Convert SMD Chips to DIP (Breadboard Friendly)

by **ASCAS** on December 25, 2013

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Hello There! I'm Angelo, I was 10 when I first published my 1st ible, and started my hobby at a young age of 4. Unlike most people my friends and I have a hobby of making awesome project :D Electronics & programming is my line of specialty, that's why I compete in the annual "National Robotics Competition". Last month I manage to earn my first "Championship Title" in the NRC prelims. Not to forget that I love HiFi audio setups, just like my dad. He has his collection of B&W speakers while I design my own from scratch MDF wood. Everytime I finish a speaker, we compare it to his HiFi setup and do a blind test. Astonishingly, after putting up a blindfold my dad was not able to determine whether it was his B&W setup or my DIY Bookshelf Speakers. I love sports, specially wake boarding and basketball :D Anyways, I plan to become an engineer someday, innovating and build projects that would build a brighter future.

Intro: Convert SMD Chips to DIP (Breadboard Friendly)

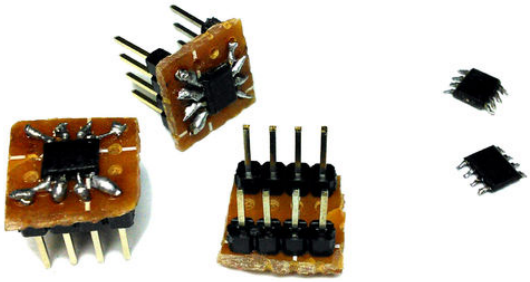
Ever encountered problems in prototyping SMD circuits? Here's a quick solution to your problem.

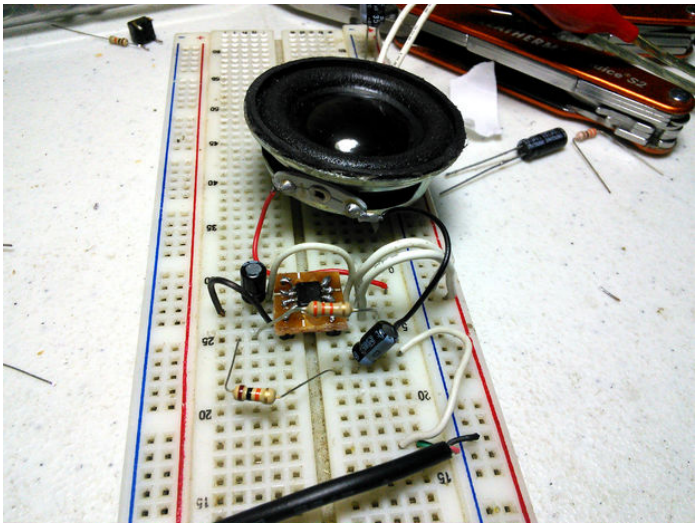
What did you use the SMD chips for?

Oh that is my "High Effeciency Amplifier" prototype. I'm going to use that for the much awaited "DIY Supercharged Bluetooth Speaker (v2.0)" guide. It took me hours to decide whether I should skip the prototyping stage and go directly to designing the PCB Layout.

SMD chips are the key to making compact devices, but prototyping SMD based circuits could sometimes be a pain in the a$$, simply because they have a different pin distance compared to the standard DIP package (which has a 1mm gap).

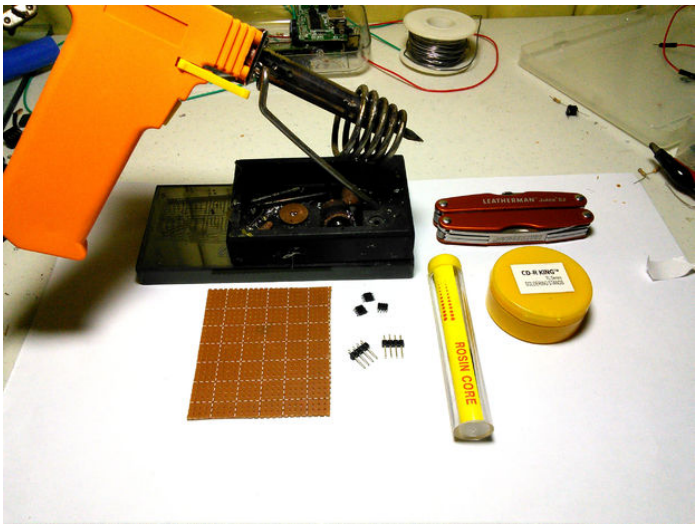
Amplifier Test Using The Converted Chip:





