

From the Design Doing blog at brianwitlin.com: <http://brianwitlin.com/post/24237279637/turn-an-old-brick-phone-into-a-bluetooth-headset-for>

Turn an Old Brick Phone into a Bluetooth Headset for Your iPhone



Over the years, I have done a number of fun projects as a designer. This one, in particular, I think is a lot of fun and it is fairly doable with a little patience. I posted this several years ago on my old Grooveking.com blog (RIP). I thought I would bring it back for good times with some minor updates.

"The Classic Brick Phone"

Okay, I think I got your attention! Remember the classic brick telephone? Some of you may remember it as the "Zach Morris phone" and others the awesome phone from the movie Wall Street with Michael Douglass as Gordon Gekko.



I remember it as one of the coolest phones to ever come out. Have you noticed that a lot has changed from 1983 since the first cell phones were released? Everything has gotten so small and jam packed with so many features. But some of us, even if we are a small few, find some nostalgia from the classic brick phone - even if it weighs a good 7 or 8 pounds. Nostalgia and technology, how can we marry the two? The classic design with current technology? The brick phone is analog, and will not work on today's networks that are primarily digital and GSM. How do we maintain all the style and personality from the old and take advantages of the features and technologies of the new? The answer is - make a brick phone into a Bluetooth headset. What? You get the advantages of your current tricked out phone, while having the ability to use the brick phone as a Bluetooth headset. Not only that, why not use the phone battery as additional power for your Bluetooth and it weighs so much you are sure to keep your conversations short! LOL

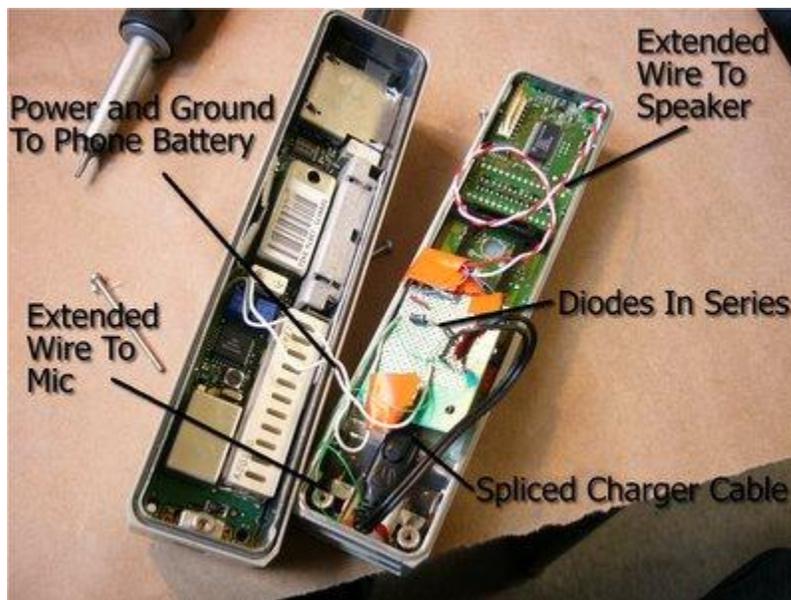
What You Need to Convert a Brick Phone into a Bluetooth Headset.

We are going to "Geek Out" a little here. To give you a little overview of what you will be doing, you will be taking an existing Bluetooth headset, wiring it up so it can receive charge from the existing brick phone battery (increases the talk time astronomically), and allowing the Bluetooth button to be controlled through the FCN button on the cell phone. I am by no means an electrical engineer and the way that I am presenting is a hack. I can tell you, however, that it works and it is extremely robust.



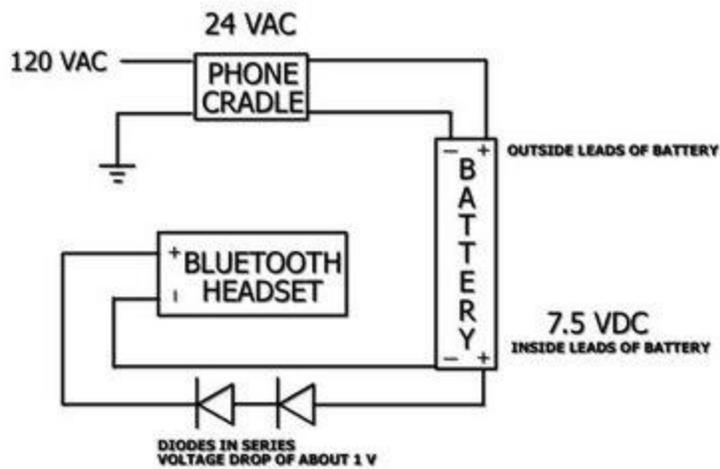
Well you don't need an electrical engineering degree to pull it off. Although I don't want to get into it super technical. I will do my best to get you far along. To start off, you need to purchase a brick phone (easily found on eBay), a Bluetooth headset (preferably the Motorola HS820 for easy modification) and security torx set. From my understanding, back in the day, you would need to have a special license to own a security torx set. This way, people could not easily open up these phones. For the Motorola phone that I opened up, they even added some extra trickery. You actually spin the torx to the left to tighten and to the right to loosen (backwards of normal). Make sure you are aware each screw you take out and where it goes. I sometimes tape the removed screws to a piece of paper with a sketch to allow me to remember how to reassemble the device.

