



Maker Tape Battery Holders

Make your own battery holder with 3D printing and some Maker Tape.

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INTRODUCTION

Make your own battery holder with 3D printing and some Maker Tape. This can be a fun project if you've got a 3D printed in your classroom and some of our Maker Tape on hand.



TOOLS:

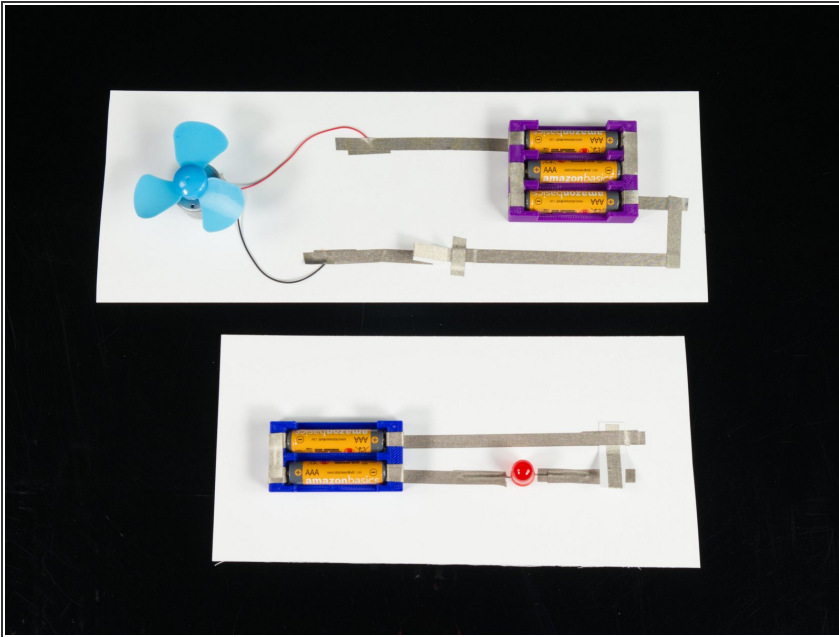
- [3D Printer](#) (1)
- [Scissors](#) (1)



PARTS:

- [Maker Tape](#) (1)
1/4" Wide

Step 1 — Overview









- Circuits need power, and if you need a battery pack, or a convenient holder for a single AA or AAA battery, you can make your own as long as you've got a 3D printer and some Maker Tape.
- This project will provide files and demonstrate how to create your own battery pack, including how to create a conductive path for multiple batteries.

⚠ **Note!** Like any project utilizing batteries there is some danger. Please read Step 2 for some warnings about working with these battery holders.

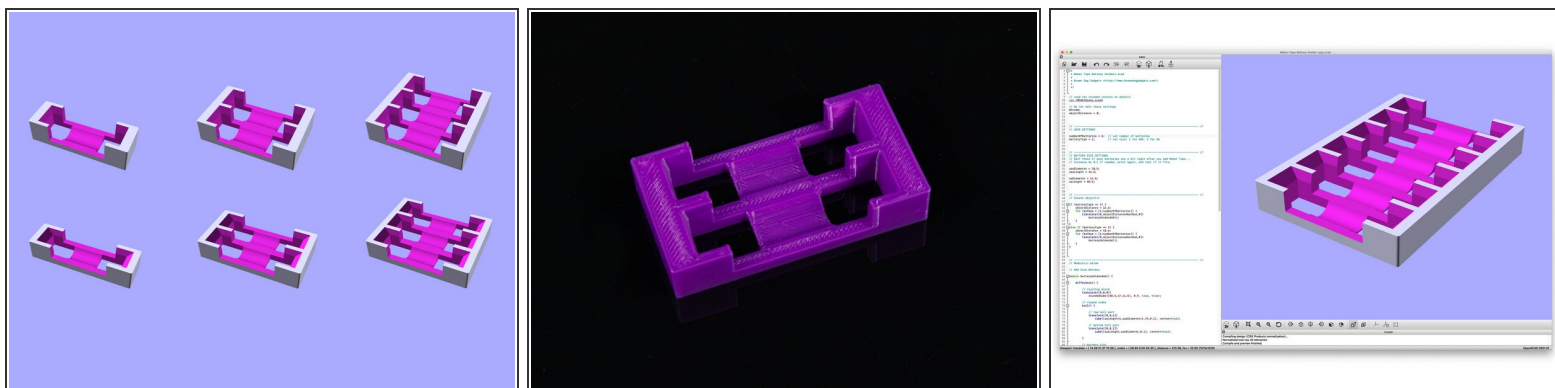
Step 2 — Warning!



- ⚠ While this project is safe if done properly, it can also cause batteries to overheat, tape to burn, and plastic to melt.
- ⚠ These battery packs are mean for **educational purposes** and should not be used *permanently* or without proper supervision.

