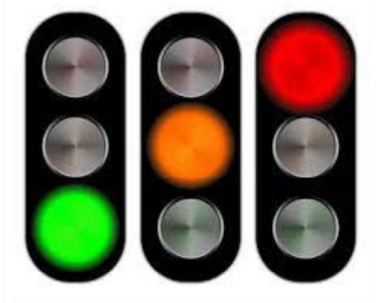


Knikkercomputer



☛ Ontwerp en maak een knikkercomputer.

Kamerstoplicht

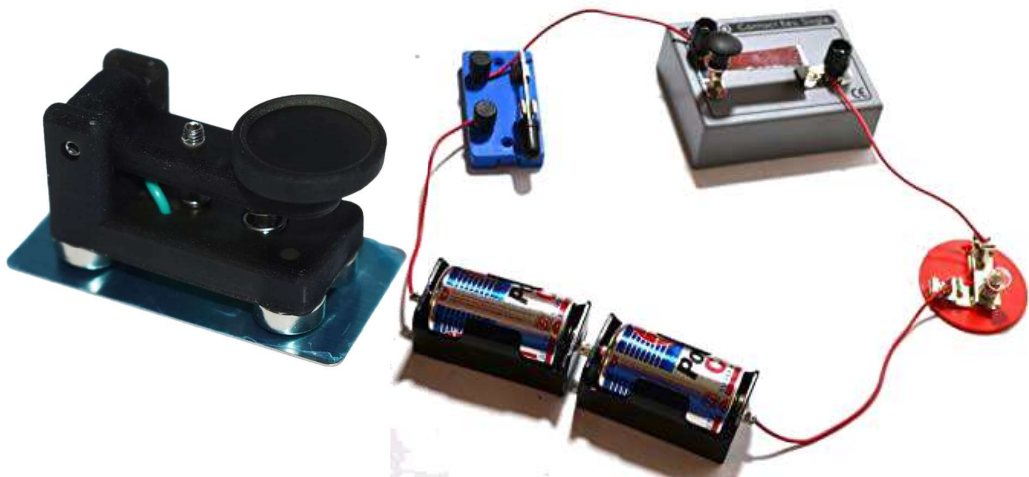


Verboden toegang
Even wachten
Kom maar binnen

☛ Regel de toegang tot je eigen kamer.