Next you will want to open the Bluetooth headset. Be very careful when doing this. What you need to do once you have opened up your Bluetooth headset is find the microphone and the speaker and extend the wires connected to both. This way you can use the mic and speaker of the Bluetooth (which probably will work better on than the vintage mic and speaker). Finally, plug in the Bluetooth headset into the AC adapter. Cut the cord about four inches from the Bluetooth. This will allow for easier power supply later. This can be seen in the diagram below.

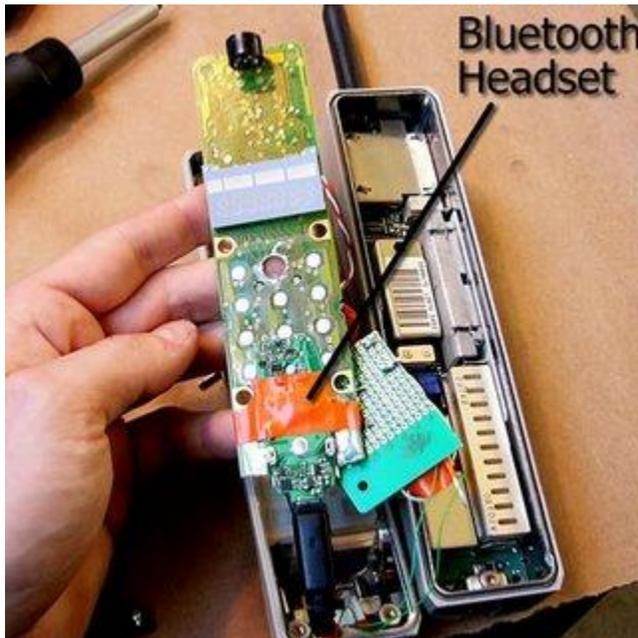


Electronics May Be Easier Than They Appear!

My goal here is to not scare away people who do not know electronics. The next diagram is a simple schematic of how to wire the device to work. For my phone, I placed two diodes in series to prevent the Bluetooth battery from draining into the phone battery. I placed these diodes on a prototyping circuit board and soldered them in place. I connected the Bluetooth cable attached to the Bluetooth headset and wired it to the power coming from the diodes. To power the diodes, I connected the a wire from the power and ground leads of the shell of the brick phone.



Next I cut away at the existing keypad circuit board to allow the Bluetooth to fit flush. The strategy here is to line up the Bluetooth talk button with the location of the FCN (function) button (which was cut away). This way when you close up the whole phone, you can control your Bluetooth headset from pressing the FCN button. This can be seen in the next photo.



After you have mounted the Bluetooth headset on the circuitboard, mount the mic and speaker where you want them (typically near where the previous mic and speaker were located). You can secure the it the keypad more solidly by screwing the keypad circuitboard (with Bluetooth headset attached) back to the front face of the phone.



You probably have noticed by now from the photos that you will need to remove the rear circuit board in order to fit your circuit in the casing. Once you do this, you can close up the phone and it will begin charging once the battery is placed on. But before you close it up, you may want to consider placing a switch somewhere on your phone to prevent the Bluetooth from charging all the time. The Bluetooth headset will not function while it is charging. The simple solution to this is to use a piece of electrical tape to cover one of the leads of the cell phone battery when you want to use the Bluetooth. Remember, I told you my solution was a hack.



Home Stretch to "Bad-Ass-dom"

Okay, now you are almost done. It is time to charge your phone. Notice the slight blue light on the 8 button. This light will go on when you attach the cell phone battery to the back of the phone. When you place the phone in the charger, you are now charging both batteries (the cell phone and the Bluetooth). After about 5 hours, turn off charge mode (by either flipping a switch or by covering up one of the leads on the cell phone battery) and press and hold down the FCN button on your phone.



You should now be able to use the brick phone as a Bluetooth headset and look super awesome! Just pair it with your preferred smart phone with bluetooth and you are ready to buy low and sell high.