

ID-51/31 USB Charger

JASON HOWARD – K6DGN

Why do this?

- I may not always have access to mains power



Why do this?

- Even 12v car power may not be available



Why do this?

- My other daily carry devices run on USB (OnePlus 3)



Why do this?

- My other daily carry devices run on USB (Asus Tablet)



Why do this?

- My other daily carry devices run on USB (BT Keyboard)



Why do this?

- My other daily carry devices run on USB (BT Headphones)



Why do this?

1. So in essence I have standardized on USB for my low power devices. I carry one of these around. Simple and small.



Why do this?

- But I also keep one of these in my car or sometimes in my backpack in the off chance of an extended time away from power, camping or emergency situations.



Why do this?

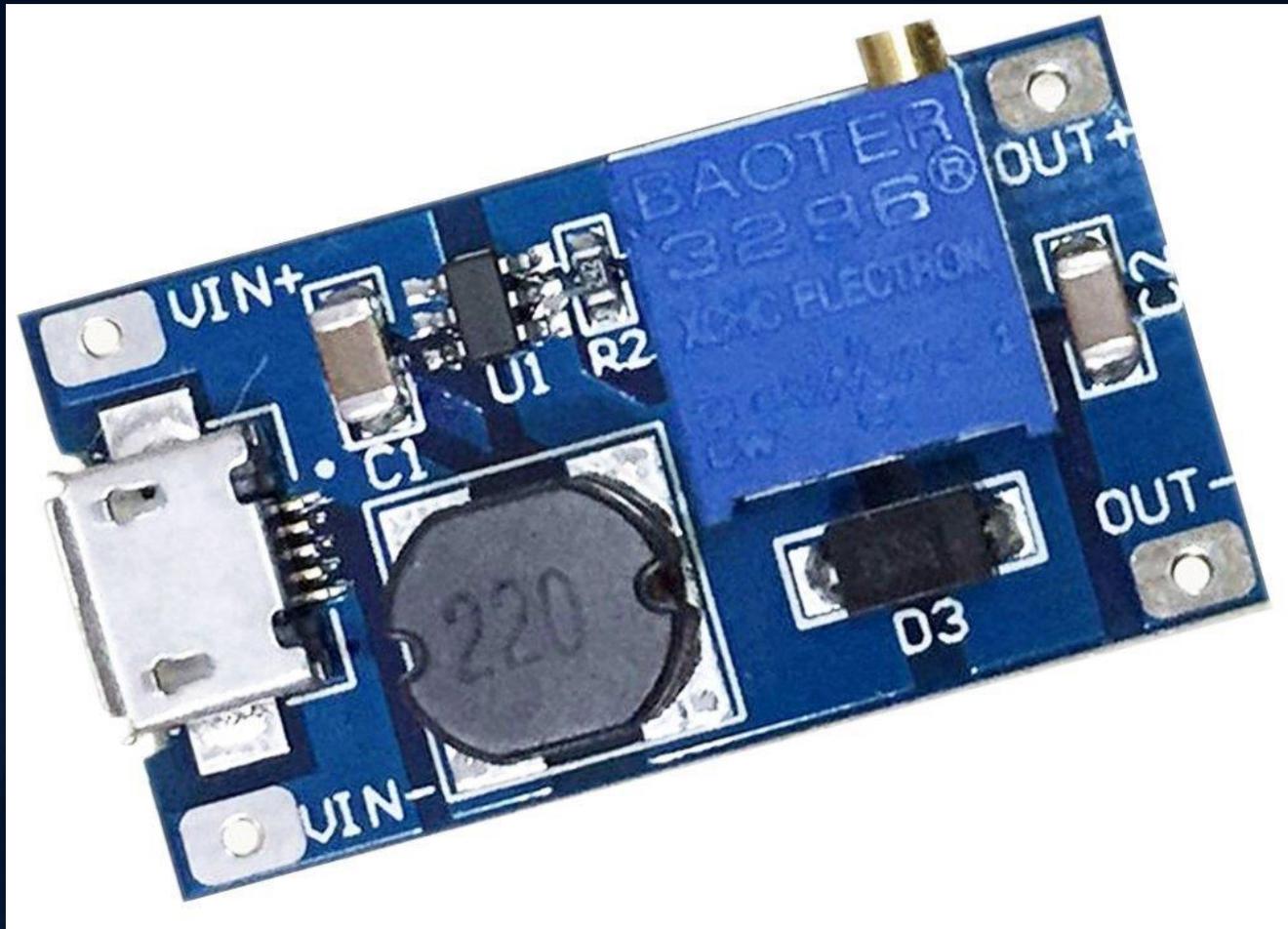
- So I see this as one of many things I keep with me incase I can't get home due to some kind of natural disaster. It allows me to stay standardized on USB power while keeping my 12v radio charged. Even if the only thing I have to worry about is boredom while I wait for the ability to get home or out of a given area.
- In addition to my electronics, mobile power, solar panel, I keep a double helping of food/water rations, FM radio, extra water, one man tent, bed roll, sleeping bag, inflatable pillow and a 1st aid kit, to name a few.
- I also have a "Go Bag" by the door with similar contents.
- The only thing I don't have is a chair. I need to fix that. 😊

