



Upgrade an ATGAMES Sega Genesis Portable With a 1500mAh Battery.



by MicroNut99

I like the Sega Genesis Portable from ATGAMES. However since [Neto and Rafael Müller](#) fixed the sound, game saves, game genie... etc, I like it much more... so much that I cant put it down. Recharging became a hassle and I wanted something better. I had a hard time finding an exact battery so I ordered the one that I wanted. However like many Lithium-ion NP-60 1500mAh batteries on the market the terminals do not align... ugh. Time to mod the battery and so far I am happy with the results. The new battery lasts longer than 6 hours and takes about 2.5 hours to charge when low. It has been running great like this for about 30 or more days now. So here it is, anyone

can now attempt to blow up their ATGAMES Sega Genesis portable. With that said modifying Lithium-ion batteries intended use is dangerous and could lead to the battery swelling up, leaking and or exploding. Now thats done... More about the mod. Many others like myself have used parallel port cable and any free wire to create jumpers, close circuits, install chips and or create stuff. Why not reuse ribbon cable? Much of it is rated far above 12v and it can be cut and folded... once.. so it can be brittle in that respect. Respect this stuff. Its great when it works but sad when the blue smoke is set free.



Step 1: Find a Battery That Matches the Replacement Type. NP-60

Find a battery that matches the replacement type. Here is an example of a quality 1500mAh NP-80 Lithium-ion battery. In this case the replacement battery terminals are upside down and backwards but this can be worked around with some ribbon cable, clear/scotch tape and an exatco knife.





Step 2: Gather Together Some Spare Ribbon Cables.

Gather together some spare ribbon cables. Sacrificing some from an old printer might do. Try to find cables with undamaged ends, they are much easier to work with because safely exposing the surface on a ribbon cable to the metal is really difficult... as it should be.

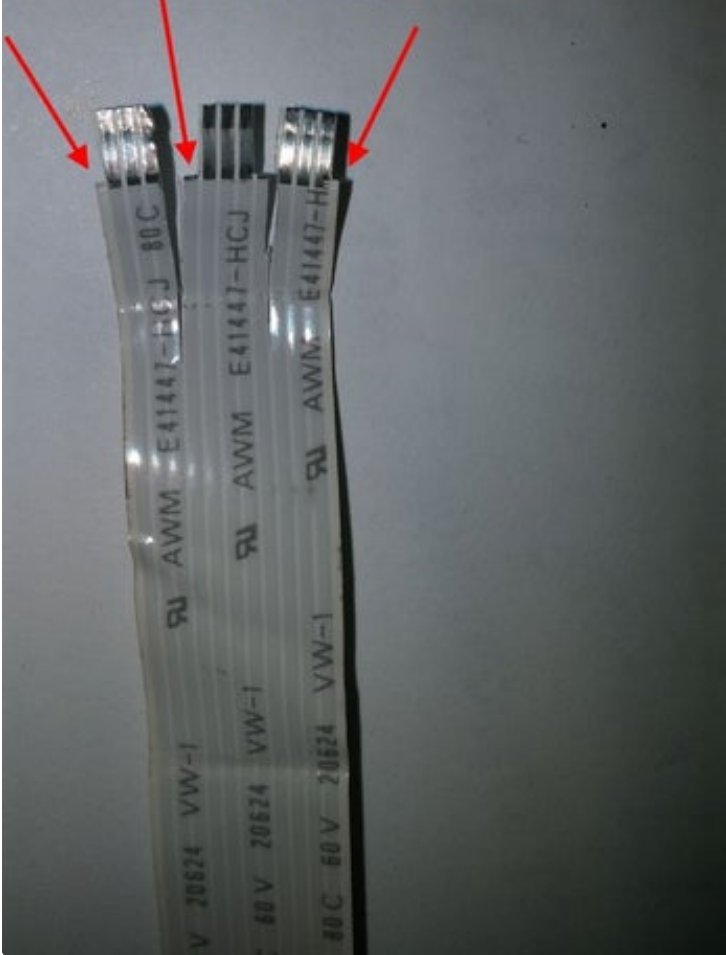


Step 3: Cut the Ribbon Cable

Carefully cut the ribbon cable so that it fits into the contacts of the battery. Notice the cable has been notched here. This does not prevent a short alone however the combined work on the other side of the cable does. Pay close attention to the gaps between