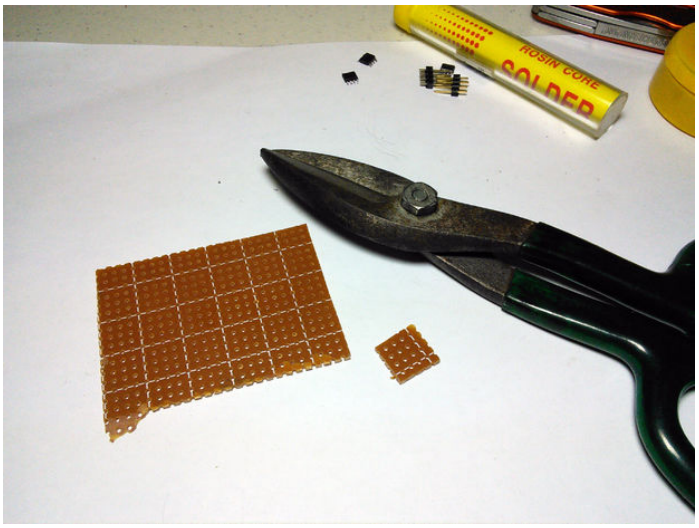
Step 1: Parts & Materials

- Your Desired SMD Chip Model (8-pin)
- Leatherman Multitool
- 30W Soldering Iron
- Soldering Paste
- Soldering Lead
- Male Headers
- Perf Board



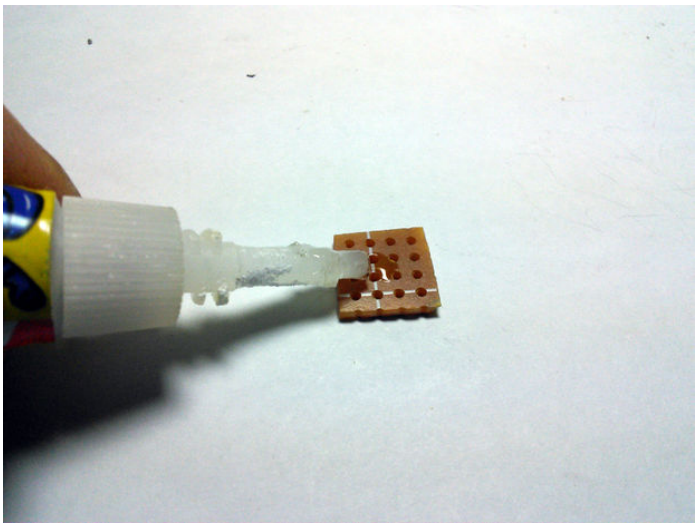
Step 2: Cutting The Perf Board

Simply cut a fraction of your perf board. Mine is 4x4 (hole count) since I am dealing with a 8 pin SMD chip.



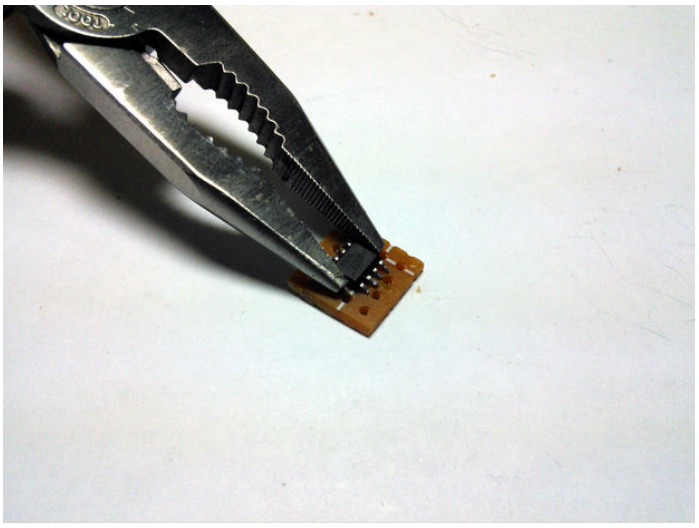
Step 3: Temporary Mount

Drop a small amount of superglue, to hold the chip in place.



