

GameBoy Original Battery Pack Replacement Battery Installation Guide

Thank you for your purchase of a GameBoy Original battery pack replacement battery from Nintendo Repair Hut. We appreciate your business and look forward to serving you again in the future. This guide is intended to take you through the steps involved in the installation of your replacement battery pack. If you have questions at any time during the installation process please don't hesitate to contact us at Starwander@Comcast.net

Thing you will need

- 600mAh 4.8V NiMH rechargeable battery pack
- 4.5mm Nutsetter security screw bit
- Soldering iron
- Solder
- Soldering braid
- A clean work area where small parts will not get lost.
- Patience
- About 25-30 minutes of spare time

Please Read

Before getting started there are several critical safety things to cover. Please do not skip this section of the guide.

- 1) Never touch the bare ends of the leads on the battery pack together! This will lead to a short leading to and not limited to combustion of the unit and or combustion of anything flammable around the unit or the leads. Trust us since we actually burnt up a unit and caught a flammable item on fire because of our carelessness. It is very easy to do, so please use extreme caution.
- 2) The solder fumes are toxic to inhale. It is recommended that you use a fume hood when soldering or at the very least perform the work in a well-ventilated area.
- 3) Okay enough with the safety spiel, let's get to work.

Getting started:

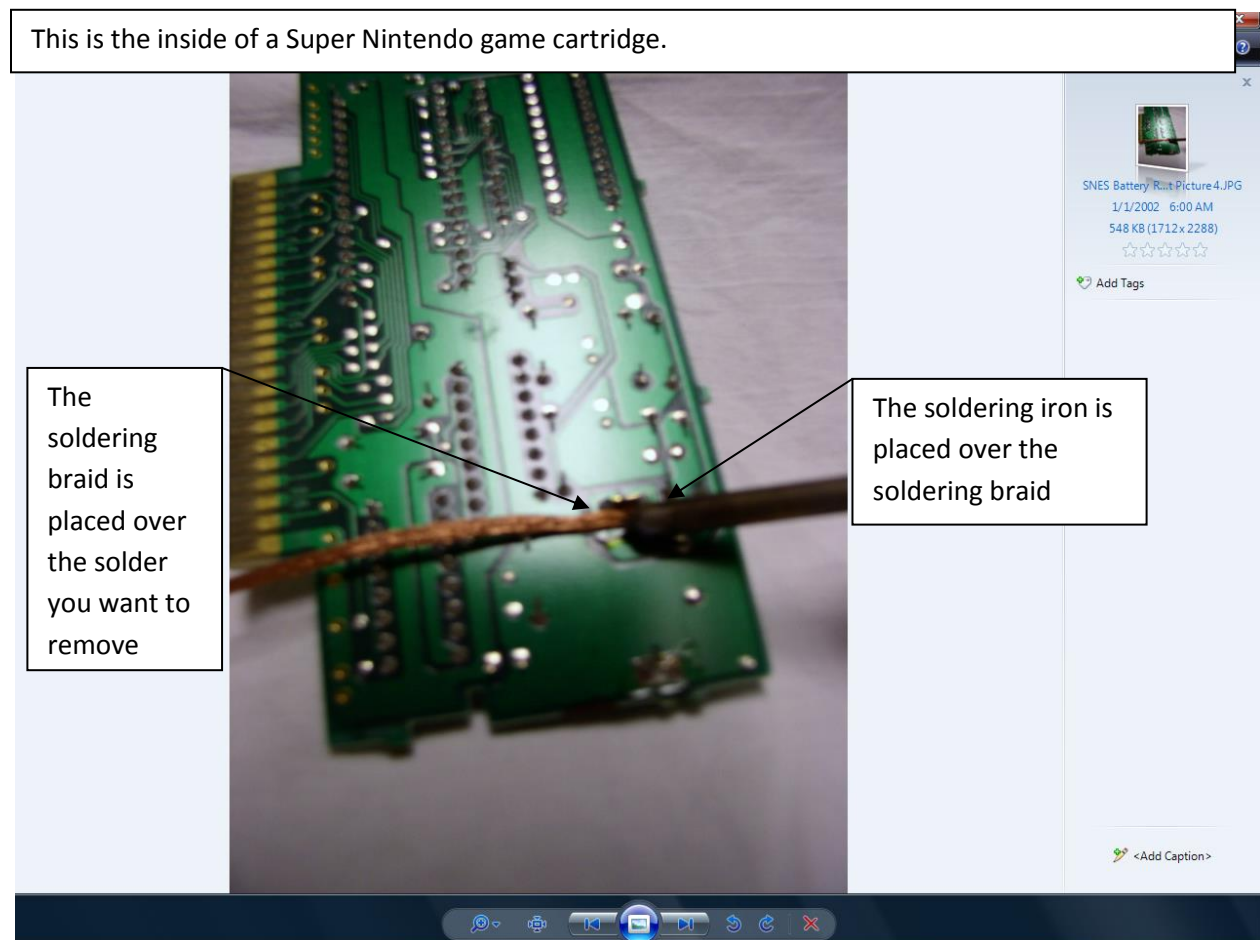
If you have a fair amount of soldering knowledge it is safe to skip ahead to step one, otherwise it is recommend that you read the following how to solder guide, which will discuss the soldering techniques you will need to successfully replace your battery pack.

