



Small-Battery Cases (Parametric)



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Summary

Small watch-, calculator-, and other instrument batteries stored in sheathed racks.

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Small-Battery Storage Cases

Small watch-, calculator-, and other instrument batteries can be stored in these racks with their fitted cases. Through the OpenSCAD source file you may specify any size of small battery by filling in the battery diameter and thickness. The number of spaces for batteries may also be specified as an array of rows and columns of the rack. As supplied the print defaults to 10 CR2032s arranged as one column of 10 rows. The CR2032 is a common coin cell, so its .stl was submitted to Printables, but the real versatility is in the supplied OpenSCAD file. Various battery sizes and arrays are shown in the photo.

I recommend a trial run using OpenSCAD -- a free download -- to specify only one battery row. In other words make the trial rack and case very short. Test the fit with the battery or batteries in the rack. If the fit is bad, adjust the case either through OpenSCAD or your slicer.

Both the rack and case (also called “sheath” in the OpenSCAD file) are encoded in the source. To print them separately, as when the rack is a solid colour but the case is transparent, either one can be commented out.

To print without supports, the case is oriented vertically with its longest dimension in the z-axis. To reduce the chance of layer shifts and other printing hiccups, it may be wise to specify an array with more than one column, thereby shrinking the length. An unexpected but welcome virtue of the rack is that the voltage of any cell can be measured in place. There's no worry in meter probes contacting the adjacent cells in the same column.

New in v2: I added an optional bump near the back of the sheath so that the rack gets pinched and therefore does not slide out if tipped. The bump size is adjustable via the OpenSCAD source. There must be a battery in place for pinching to occur.

Version 2.1: I added an option to stack two racks of batteries into one case, and added parameters for AA and AAA batteries. This and a bug fix, replacing v2. July 21, 2023.

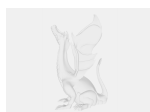
Bulletin 23-Jan-23: There is a re-mix that SR-G and I agree to call v3. Along with other features, SR-G added a little height to the base. That gets rid of tiny rectangular holes at the bottom of each battery compartment or, in rare instances, one big hole. [Find v3](#). Note that v3 was a re-mix of v2, and therefore does not have the added features and bug fix of v2.1.

Model files

battery_case_10_2032.stl



battery_case_v21.scad



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