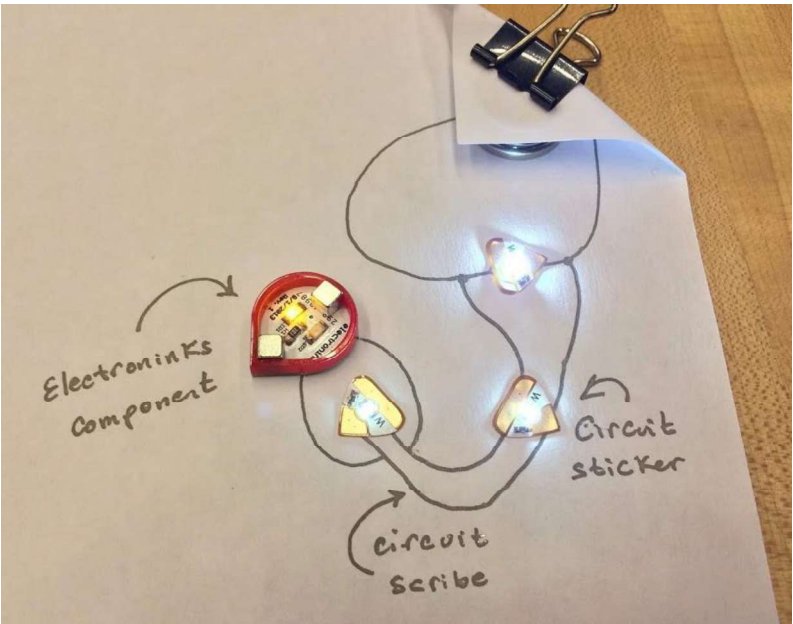
Morse station



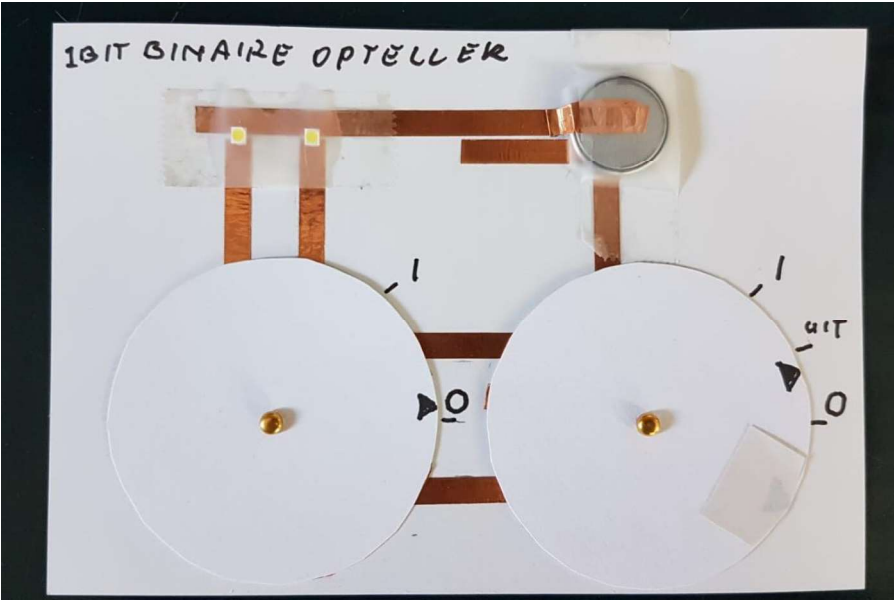
☛ Codeer en decodeer morsecode met een Arduino.

A ·—	J ·— — —	S ...
B — ...	K — · —	T —
C — · — ·	L — · · ·	U · · —
D — · ·	M — —	V · · · —
E ·	N — ·	W — · — —
F · · · ·	O — — —	X · · · — —
G — — ·	P — · — ·	Y — · — — —
H · · · ·	Q — — · —	Z — — · ·
I · ·	R — · —	