What you will need



Your radio of course

Yeeco 2577 DC DC Boost Converter



<https://www.amazon.com/gp/product/B011EBSKko>

Uxcell 10pcs 40x20x11mm Power Project Case



<https://www.amazon.com/gp/product/BooLGKNG8G>

Conwork 10-Pack 3.5mm x 1.3mm DC Plug



<https://www.amazon.com/Conwork-10-Pack-Adapter-Straight-Connector/dp/B01G6EB99E>

20 Guage Wire (Maybe not this much)



A good soldering iron



A quality multimeter



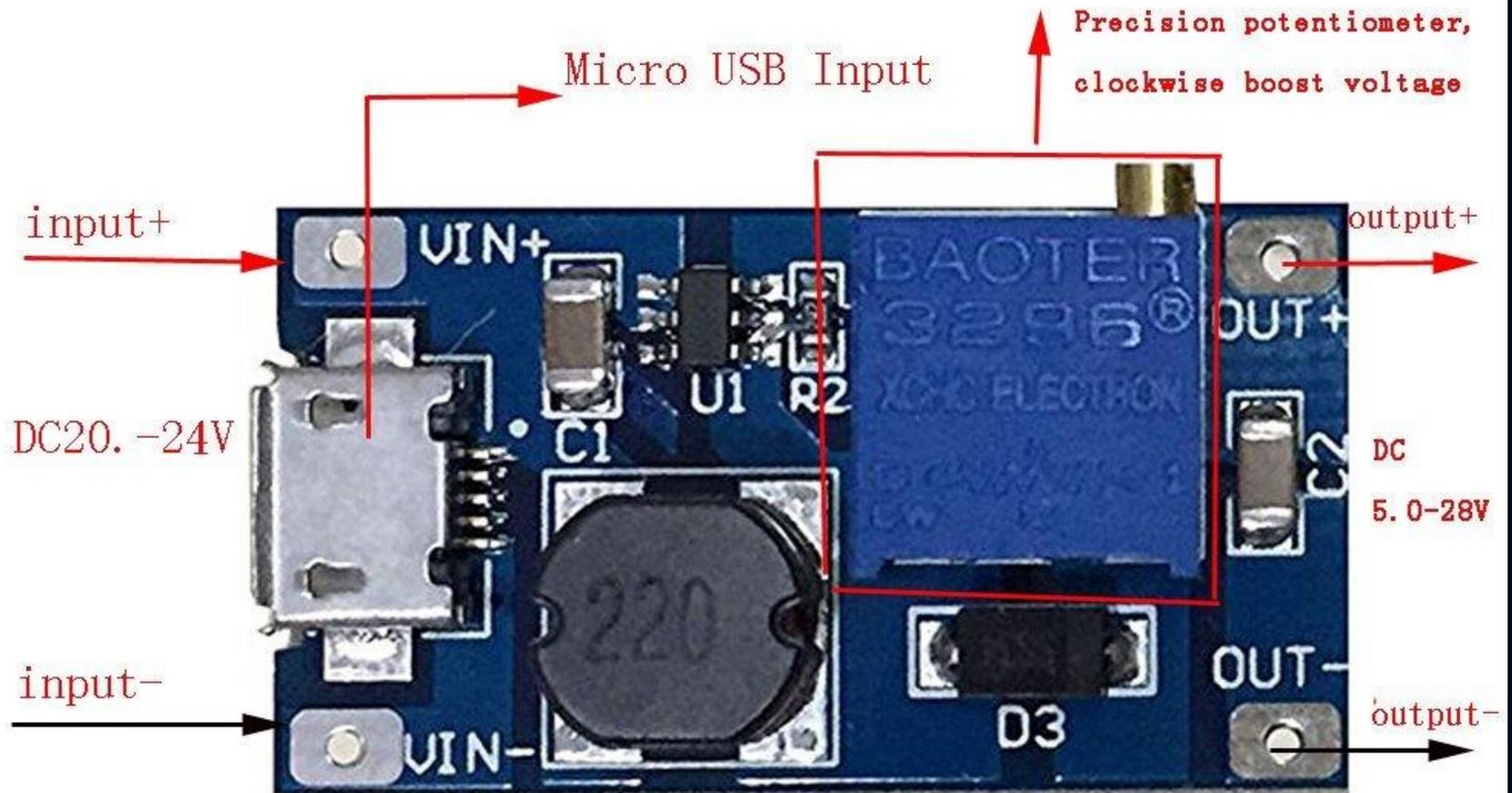
Dremel and small grinding wheel



A USB Power Source that does 2.1 Amps

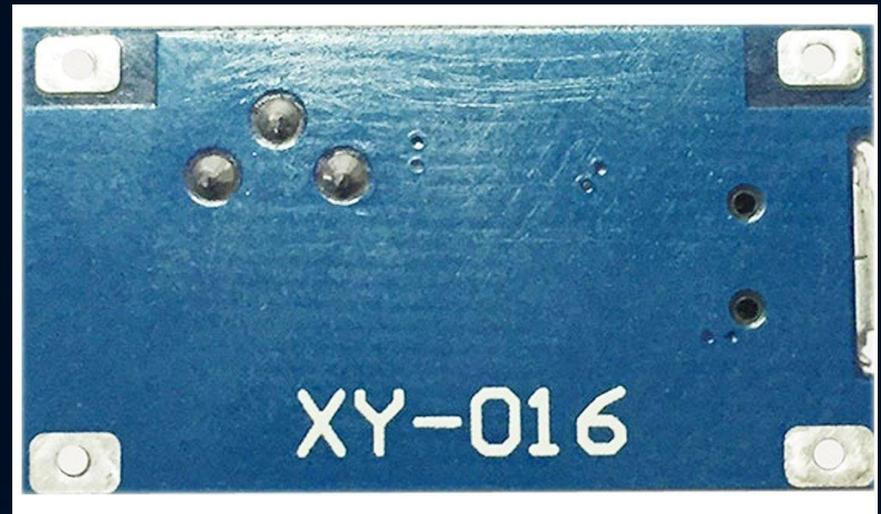
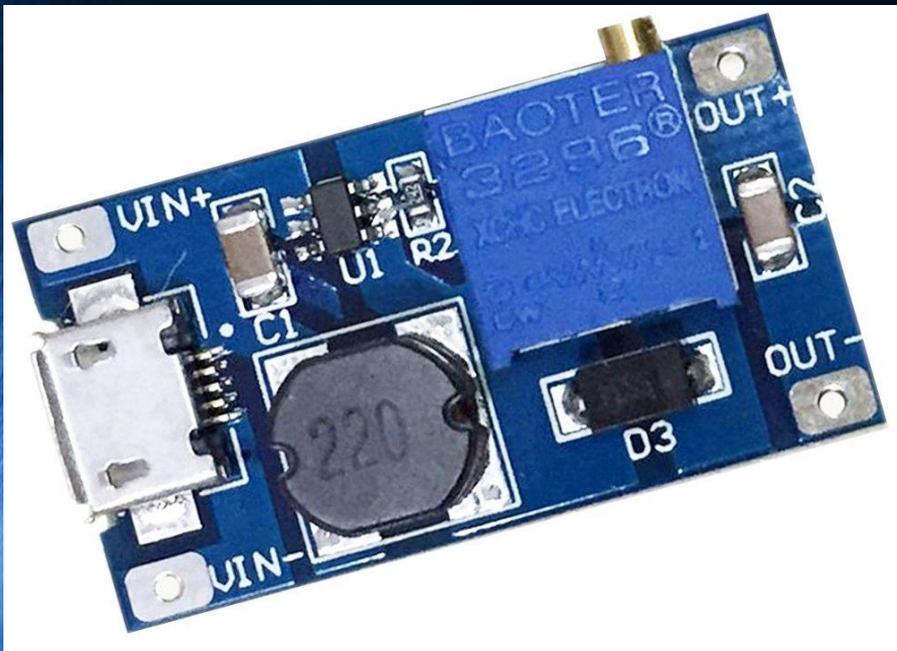


