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Model 500 Mod

Today at Goodwill, I found this:



(sorry for poor image quality, i only had my cell phone available today)

It is a magnificent Model 500 telephone [actually, likely an ITT/Cortelco or Stromberg-Carlson/Comdial], with only very minor damage, for a princely 3.99. This was a find, as I'd been wanting one of these for some time. What follows is what I did with it.

I am a rather heavy google voice user, and I was thrilled when google implemented calling through gmail, except for one thing. I use a desktop, which has only a token crap webcam, and not a decent microphone at all. Thus, I could rarely make use of a fantastic feature of being able to call without using my phone at all, and simply using a browser window in my regular work flow.

I toyed around with using a headset, but it just didn't do it for me.

So now that I had this phone, I cracked it open to find the best way of modding it up into a handset for use in google talk and google voice.



The insides of this thing are possible more beautiful then the exterior. Fantastic design, all around. I get all giddy about great mechanical stuff like this, considering most brilliance we see nowadays is in software and doesn't really carry the same feel as great designs like this.



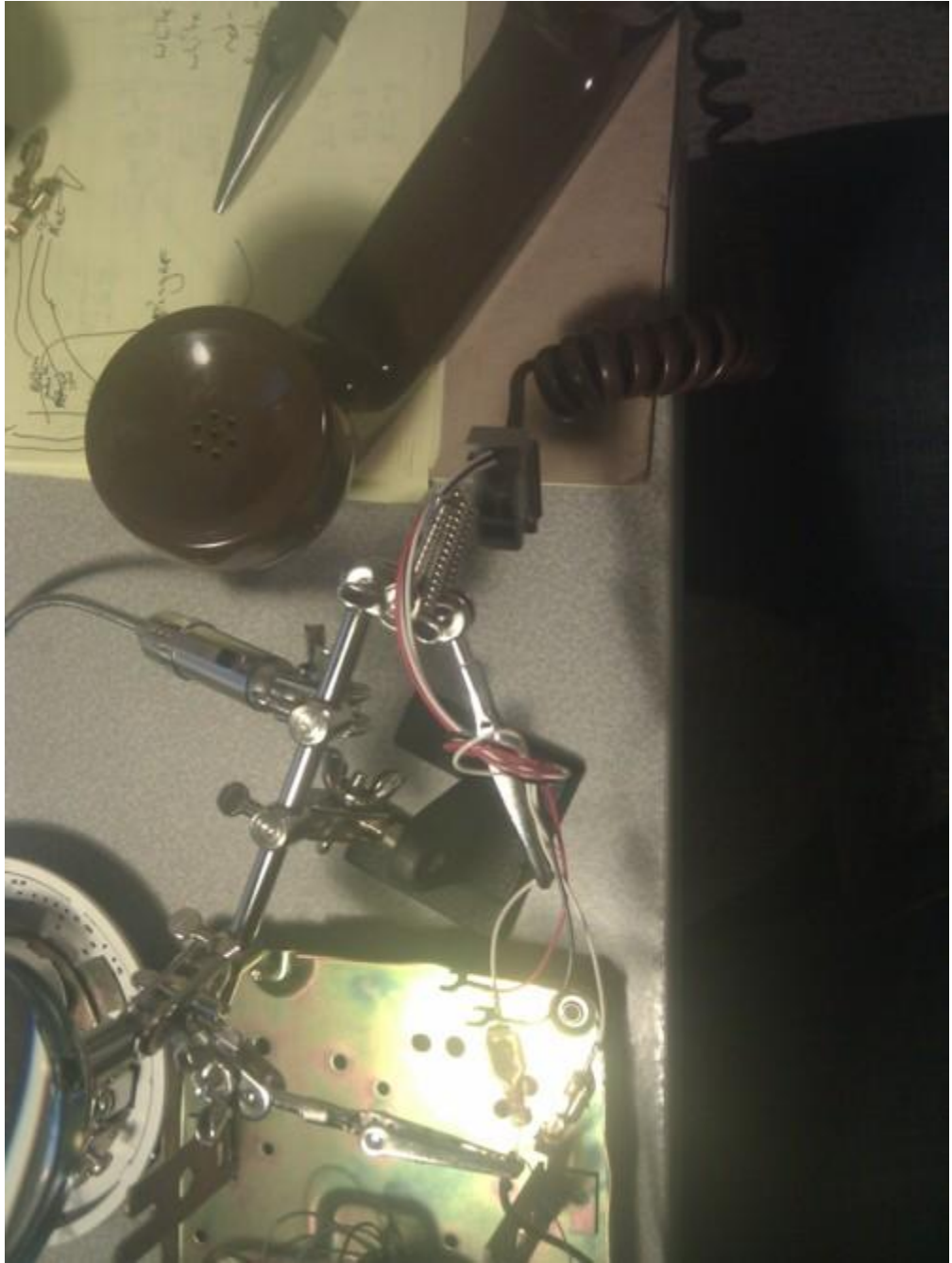
I pulled out the little tiny circuit board to get an idea of what was going on. It was pretty clear without even getting that deep into research that for now I was going to just have to ignore most of this stuff and bypass it. I mapped the circuits, and then split off the leads that led to the in and out jacks.

Next, I dug out 3 or 4 pairs of old headphones to cut up. My original goal was to work in a changeable jack system using the original phone jack, but later I realized I was going to need some RJ14 or other higher contact cables than standard phone cable. Instead I settled on the basic 2 jack computer headset system, of one 3.5 mm for the speaker and one for the mic.



The two whites went to the speaker, while the red was the mic and the black the mic ground. If you attempt this yourself, don't take my word for it, check your handset out first and see what goes where. This isn't high voltage but that doesn't mean you should be careless.

I didn't solder anything together yet, as I'm planning on making further changes. I just wrapped the leads to brackets that were in the garage that happened to fit perfectly onto the u hooks already on the phones leads.



I recommend taking your time here and testing it several times. If you use a computer with multiple jacks or sound cards, make sure the right one is on and play something through it to check your connection for the speaker, and then open a sound recorder or something with a mic meter to test out your mic connection. I'm using a third hand here to give things a bit more stability while plugging and unplugging.



I took a lighter to the ends of the wires for a brief second to melt away the shielding stuff that is sometimes wrapped around the headphone wiring, as it makes it very difficult to get a good connection. I'll admit, I took the lazy route on that part.



Everything was working, so I started to piece it back together for now. I taped down the leads, to keep them from touching each other accidentally while putting it back together.





All set!



All done, for now.

Now my goals are too:

A. Find a way (if possible) to set up the hook thing (for hanging up) to kill the connection of the speaker and microphone, so that I do not have to deactivate it on the computer manually, or unplug it manually.

B. Redo the cabling to look better and fit in better. It be nice to set it up with the original jack on the back again, and use actual modified phone cable with the necessary 3.5 mm jacks spliced on the ends, but I will need 4 contact phone line. This would be prime because then I could have multiple options and be able to change the line on the back to connect it to my cell phones single jack for mic and headphone, or perhaps a 2.5 mm for other phones. Several options is good!

C. I am looking into a few options of using an arduino and some scripts to set up decoding on the dial mechanism, which would allow me to dial numbers to launch specific activities.

D. Build more of 'em!