



## Einhell/Ozito battery to USB adapter - Mobile soldering iron

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### Summary

An adapter that can be plugged into an Einhell/Ozito battery and outputs power via a USA-A and a USB-C socket.

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[einhell18v](#)

My old soldering iron has been bothering me for a long time. It's bulky, gets hot slowly, takes up a lot of space and you always need a power socket. That's why I wanted to buy a cordless soldering iron. Unfortunately, I couldn't find one that met my requirements.

For this reason, I thought about how I could find a different solution. In the end, I decided to build an adapter that I can plug onto one of my Einhell batteries to use the soldering iron. However, this adapter can be used not only with soldering irons but also with other devices. In principle, you have a powerful power bank with the adapter.

The setup is quite simple. I use the Einhell adapter from Hans (<https://www.printables.com/de/model/243613-battery-adapter-einhell-power-x-change-general-pur>) as a base. An XH-M609 is connected directly behind

it, which monitors the battery voltage and switches off if it falls below a set value to protect the battery from deep discharge. I have also integrated a slot for a fuse. I currently have a 7.5A fuse plugged in there. This is also there to protect the battery. Then there is a switch to switch the device on and off and finally an SW3518. The SW3518 takes the voltage of the battery (6 - 35V are possible), converts it and outputs it to a USA-A and USB-C port.

If you prefer, you can also omit the XH-M609, the fuse and the switch and connect the battery directly to the SW3518.

To keep the whole thing compact and easy to wire, I have divided the components into two levels. The housing is connected using four fusible sleeves and four M3x25 screws.

Note: The brass threaded inserts must be melted in part 1. Then screw the screw through the cover, through part 2 and fasten the screw in part 1.

Here is a list of the parts I used:

- XH-M609: [https://www.aliexpress.com/item/33049540052.html?spm=a2g0o.order\\_list.order\\_list\\_main.11.5b111802okqbDx](https://www.aliexpress.com/item/33049540052.html?spm=a2g0o.order_list.order_list_main.11.5b111802okqbDx)
- SW3518: [https://www.aliexpress.com/item/1005002460569356.html?spm=a2g0o.order\\_list.order\\_list\\_main.17.5b111802okqbDx](https://www.aliexpress.com/item/1005002460569356.html?spm=a2g0o.order_list.order_list_main.17.5b111802okqbDx)
- 7.5A fuse and holder: [https://www.aliexpress.com/item/4001243079952.html?spm=a2g0o.order\\_list.order\\_list\\_main.28.5b111802okqbDx](https://www.aliexpress.com/item/4001243079952.html?spm=a2g0o.order_list.order_list_main.28.5b111802okqbDx)
- Switch: [https://www.aliexpress.com/item/1005006623653360.html?spm=a2g0o.order\\_list.order\\_list\\_main.35.5b111802okqbDx](https://www.aliexpress.com/item/1005006623653360.html?spm=a2g0o.order_list.order_list_main.35.5b111802okqbDx)
- M3 brass threaded inserts: [https://www.aliexpress.com/item/1005004535859664.html?spm=a2g0o.order\\_list.order\\_list\\_main.75.5b111802okqbDx](https://www.aliexpress.com/item/1005004535859664.html?spm=a2g0o.order_list.order_list_main.75.5b111802okqbDx)
- M3 screws: 4x M3x24
- Cable: I used 18AWG
- Crimping stuff: Crimping Terminal Male Connector
- Soldering iron: [https://www.banggood.com/PTS80-T12-Smart-Electric-Soldering-Iron-Kit-PD-65W-DC-72W-Adjustable-Temperature-Portable-Solder-Welding-Station-Heat-Pencil-p-1987452.html?akmClientCountry=DE&rmmds=myorder&cur\\_warehouse=CN&ID=6322907&a=1](https://www.banggood.com/PTS80-T12-Smart-Electric-Soldering-Iron-Kit-PD-65W-DC-72W-Adjustable-Temperature-Portable-Solder-Welding-Station-Heat-Pencil-p-1987452.html?akmClientCountry=DE&rmmds=myorder&cur_warehouse=CN&ID=6322907&a=1)
- Soldering tips: [https://www.banggood.com/10PCS-T12-Lead-free-Alloy-Stainless-Steel-Color-Soldering-Iron-Tips-Set-p-1978657.html?akmClientCountry=DE&rmmds=myorder&cur\\_warehouse=CN](https://www.banggood.com/10PCS-T12-Lead-free-Alloy-Stainless-Steel-Color-Soldering-Iron-Tips-Set-p-1978657.html?akmClientCountry=DE&rmmds=myorder&cur_warehouse=CN)
- Silicone USB-C cable: [https://www.aliexpress.com/item/1005007212141434.html?spm=a2g0o.order\\_list.order\\_list\\_main.47.5b111802okqbDx](https://www.aliexpress.com/item/1005007212141434.html?spm=a2g0o.order_list.order_list_main.47.5b111802okqbDx)

With the soldering iron, soldering tips and USB cable, I paid around 55 euros. Without the soldering iron, soldering tips and USB cable, it was

20 euros. I think the price is really good for a mobile soldering iron that has power, heats up in seconds and is flexible thanks to the many soldering tips. With the new setup, soldering is finally fun again :).

## Model files



einhelladapter-part-2.stl



einhelladapter-cover.stl



einhelladapter-part-1.stl

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