



Oculus Quest Battery Counterweight

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

Last updated on 2024-06-03 03:01:49 PM EDT

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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](http://adafru.it/1566)** (<http://adafru.it/1566>) 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/19B9) (<https://adafru.it/19B9>) 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/19B9) (<https://adafru.it/19B9>) 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/lBm) (<https://adafru.it/lBm>) 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 :)