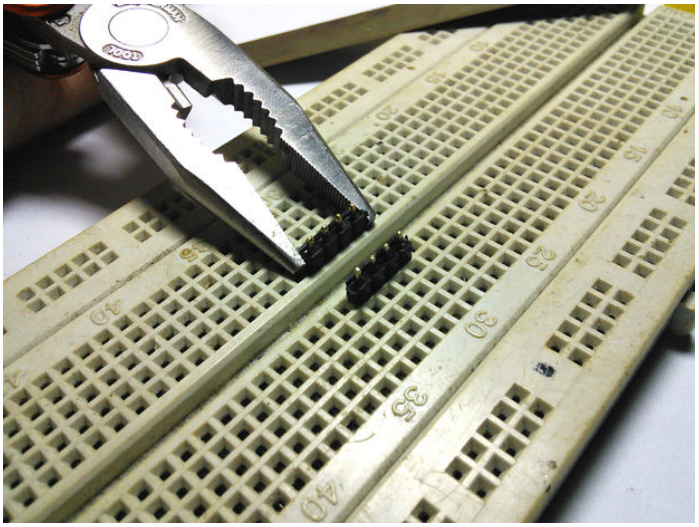
Step 4: Carefully Mount

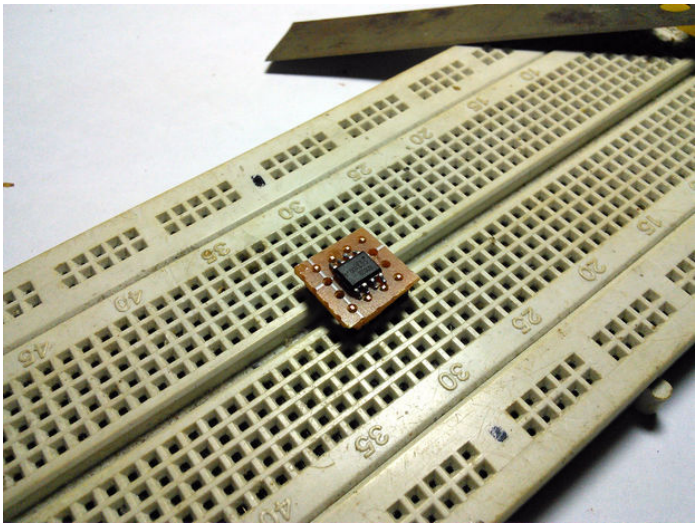
Use your leatherman as a tool for for mounting the chip. Be sure to mount it in the exact center.



Step 5: Breadboard As Pin Holder

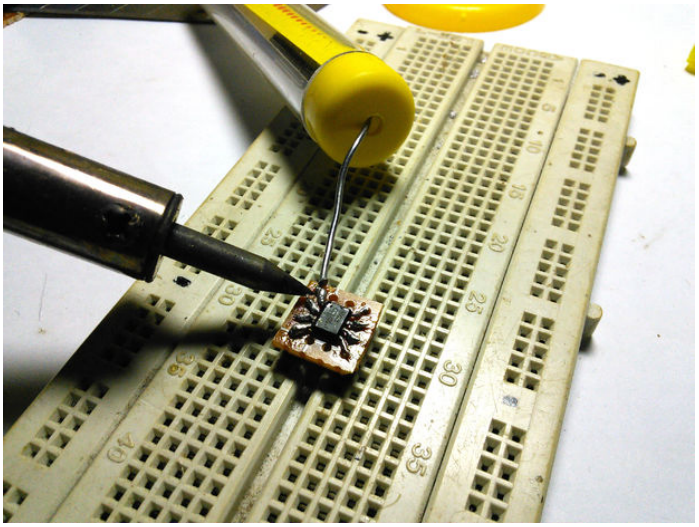
The male headers tend to wobble when soldering. Use your breadboard to hold them in place while soldering.





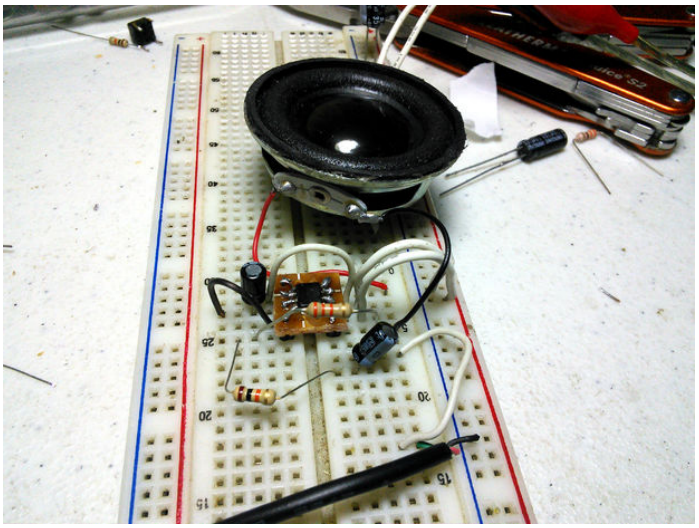
Step 6: Solder The Chip

Use a 30W soldering iron to prevent the SMD chip from getting damaged from heat.



Step 7: You're Done! Let's start prototyping!

After hours of frustration, I can now start prototyping my amplifier circuit.



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samuraijack says:
what smd chip are you using?

Dec 26, 2013. 11:32 AM **REPLY**