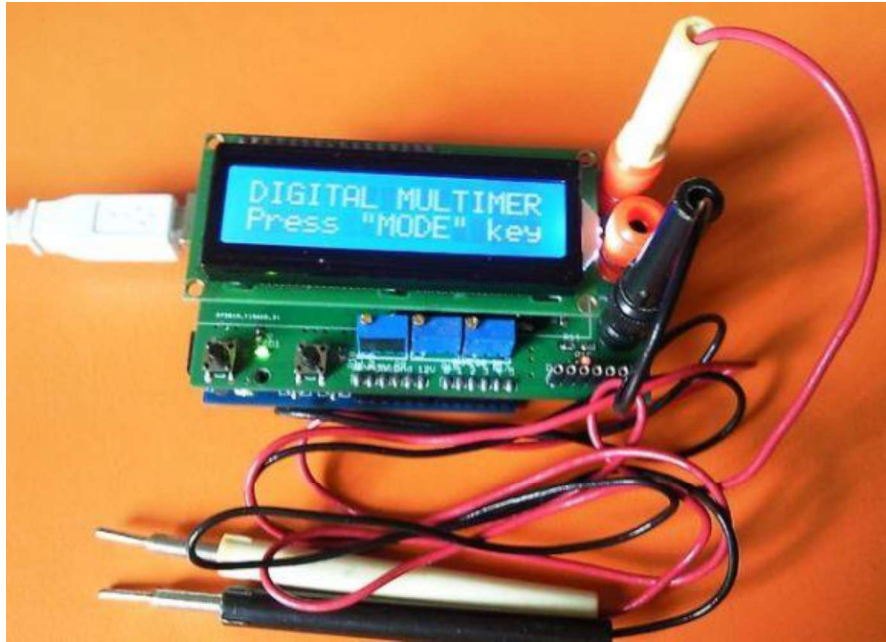
Paper electronics



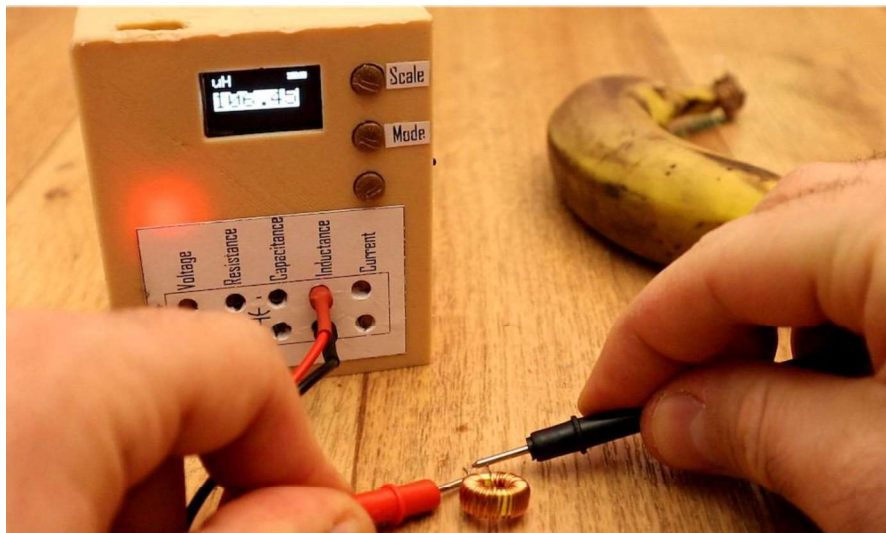
☛ Maak een papieren elektronicaschakeling.



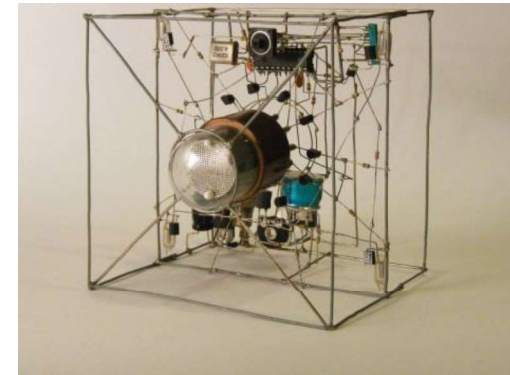
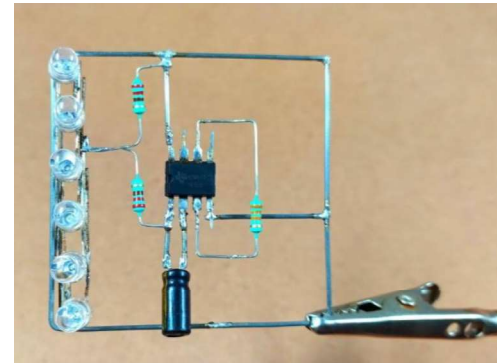
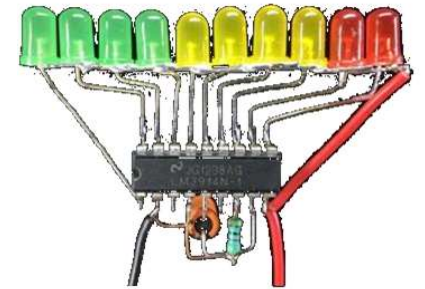
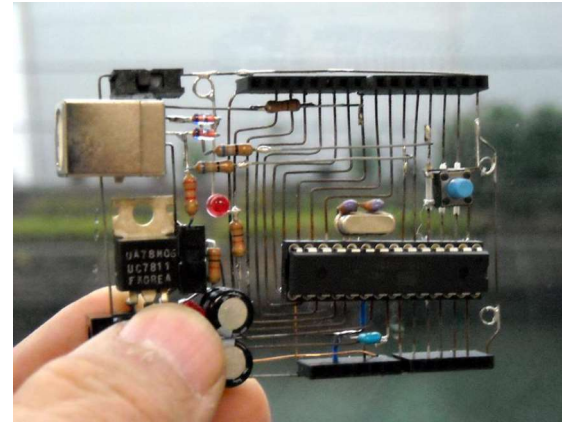
Arduino multimeter