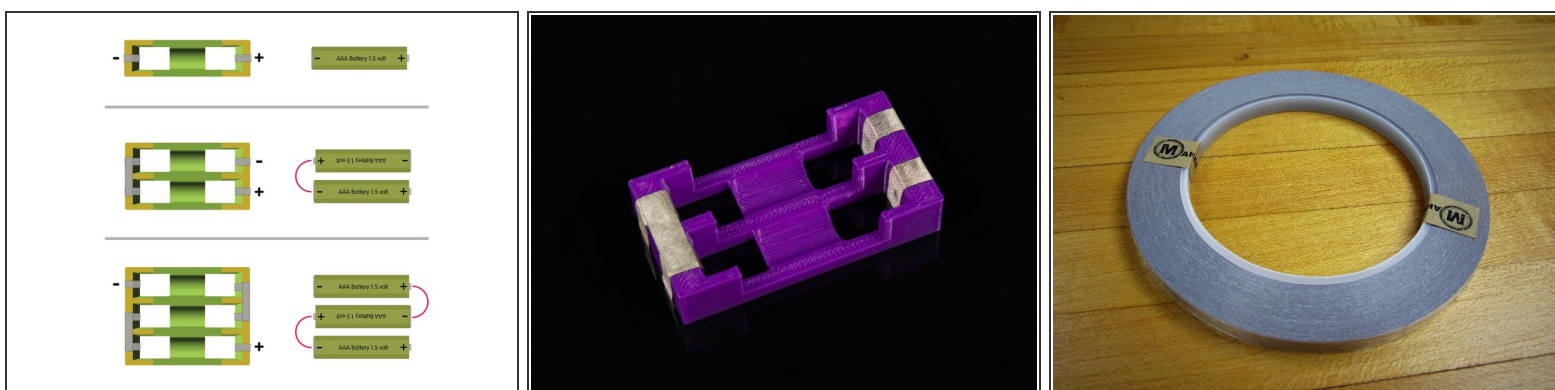
-  For safety it is recommended to **remove the batteries from the holder when not being used** in a circuit. Store them safely when not in use.
-  Do not stack battery holders while batteries are inserted!
-  Do not put batteries holders into a bag or box when batteries are inserted!
-  Do not place battery holders on conductive surfaces such as a metal table.
-  While **Maker Tape** is designed (and works perfect) for low-power circuits, it can only handle so many amps of power.
-  Check out this video for more info: [Conductive Tape Destructive Testing](#)

Step 3 — Download and Print



- You can download the file and print it on your own 3D Printer.
- Find it in our GitHub repository: <https://github.com/BrownDogGadgets/3D-Pr...>
- You'll find ready-to-print STL files for one, two, and three AAA and AA batteries.
- ❗ There's also a .scad file so if you're comfortable editing [OpenSCAD](#) code you can also easily create versions that hold 4, 5, 6 or more batteries!

Step 4 — Add Maker Tape



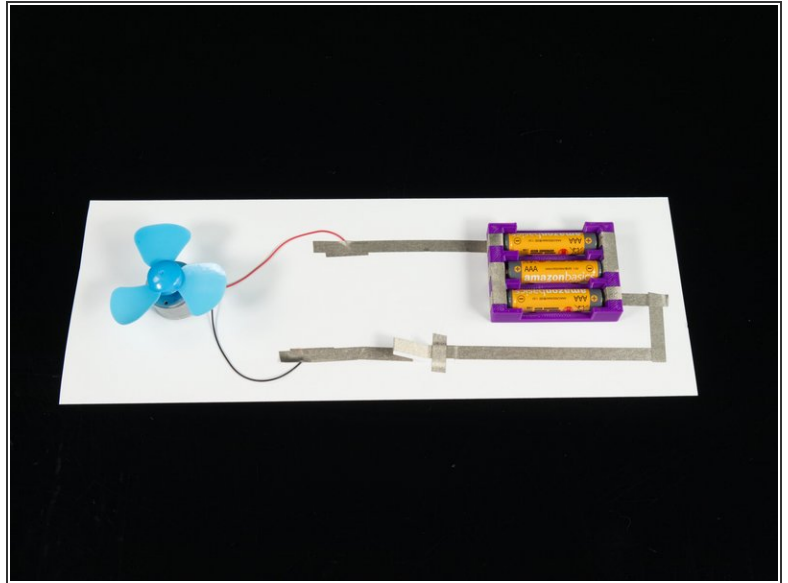
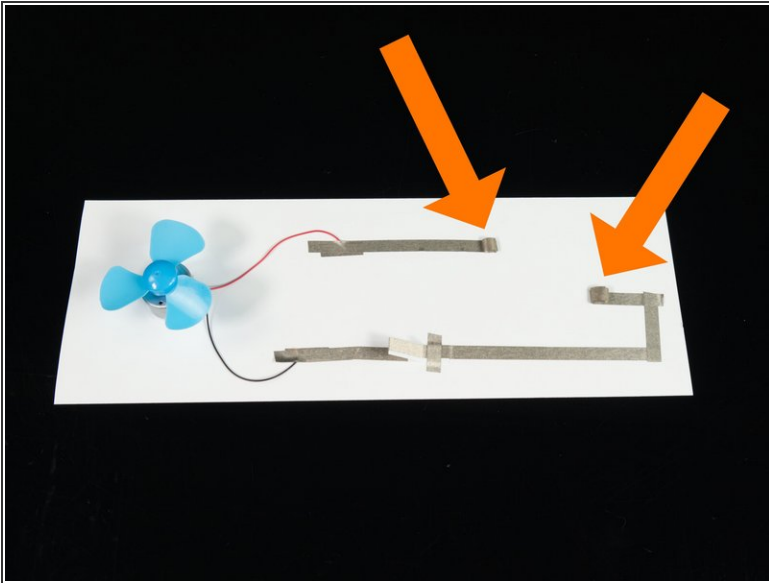
- For the single battery holder you just need to add a piece of tape looped around each end so the positive and negative side of the battery will make contact with the tape when pressed in place.
- For multiple batteries you'll need to connect the negative of one battery to the positive of the next battery. This connects the batteries in **series**.
- ❗ Tip! If your battery fits a bit too loose you can just add another layer of Maker Tape around the end of the holder for a tighter fit.

