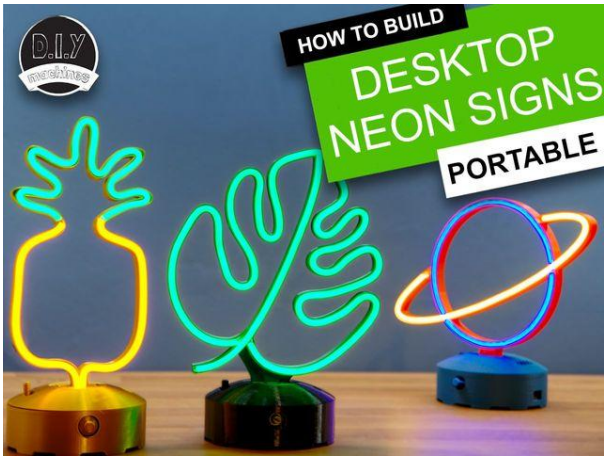

How to make Desktop Neon Signs - 3D Printable, Battery or USB powered & Dimmable!

DIY Machines

VIEW IN BROWSER

updated 7. 3. 2023 | published 7. 3. 2023

Summary

3D Print your own customisable Desktop Neon LED Sign. Powered by USB or AA batteries these will light up your room.

17.95 hrs	7 pcs	0.20 mm	0.40 mm	PLA	197 g	Prusa MK3/S/S+

Hobby & Makers > Electronics

Tags: sign decor 3dprinting lights battery lighting usb pcb neonsign neon ledneon

Please take a moment to **like** this project and **download** it from Printables - it really helps me out! Thank you

Today we’re making some of these awesome customisable desktop neon signs. These ones can be powered by either a USB cable or 4 x 'AA' batteries giving you a lot of flexibility for placement.

Why not use one to illuminate your next garden or beachside party? They are also dimmable to help create the right level of ambience for any setting. Use it to help illuminate a room or dial it down for a more subtle addition to your decor.

As for customising? You can print the parts in any rigid filament colour, It’s your choice as well for the colour of Neon effect LED’s used.

There are several ready designed Neon shapes you can choose from and I’ll be creating some more which are available on my Etsy shop: https://www.etsy.com/shop/diymachines

And if you're comfortable you can edit the design and create something totally unique either for yourself or as a thoughtfully made gift to someone else.

List of items used in this project and where to find them:

■ Neon effect LED strips: https://geni.us/NeonLEDStrip5v

■ Resistors 1kΩ (x2): https://geni.us/Ufa2s

■ Capacitors 0.1µF (x2): https://geni.us/Capacitor

■ Switching Diodes IN4148 (x2): https://geni.us/IN4148-Diode
■ Toggle Switch DPDT (x1): https://geni.us/DPDT-Toggle-Switch
■ Female USB Socket (x1): https://geni.us/MiniUSBSocket
■ 50k Rotary Potentiometer (x1): https://geni.us/Potentiometers
■ 555 timer IC (x1): https://geni.us/555Timer
■ MOSFET Transistor (IRLB8721PBF) (x1): https://geni.us/IRLB8721PBF
■ Bolts (M3x8mm x6): https://geni.us/NutsAndBolts
■ Electrical hook-up wire: https://geni.us/22AWGWire
■ Filament: https://geni.us/3DJake (I used PLA)
■ Projects PCB: https://geni.us/DesktopNeonSigns

These are some of my favourite tools I use and can recommend:
■ Battery-powered glue gun: http://geni.us/BoschBatteryGlueGun
■ Bosch Bit Driver: https://geni.us/Bosch-Screwdriver

I use a Prusa MK3S for my projects and highly recommend both it and the Prusa Mini. If I inspired you to take up 3D printing please consider purchasing a printer via this link: http://shop.prusa3d.com/

#a_aid=diymachines
Prusa support my channel when you use that link at no cost to yourself. :)

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Wiring diagrams, FAQ etc can be found here: https://www.diymachines.co.uk/3d-printed-desktop-neon-signs

Etsy shop for 3D printable kits and more: https://www.etsy.com/shop/diymachines
Discord server for this project: https://discord.gg/VjNdvW9RV6

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SAY THANKS:

Provide continual and dependable support through Patreon: https://www.patreon.com/diymachines
Or join this channel on Youtube Memberships: https://www.youtube.com/channel/UC3jc4X-kEq-dEDYhQ8QoYnQ/join
Buy me a coffee to say thanks: https://ko-fi.com/diymachines

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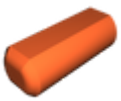
Disclaimer: This video is shared for demonstration purposes only.

Model files

desktop-neon-shape-planet.3mf



desktop-neon-toggle.stl

desktop-neon-shape-pineapple.3mf

desktop-neon-toggle.3mf

desktop-neon-shape-planet.stl

desktop-neon-housing-bottom.3mf

desktop-neon-housing-top.3mf

desktop-neon-shape-pineapple.stl

desktop-neon-housing-top.stl

desktop-neon-housing-bottom.stl

desktop-neon-dial.3mf

desktop-neon-dial.stl

desktop-neon-shape-cactus.3mf

desktop-neon-shape-cactus.stl

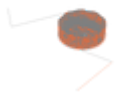
neon-shape-starter.stp

Useful for designing your own shapes

Print files

desktop-neon-toggle_02mm_pla_mk3s_6m.gcode

PLA 0.40 mm 0.20 mm 0.10 hrs 1 g Prusa MK3/S/S+



desktop-neon-housing-bottom.gcode

PLA 0.40 mm 0.20 mm 4.46 hrs 50 g Prusa MK3/S/S+

desktop-neon-housing-top_02mm_pla_mk3s_2h44m.gcode

PLA 0.40 mm 0.20 mm 2.74 hrs 33 g Prusa MK3/S/S+

desktop-neon-shape-pineapple_02mm_pla_mk3s_3h13m.gcode

PLA 0.40 mm 0.20 mm 3.21 hrs 34 g Prusa MK3/S/S+

desktop-neon-shape-planet_02mm_pla_mk3s_3h34m.gcode

PLA 0.40 mm 0.20 mm 3.57 hrs 38 g Prusa MK3/S/S+

desktop-neon-dial_02mm_pla_mk3s_9m.gcode

PLA 0.40 mm 0.20 mm 0.14 hrs 1 g Prusa MK3/S/S+

desktop-neon-shape-cactus_02mm_pla_mk3s_3h39m.gcode

PLA 0.40 mm 0.20 mm 3.73 hrs 40 g Prusa MK3/S/S+

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