Soldering Techniques:

In order to solder and unsolder correctly you will need a soldering iron, solder and soldering braid. Once you have these items it is safe to proceed forward. For the duration of this project it is not recommend that you use a cold heat or any other instantaneous heating soldering gun, since these guns use an electrical current to melt the solder. Passing a strong electrical current through your games is not recommended and as such should be avoided. We recommend that you use a typical soldering gun, the type that you have to plug in and wait to heat up. In addition it is recommended that you set your soldering iron to 30watts for the duration of this project.

Unsoldering:

Correctly unsoldering a joint is rather easy once you get the hang of it. In order to unsolder a joint place soldering braid over the solder you wish to remove and then place the soldering iron over the soldering braid. The soldering iron will heat the braid and in turn the solder will liquefy, which will be sucked up by the braid. Please see picture below.



Picture Introduction: Proper usage of soldering braid

Although it might take a little while to completely remove all of the solder, patience and persistence will pay off in this case. Every 10-15 seconds remove the soldering braid and check to see if the solder have been fully removed. As the soldering braid accumulated solder you should periodically cut off the used portion and use fresh solder.

Soldering:

Now that the solder has been removed you can now remove the object that the solder was holding in place and you are now ready to solder something new into place. For the purposes of this project it is safe to use a generous amount of solder, though this is not always the case with most soldering projects. The two most important things to keep in mind are:

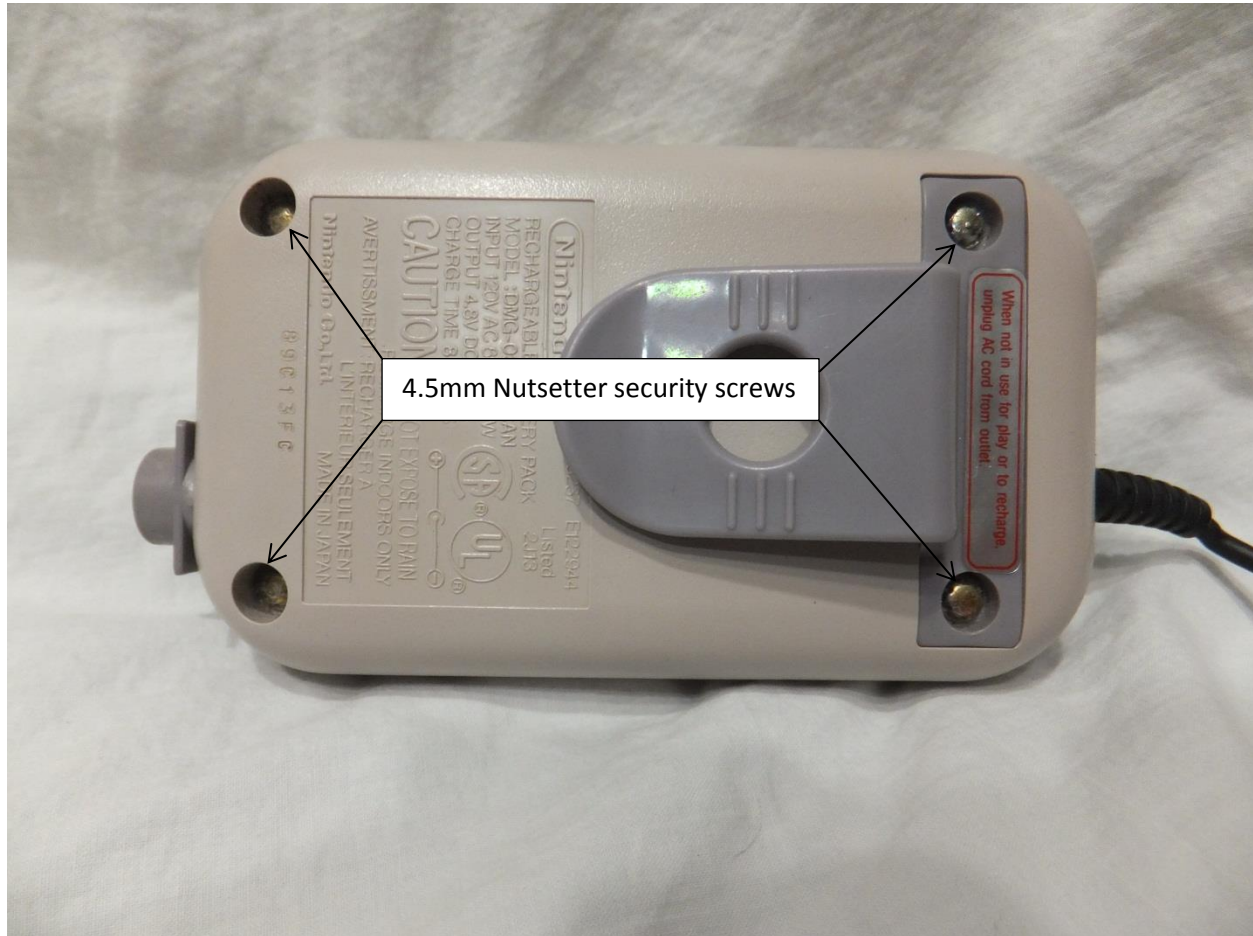
- 1) Never allow patches of solder to overlap or touch, doing so creates a short, thereby rendering the circuit inoperable.
- 2) Make sure to use enough solder to securely attach whatever it is you are soldering, do not be afraid to test the joint out.

