Battery Replacement on the Mio C-230

Disclaimer: Perform the following procedure at your own risk. Opening your GPS case will certainly void your warrantee and you may damage it. I make no claim as to what success or performance increases you may experience. I only state that I have made these same battery changes on my own Mio C-230 and it worked fine, resulting in a dramatic increase in Uptime between recharges.

The Mio OEM C-220 Battery compared with a smaller OEM C-230 battery

Model No. CS-MIOC220L
Part No. E4MT081202B12 (Do a web search on this number or on “Mio C-220 battery”)
Lowest on-line cost found was somewhere between $20-$30 including shipping.

The standard OEM C-230 battery is 3.7 volts 850 mAh

The standard OEM C-220 battery is 3.7 volts 1200 mAh

mAh = (Milli ampere hour)
mAh is a term of measurement used in batteries for their energy storage capacity. It is a measure of how much current in milliamps can be delivered from a battery over the period of 1 hour.

A replacement battery is 3.7 volts and might deliver somewhere between 1200 and 1250 mAh. The C-220 and C-230 batteries are similar in dimensions except for the width. A replacement battery obtained from an on-line auction site was actually smaller than the OEM C-220 battery. This third party battery also worked fine.

Before opening up the GPS, COMPLETELY POWER OFF the GPS with the ON-OFF switch on the rear of the unit and remove any SD cards.

Note the "On-Off" switch button. The part you see through the hole is a loose piece that will probably fall off once the case is opened. It has a small square hole in the bottom that fits over a switch button on the main circuit board. To help you reassemble this piece, you may want to put a small mark on it before beginning disassembly, so you can identify its orientation in its "normal" location.

Remove two rubber covers and two screws from bottom rear of case. These are very small Phillips screws, but a flathead screwdriver from an eye glasses repair kit seems to do the job fine. Put these small items aside where they will not be lost.

Pry open the GPS case starting at the bottom and move along and up the sides. The top of the case is the tightest area and should be unsnapped last

As soon as the case is open, note that the battery cable has a small piece of black tape over the end, apparently to help hold it to the circuit board connector. Peel back one half of this tape to see where the two pieces join. When you pull back the black tape, you should note that the metal contacts of the connector are facing up and the red wire is on the left, facing from the battery. You will need to install the new battery cable in this same way. Disconnect the battery cable from the GPS circuit board. This will help prevent any short circuits, should you touch any sensitive areas. It may also help to disconnect the speaker wires. If so, make a note of which way the wires went into the speaker connector. Also, if you are going to install an external speaker jack, as is described at this URL:

http://c230.wordpress.com/2008/01/06/adding-a-headphone-jack-to-mio-c230/

this would be an opportune time to do both procedures at once.

Note which corner of the battery the main board connector is closest to. When you install the replacement battery, you will want to orient the battery so that the corner which the connector cable comes from takes the shortest path to the main board connector. Leaving enough slack will ensure that things are not pulled too tight. Note that this may require orienting the replacement battery label "upside down."

The original battery is attached to the GPS circuit board with double-faced tape that has quite a strong bond. DO NOT ATTEMPT TO FORCE the battery directly off the main circuit board, as too much force may crack or break it. Hold down the board and Slowly PRY one edge of the battery away from the board by applying pressure between the board and the battery. Heating the battery between the board and battery with a Hot air dryer may help. Be careful to not overheat the parts..

On the back cover of the GPS, the area that encloses the battery is outlined with raised projections. The standard C-230 smaller 850 mAh battery does not fill up this entire area, but the 1200 C-220 battery does.

In the middle of the cover where it sits over the battery area, there should be a piece of foam padding. Rather than re-sticking the new battery to the original main circuit board area, I recommend attaching it to this foam padding. That way, the next time you replace the battery; it won't be as difficult to remove the old one. Also, you will be better able to align the battery placement inside the cover area so the case will reassemble properly.

Place a piece of thin piece of double faced tape on the foam pad, (or remove the foam pad and use a thicker piece) and attach the battery directly to it. Remember to align the battery so that the corner where the cable comes from is as close to the main board connector as possible.

If you are not reusing it, remove the original piece of double faced tape, so it does not double-stick the battery in place. Reinsert the battery cable, shiny pins showing, into the connector jack. Reinsert the On-Off switch adapter piece with the square hole over the switch. Assemble the cover onto the GPS main body, being careful to align everything so that no parts or cables are pinched and that everything fits together. Snap the top together, and work your way down the sides toward the bottom.

Do not reinsert the corner screws until you are sure everything works. Turn on the On-Off switch and after a few seconds, the GPS should begin to boot up. Try out a few things and if they seem to work, turn the unit back off and finish the screw and rubber plug assembly. If this is a brand new battery, you should make sure it is fully charged before running any lengthy tests. Good Luck.