

Astro-Physics Keypad Battery

Install the Pigtail Harness on New Battery

If your keypad has a dead battery with a 2.5" (6 cm) or 6" (15 cm) pigtail harness as shown in the photo below, these procedures will enable you to transfer the pigtail of your original battery to a new coin cell battery with spot welded tabs that you can purchase off-the-shelf. This will be less expensive than purchasing a new battery with pigtail harness from Astro-Physics (part# E0334 or E0338), particularly considering the restrictions and extra expense involved with shipment of lithium batteries, especially to international destinations.

Refer to the GTO Keypad Maintenance Instruction manual for information regarding removal and installation of your battery from the keypad and troubleshooting tips. Follow the links from the Support tab of our website.



Before the Repair:

Gather all the equipment you need. Here is a list of what is required or recommended:

- New CR2430 battery with spot welded tabs on both sides of the coin cell (e.g. Renata CR2430FV-LF).
- Old keypad battery with the 2.5" (6 cm) or 6" (15 cm) wire harness.
- Sharp blade, like an Exacto-Knife or razor.
- Soldering Iron.
- Solder. Lead solder can be used if no lead-free solder is available.
- A non-conductive helping-hands tool can be used to support the battery. If you are not sure that it is non-conductive, don't use it.
- Sharpie to mark the date of installation on your new battery.
- Multimeter to check the voltage of your new battery before installation.
- Heat shrink tubing. If you don't already have some, it can be purchased cheaply online and will improve all of your DIY projects!
- Heat gun for applying heat shrink tubing.

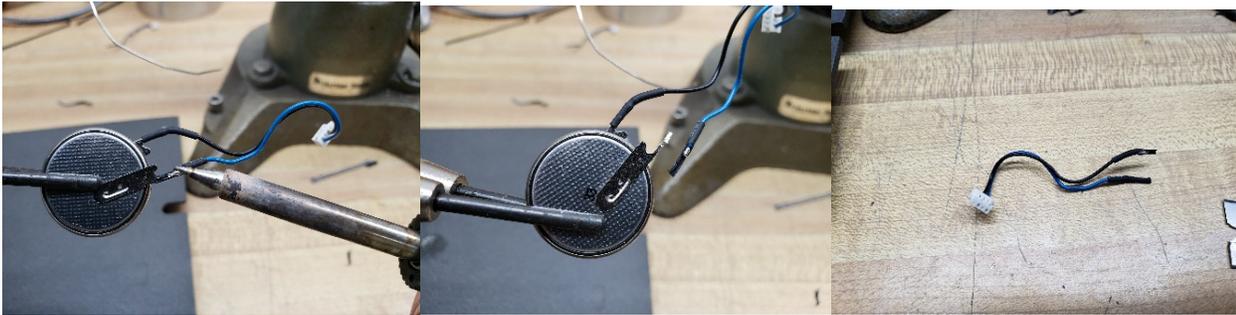
The Repair:

Follow these steps to replace the battery on your pigtail harness.

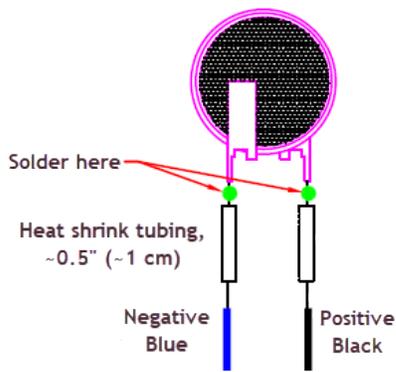
1. Start by marking the new battery with the current year, if you choose to do so. Test the battery voltage with the multimeter to make sure it works BEFORE you go through the effort of soldering; you should get 3V from the battery.
2. Gently cut the heat shrink tubing off of the old battery terminals, exposing the soldered joints between the wires and the solder tabs.



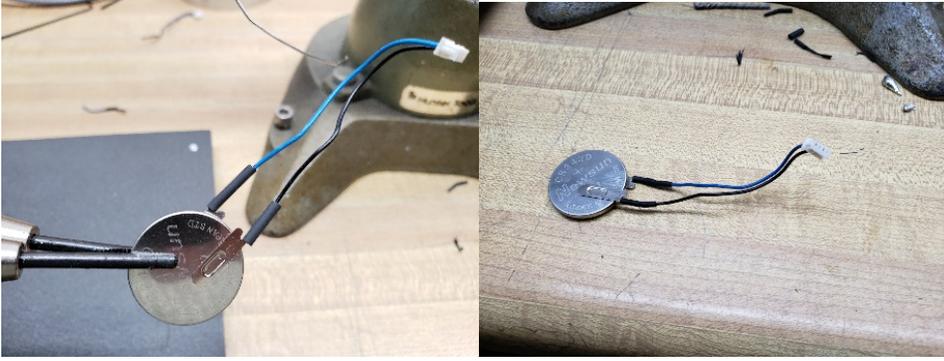
3. Use the soldering iron to quickly heat the soldered joints, and pull the wire away from the tab. This should be quick as to not burn the heat sensitive insulation on the wires.



4. If you have heat shrink tubing, now is the time to put it on the wires. Cut two pieces of tubing about $\frac{1}{2}$ " (~1 cm) long and slide each one onto the end of a wire until it is at the plastic connector.



6. After cooling, slide the heat shrink back down the wire and press it onto the tab. You can use the soldering iron to gently warm and shrink the tubing down on the connection, but a heat gun will work better.



The replacement is now complete, and you are ready to install the battery into your keypad.

If you plan to ship the battery or store it, do not use anti-static packaging material to avoid the possibility of discharging the battery.

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