Keeping these items in mind lets continue with our demonstration. This part of the project is pretty easy once you get used to doing it. All you have to do is take your solder and place it over the soldering joint and then lightly place the soldering iron over the solder. This is just like unsoldering, although this time you are soldering and not unsoldering. This part is a little tricky when you first start and is hard to describe with words alone.

It is recommended that you test out melting solder first to get an idea of how it behaves. One ideal exercise you might want to try is to attempt to solder together two pieces of wire. Take two pieces of wire, strip the ends, twist the ends together and then practice applying solder over this twisted joint. During the course of this project if you run into trouble remember you can always back track and remove the solder and try again, using the soldering braid. Soldering braid and solder are very cheap and as such are worth playing around with to get comfortable with before you go ahead and try to solder in a replacement battery. Now that we have covered the basics of soldering and unsoldering, let's get started with the replacement of that battery pack.

Step One:

To start please locate the four 4.5mm security screw bits that are holding the unit together as seen in picture one below.

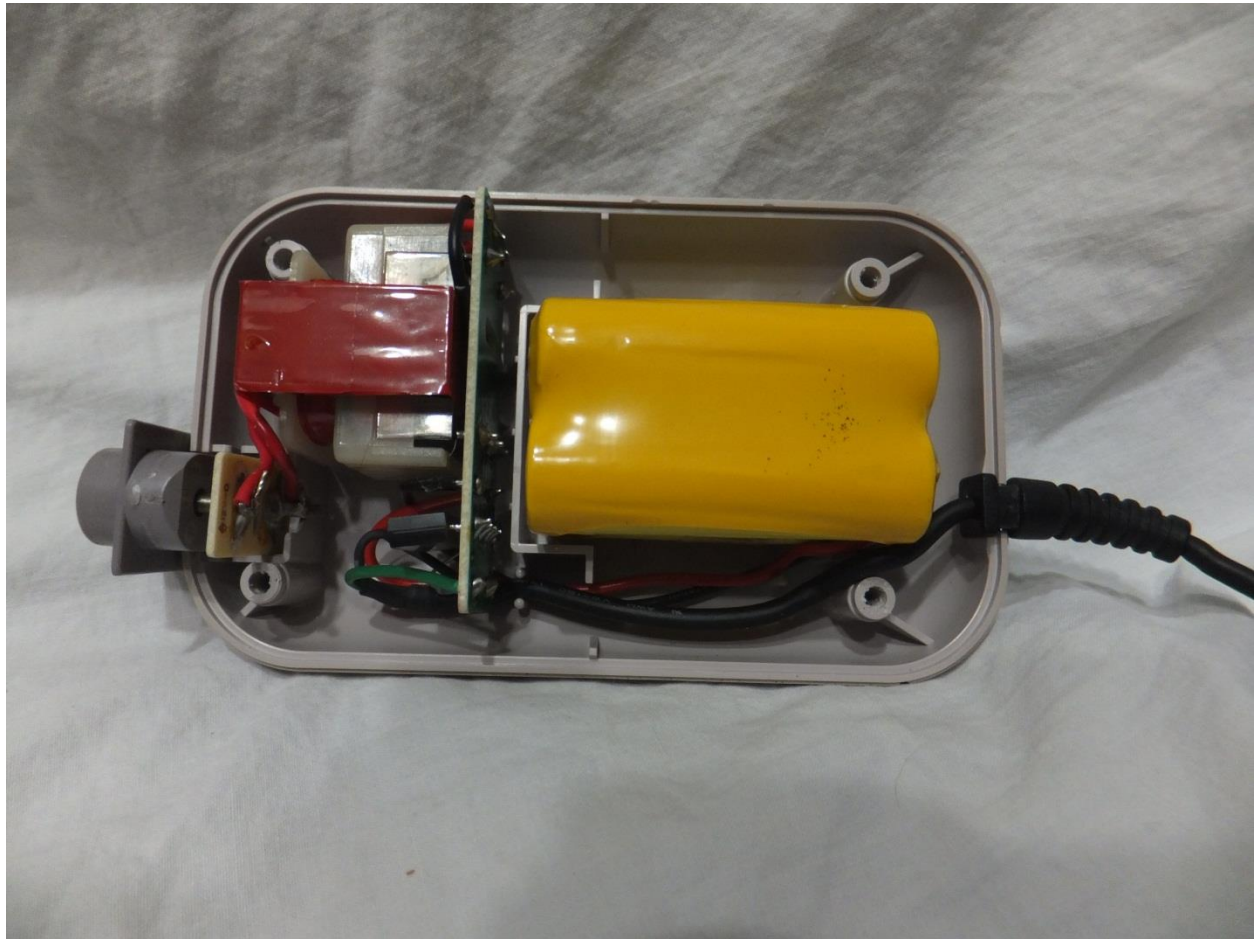


Picture One: Locating and removing the security screws

Once located please unscrew them using a 4.5mm Nutsetter bit or driver. Once the screws are removed please separate the two halves of the unit and proceed to step two.

Step Two:

Now that the unit is open it should look like picture two below.