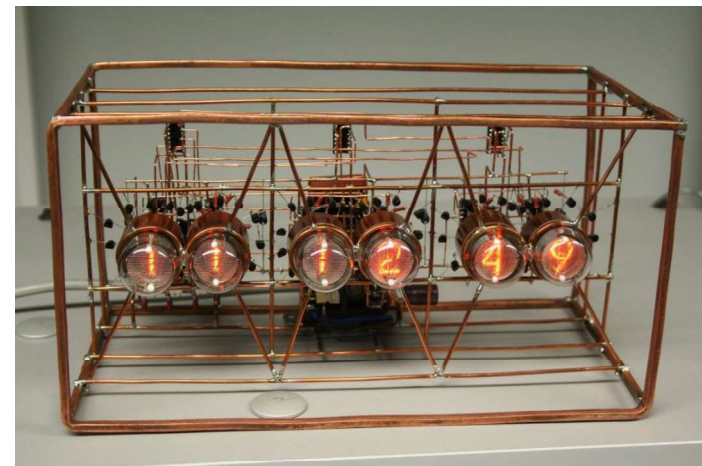
- Maak een multimeter en meet weerstand, stroom en voltage.



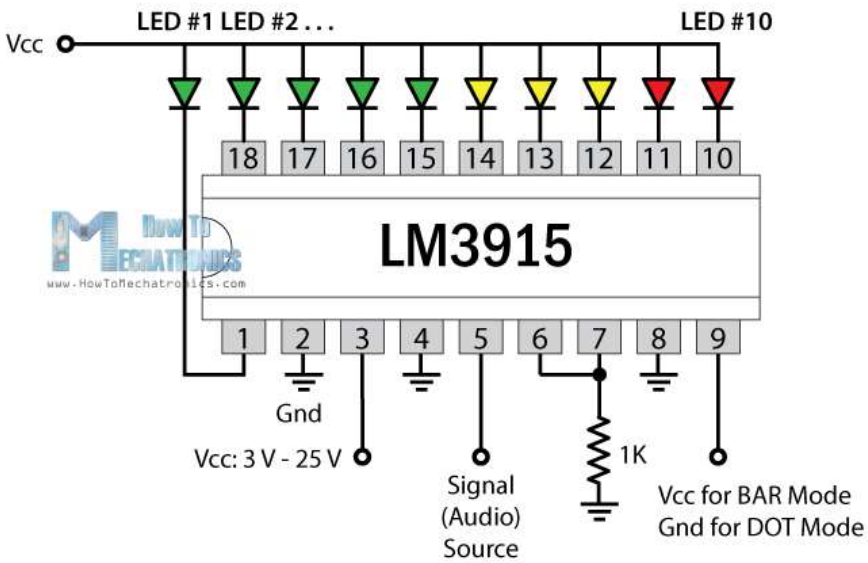
3D electronics



- Maak een kunstzinnige elektronicaschakeling (knipperleds) met 3D electronics.



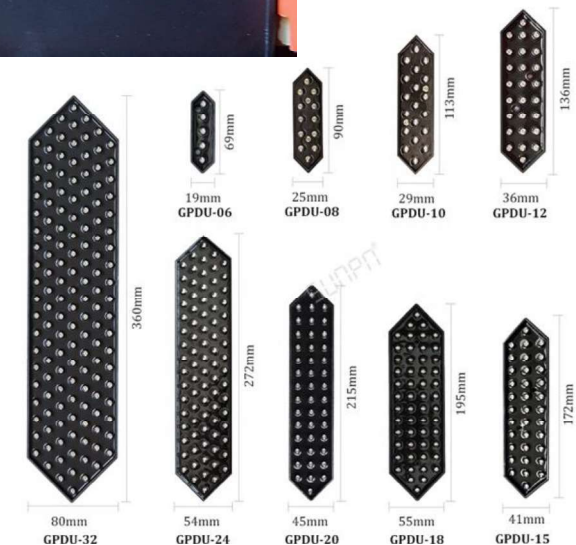
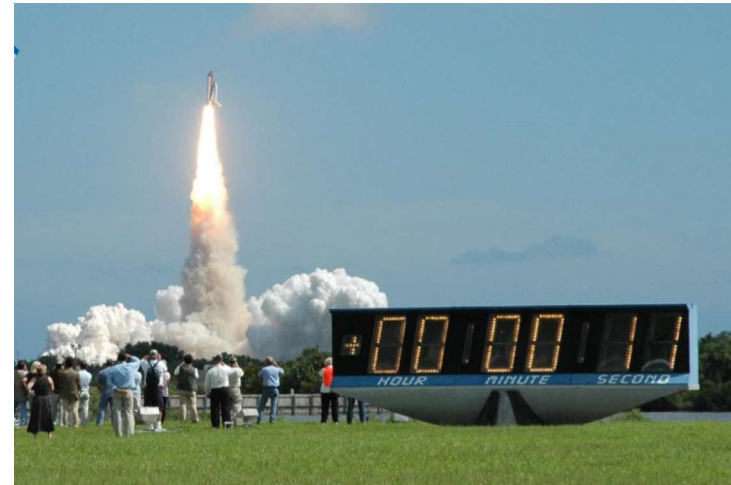
Audiolevel meter