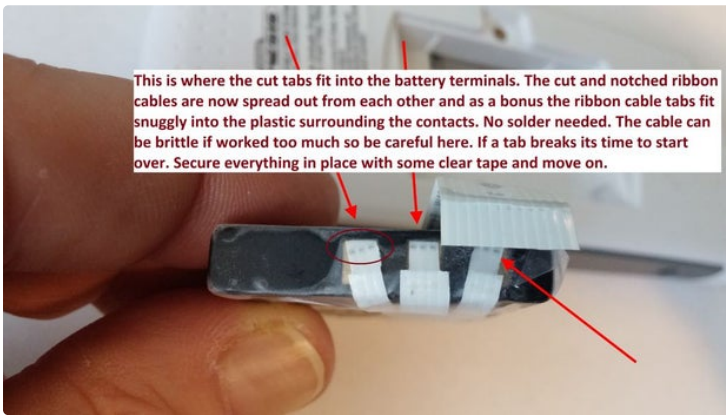
the wires. There isn't much insulation to cut away without risking a short. A very sharp exacto knife is highly recommend. (Great eye sight or an illuminated Head Magnifier really help as well.)

Cut the ribbon cable so that it fits into the contacts of the battery. Notice the cable has been notched here. This does not prevent a short alone however the combined work on the other side of the cable does.



Step 4: Connect the Ribbon Cable to the Battery Terminals

This is where the cut tabs fit into the battery terminals. The cut and notched ribbon cable tabs are spread out from each other and as a bonus the ribbon cable tabs fit snugly into the plastic surrounding the contacts. No solder needed. The cable can be brittle if worked too much so be careful here. If a tab breaks its time to start over. Secure everything in place with some clear tape and move on.

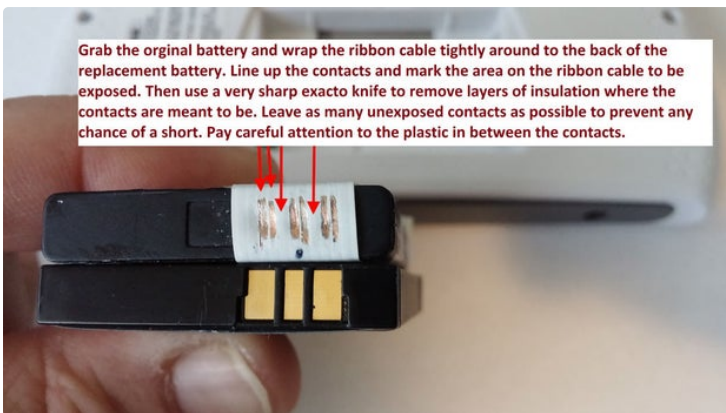


This is where the cut tabs fit into the battery terminals. The cut and notched ribbon cables are now spread out from each other and as a bonus the ribbon cable tabs fit snugly into the plastic surrounding the contacts. No solder needed. The cable can be brittle if worked too much so be careful here. If a tab breaks its time to start over. Secure everything in place with some clear tape and move on.

Step 5: Lining Things Up for Exposure.

Grab the original battery and wrap the ribbon cable tightly around to the back of the replacement battery. Line up the contacts and mark the area on the ribbon cable to be exposed. Then use a very sharp exacto knife to remove layers of insulation where the contacts are meant to be. Leave as many unexposed contacts or wires as possible to prevent any chance of

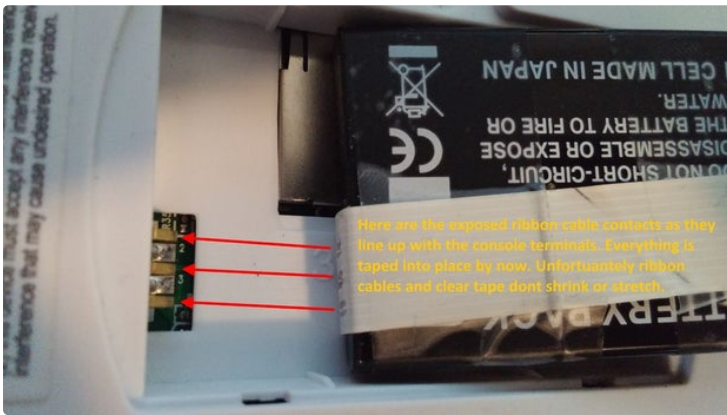
a short. Be careful not to scrape too hard because its easy to put a hole in the wire. Its ok to use tape to hold everything together. Tape is your friend and your enemy here. It will hold the project together as needed but it can also tear the battery apart when removed.