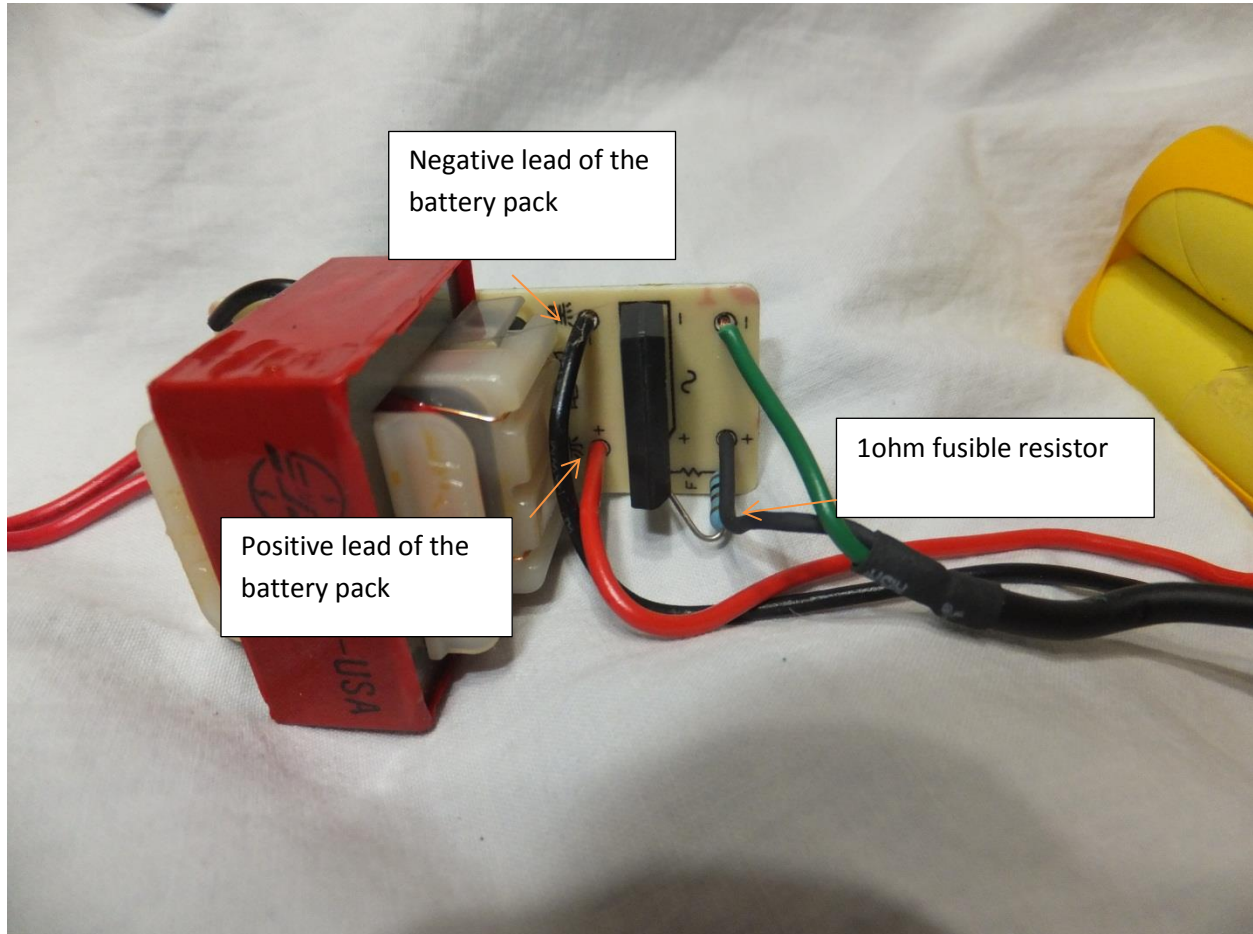
Picture Two: Inside of the GameBoy Original battery pack

Grasp the yellow battery pack and remove it from the inside casing. The foam tape holding it in place is quite strong so some brute force strength might be needed. Once it is removed proceed to remove the circuit board and well so that everything is separated from the front casing.

Once everything is dissembled please proceed to step three.

Step Three:

Now that we have access to the circuit board it is time to familiarize yourself with the layout of the circuit board. Please see picture three below.

