



Oculus Quest Battery Counterweight

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<https://learn.adafruit.com/oculus-quest-battery-counterweight>

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Overview & Materials

Here's a simple & easily reversible mod to extend Oculus Quest's play time while also making it more comfortable to wear. By attaching a USB battery pack to the back of the Quest, you'll get more time for lightsaber dancing plus a counterweight to balance that bulky HMD strapped to your face. Lovely.

In addition to an Oculus Quest VR headset, you'll need the following items ...

USB Battery Pack



[USB Battery Pack for Raspberry Pi - 10000mAh - 2 x 5V outputs](https://www.adafruit.com/product/1566)

A large-sized rechargeable battery pack for your Raspberry Pi (or Arduino, or <https://www.adafruit.com/product/1566>)

A 10,000mAh [battery pack \(https://adafru.it/IBk\)](https://adafru.it/IBk) provides a substantial amount of extra run time, plus enough weight (~oz) that I was able to loosen the Quest side straps and not rely exclusively on clamping force to keep the Quest on my head.

Heavy Duty Adhesive Velcro Tape



This [adhesive velcro-brand tape \(https://adafru.it/IBI\)](https://adafru.it/IBI) can be made from standard hook & loop material, as long as it has strong adhesive that sticks to the battery pack's textured plastic case. I had this [unusually wide roll \(https://adafru.it/IBI\)](https://adafru.it/IBI) left over from another project, but only a couple of 2cm-wide strips are needed.

Velcro Cable Ties



[Hook & Loop / Velcro ties \(https://adafru.it/IBm\)](https://adafru.it/IBm) are great for tidying up wiring and more. Make sure your ties are compatible with the Heavy Duty Adhesive Tape you use. We'll need the two types to stick together in order to suspend the battery pack from the Quest.

USB Cable



USB cable - USB A to Micro-B

This here is your standard A to micro-B USB cable, for USB 1.1 or 2.0. Perfect for connecting a PC to your Metro, Feather, Raspberry Pi or other dev-board or...

<https://www.adafruit.com/product/592>



Micro B USB to USB C Adapter

As technology changes and adapts, so does Adafruit, and speaking of adapting, this adapter has a Micro B USB jack and a USB C...

<https://www.adafruit.com/product/4299>

To connect the battery pack to the Quest, you'll need a USB-A to USB-C cable or perhaps a common cable type along with an adapter. I used a basic USB micro B cable along with a micro B to USB-C adapter. We'll only need power connections, so we don't need to be too choosy.

Assembly

Attach adhesive velcro to battery



Cut two 5cm x 2cm strips of fluffy side heavy duty velcro tape. These will be placed on the top side of the battery pack – this is the side with 4 small holes on it.



Peel the protective sheet off of each piece and stick them to the top side of the battery pack in parallel. Placing them closer to the outer edges will provide more stability, but be sure not to cover the pack's indicator LEDs – they're quite helpful :)

Attach battery pack to Quest



Line the cable ties up with the adhesive tape on the battery pack and press them securely in place. Ensure the rough/hook side of the cable ties attach to the fluffy loop strips on the top of the battery pack.



Position the battery pack against the Quest's back-bottom strap with the pack's USB ports pointed to the left side.

Bring the long end of the ties around the strap, and pass them each through their respective eyelets. Pull them both tight and press in place to secure.

Connect USB

Connect the USB cable's USB-A connector to the battery pack.



Gather any extra cable slack in a loop and secure it to the Quest's left side strap using another cable tie.



Plug the USB-C end of your cable into the Quest's left side port. You're now ready for your next marathon VR session.

Because the battery pack counters the weight of the head-mounted display, you should be able to loosen the Quest's side straps a bit, without any risk of it falling off. This will reduce the amount of pressure applied to your face and increase comfort – always a good thing :)