Grab the original battery and wrap the ribbon cable tightly around to the back of the replacement battery. Line up the contacts and mark the area on the ribbon cable to be exposed. Then use a very sharp exacto knife to remove layers of insulation where the contacts are meant to be. Leave as many unexposed contacts as possible to prevent any chance of a short. Pay careful attention to the plastic in between the contacts.

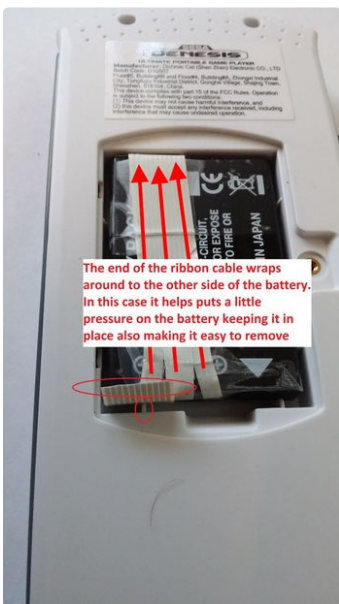
Step 6: Exposed at the Poles.

Here are the exposed ribbon cable contacts as they line up with the console terminals. Everything should be taped into place by now. Unfortunately ribbon cables and clear tape dont shrink or stretch all the much. Measure twice and cut once really means a lot here.



Step 7: The End of the Ribbon Cable

The end of the ribbon cable wraps around to the other side of the battery. In this case it helps puts a little pressure on the battery keeping it in place while also making it easier to remove. The battery snaps into place as shown. Notice how the ribbon cable runs at an angle to properly line up with the console (battery) terminals.



Step 8: the Battery, the Battery?!

You should be able to test your new battery now.

If everything went well the device could hold up to 6 hours or more instead of 2 or less and not explode...

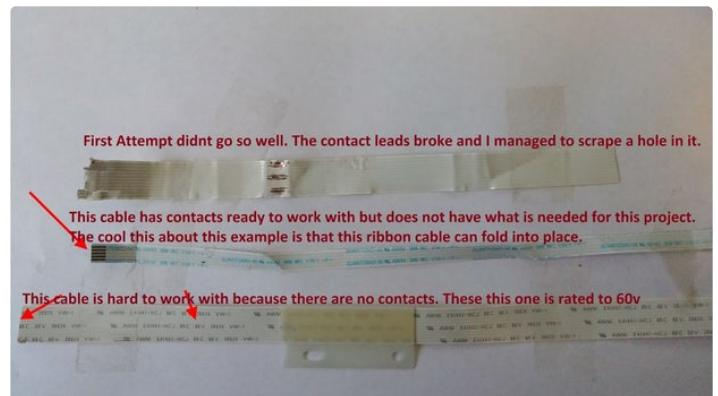
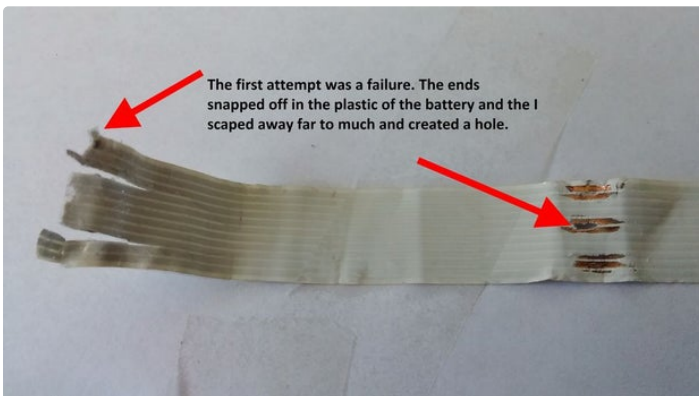


Step 9: Notes

Well that's about it.

If you are wondering what else you can do with all that new found power check this out!

[Turn an ATGAMES Portable Sega Genesis Into a Wireless Set of Speakers.](#)



Awesome! Never worry about running out of batteries.

Thank you!