👉 Speel je favoriete muziek en zie hoe hard die is!

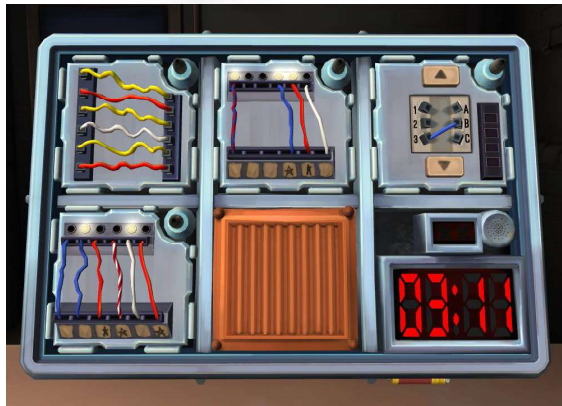


Count down clock



👉 Maak ene kleine of grote countdown klok en weet precies hoe lang het nog duurt voordat je weer vakantie hebt!

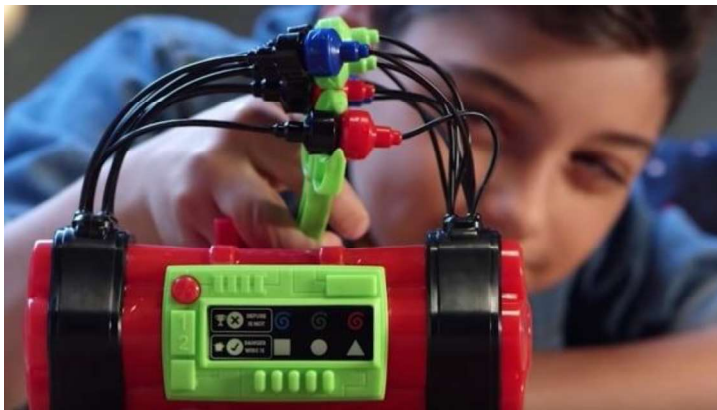
Defuse the bomb game



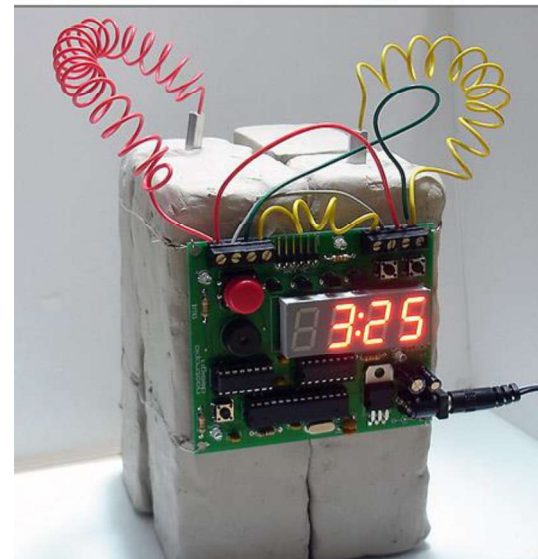
Welk draadje moet je doorknippen om de bom safe te maken:

- Een draadje maakt de bom safe
- Twee draadjes laten de bom ontploffen
- De rest doet niets

☛ Wordt EOD-expert en ontmantel je eigen bom.
Wie kan dat het snelst?



TNT klok (nepbom) voor op je kamer



☛ Verras je vrienden met een bijzondere klok op je kamer!