Step 5 — Add Batteries



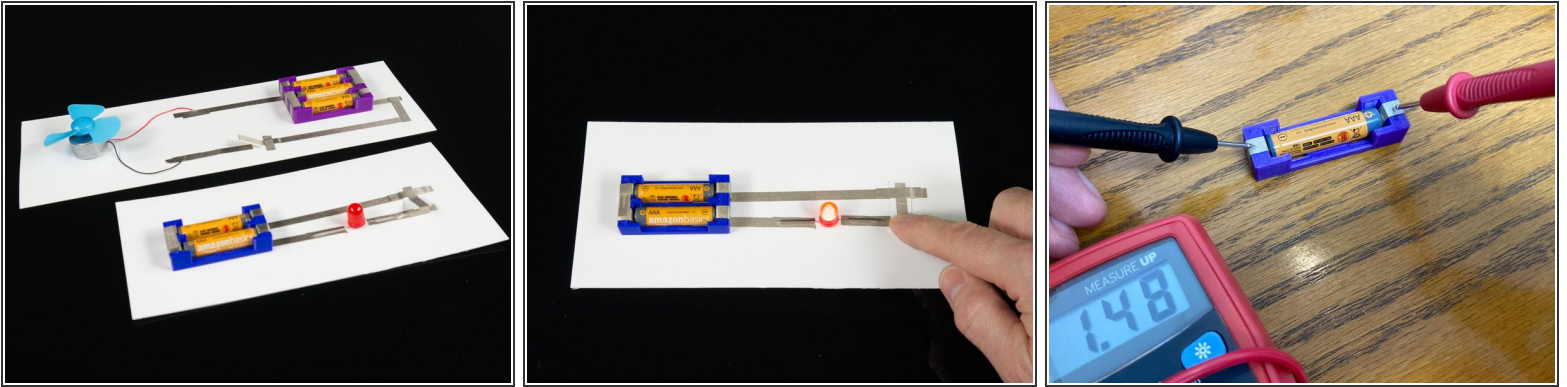
- Once you have your tape (or tape paths) in place you can add the batteries.
 - They should fit in snug so that the ends are touching the Maker Tape. (If they do not, you can just add another layer of tape.)
- ☒ Remember, Maker Tape is conductive on both sides and all the way through, so layering it works just fine. (This is not the case with most copper tapes.)

Step 6 — Add to Circuit



- You can use these battery packs in a circuit the same way you would use any battery pack.
- You can even use a tape loop to stick the battery pack right down to your Maker Tape pathways.

Step 7 — Take it Further



- Maybe you'll come up with some new ways to use these battery packs.
- Got some batteries that are down to just one volt? Put three of them in a holder together and you've got a 3 volt battery pack which is equal to a battery pack with two fresh batteries. A great way to get a bit more use out of old batteries.
- Could you connect the packs in parallel? Sure! It's just a matter of running Maker Tape for a specific pathway.
- One of our favorite uses is to pop one battery into a holder to check it with a multimeter. This solves the problem of trying to hold the battery and the meter probes at the same time.