More about the Yeeco 2577



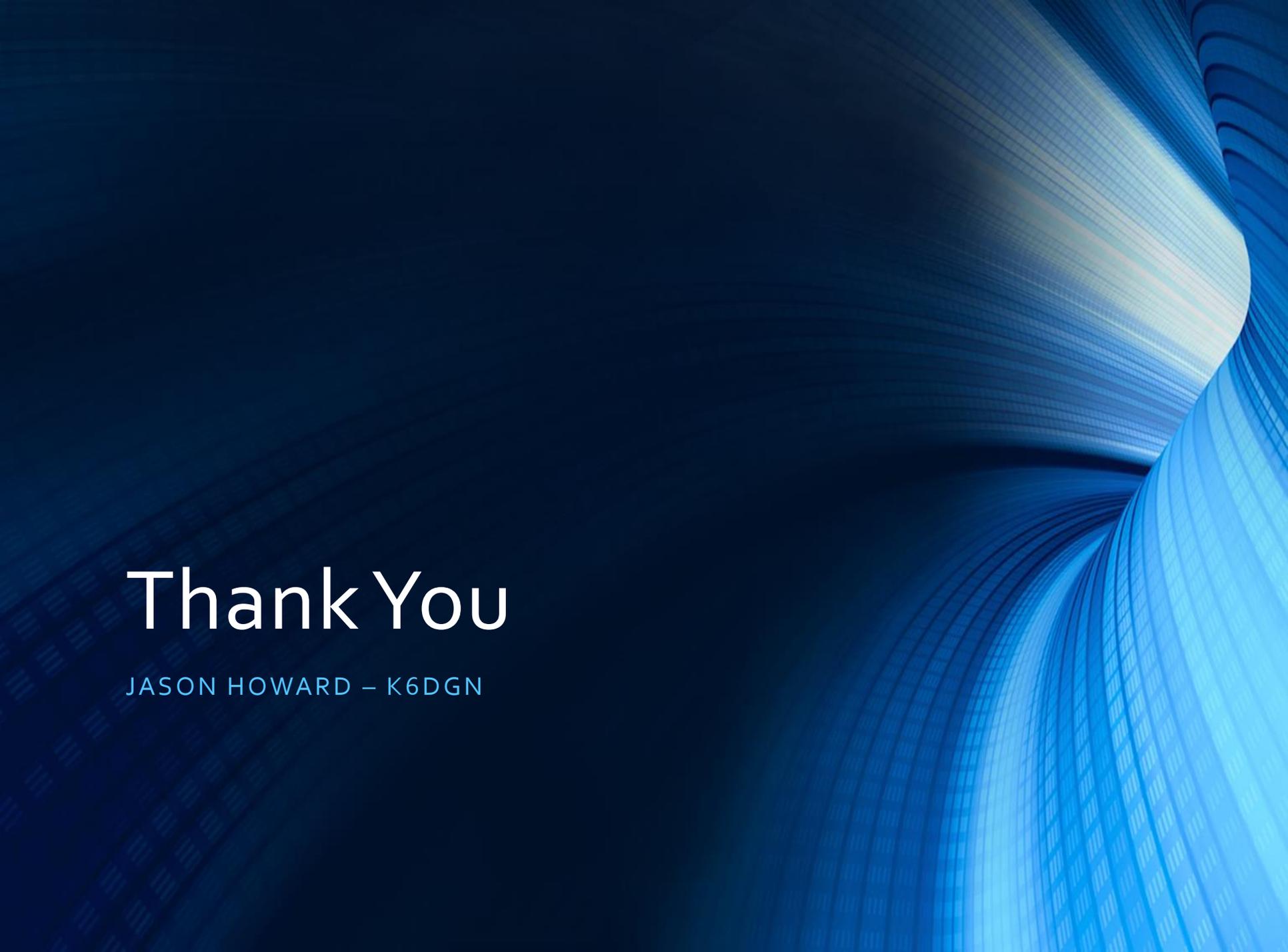
More about the Yeeco 2577

- Step-up Voltage Regulator / Stabilizer
- Input Power Supply DC 2-24V
- Output Power 5V 9V 12V 24V 2^a
- Yeeco recommends max load of 500mA at 5v



Assembly

1. Solder 12 inches of wire to the barrel jack
2. Remember, center pin positive
3. Solder the other end of the wire to the boost board
4. Use your multimeter to check conductivity positive to negative and negative to positive to make sure there are no bridged solder connections
5. Plug the board into your USB power source
6. Use your multimeter to measure output voltage while adjusting the pot to get as close to 12v as possible
7. If all checks out you should be able to charge your HT via a USB power source.
8. Now place the completed kit into an enclosure.
9. For my use I used the tiny project box and dremel'ed out the edges so the board would fit.
10. I used double sided tape to fix the board into the box and hot-glued the box closed.

The background features a dark blue gradient on the left, transitioning into a complex, glowing blue structure on the right. This structure consists of numerous thin, parallel lines that curve and spiral inward, creating a sense of depth and movement, similar to a tunnel or a stylized architectural element. The lines are more densely packed and brighter in the center-right area, fading into the dark blue on the left.

Thank You

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