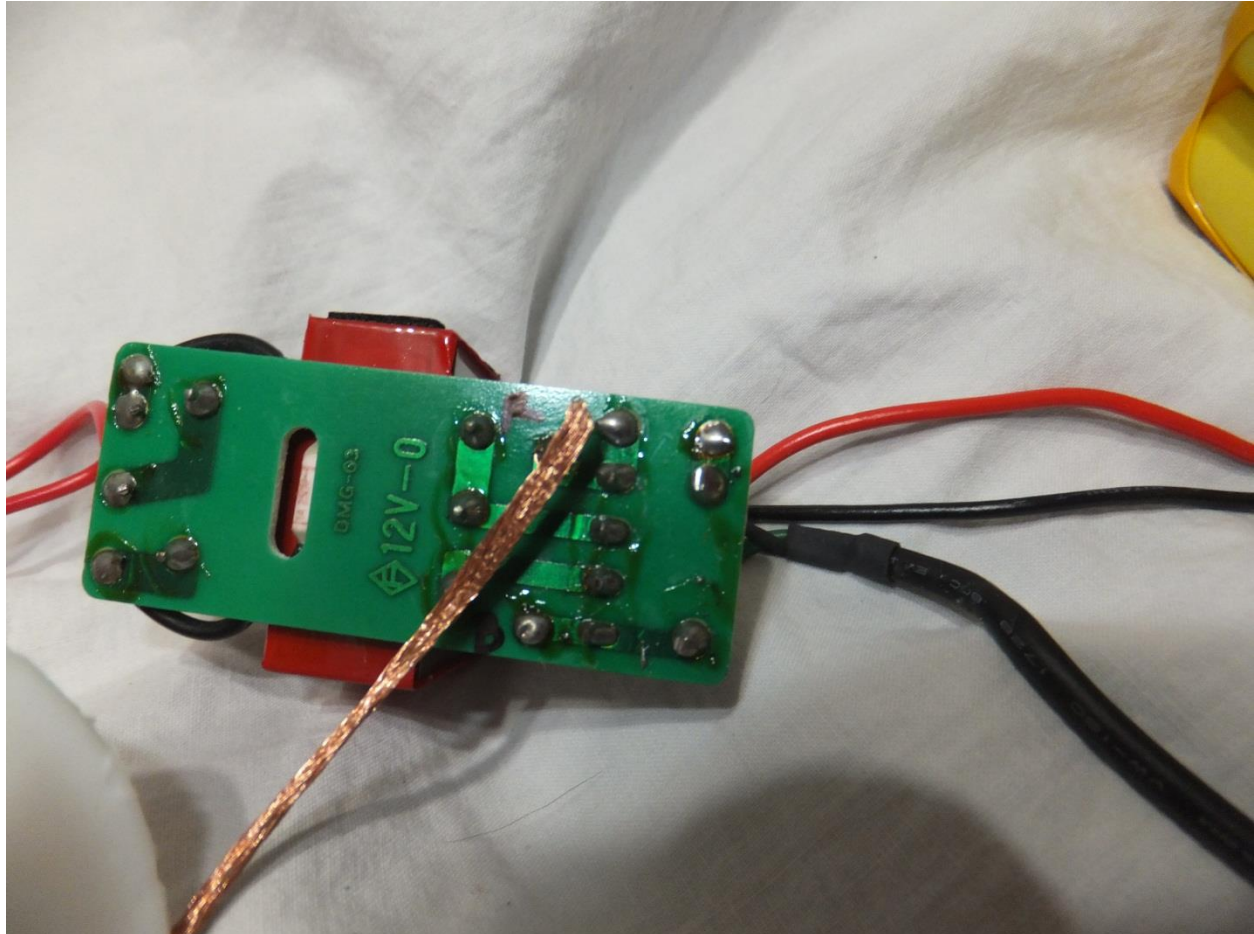


Picture Three: Circuit board awareness

As seen in picture three above the two leads of the battery pack are identified and the 1ohm fusible resistor is also noted. Once you are familiar with the layout of the circuit board please proceed to step four.

Step Four

Using the skill discussed at the beginning of this guide please unsolder the battery leads from the circuit board. One recommended strategy is shown below in picture four.



Picture Four: Soldering braid properly used

Placing the soldering braid over the solder joint heat the joint with the soldering iron and the braid will suck up the solder. Once enough solder has been removed apply traction on the battery lead pulling it away from the circuit board to help facilitate its release. Once the terminals are removed please also unsolder the one ohm fusible resistor if it needs to be replaced.

Once everything is unsoldered please proceed to solder the replacement battery pack leads and fusible resistor. It is important to make sure that the negative battery pack lead (black lead) is soldered to the negative terminal on the circuit board and vice versa. In regards to the fusible resistor it does not have a positive or negative terminal as it is bidirectional.

Continued on next page

Step Four Continued:

Once everything is soldered back in place please reassemble your system. If the battery pack is moving about you can use tape to hold it in place such as electrical tape. Before using your battery pack please charge the unit by plugging it into the wall. The unit will be charged in 45minutes to 1hr's time and should provide about 8-10hrs of continuous gameplay.

Please enjoy your battery pack. If you find that something is not working correctly after you have finished the installation of your replacement battery pack please see our troubleshooting section at the end of this guide.

Troubleshooting Section

We are sorry to hear that everything is not working correctly after the installation of the replacement battery pack. Please select the problem most similar to the one you are experiencing. You can also contact us for assistance at Starwander@Comcast.net

1) My battery pack does not provide power to the system

- a. Please start off by taking out your voltmeter and checking the output cable on the battery pack for a charge. It should register a 4.0-5.0 DC voltage.
- b. If you voltmeter shows a voltage please test out the power port on the GameBoy system by using a GameBoy Original power adapter. If you don't have one please open the system and check out the port itself for any soldering issues.
- c. If the voltmeter shows no voltage please open the battery pack and make sure the battery pack leads are soldered to the right terminals (Positive to positive and negative to negative). Also try replacing the fusible resistor if you haven't already.
- d. If the battery pack's leads are properly soldered in place and the fusible resistor has been replaced it is possible there is a shortage in the wire that inserts into the power port on the GameBoy. Use your voltmeter to see if there is a shortage by switching to the ohm setting. If the wire is bad we sell replacements.