



Small Amp

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TOOLS:

- [Dremel tool with cutting, grinding, or routing bits \(1\)](#)
- [Hot Glue gun & hot glue \(1\)](#)
- [Lighter, long-handled \(1\)](#)
- [Needle Nose Pliers \(1\)](#)
- [Soldering iron \(1\)](#)
- [Super glue \(1\)](#)
- [Wire cutter/stripper \(1\)](#)
- [X-Acto knife \(1\)](#)

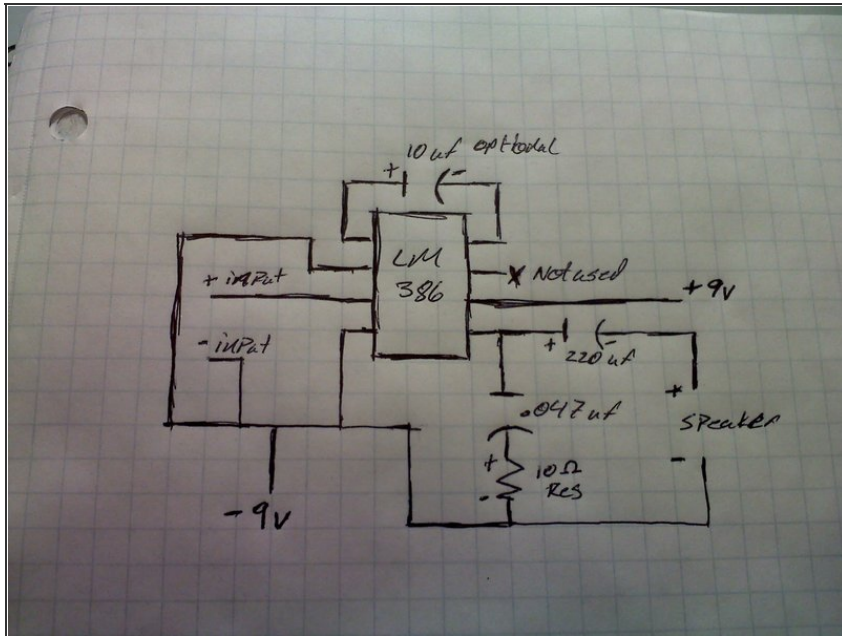
PARTS:

- [LM386 audio op-amp \(1\)](#)
- [Wire \(1\)](#)
- [9 Volt alkaline battery \(1\)](#)
- [9 volt battery snap connector \(1\)](#)
- [220uF/35V capacitor \(1\)](#)
- [.047uF 100v capacitor \(1\)](#)
- [10 Ohm, 1/8 Watt resistor \(1\)](#)
- [Mono 1/4" Phone Jack \(female\) \(1\)](#)

SUMMARY

This was one of the first circuits that got me into making. It's very simple and can be used to amplify audio output (mp3 player, computer, etc.) as well as electric guitars.

Step 1 — Small Amp

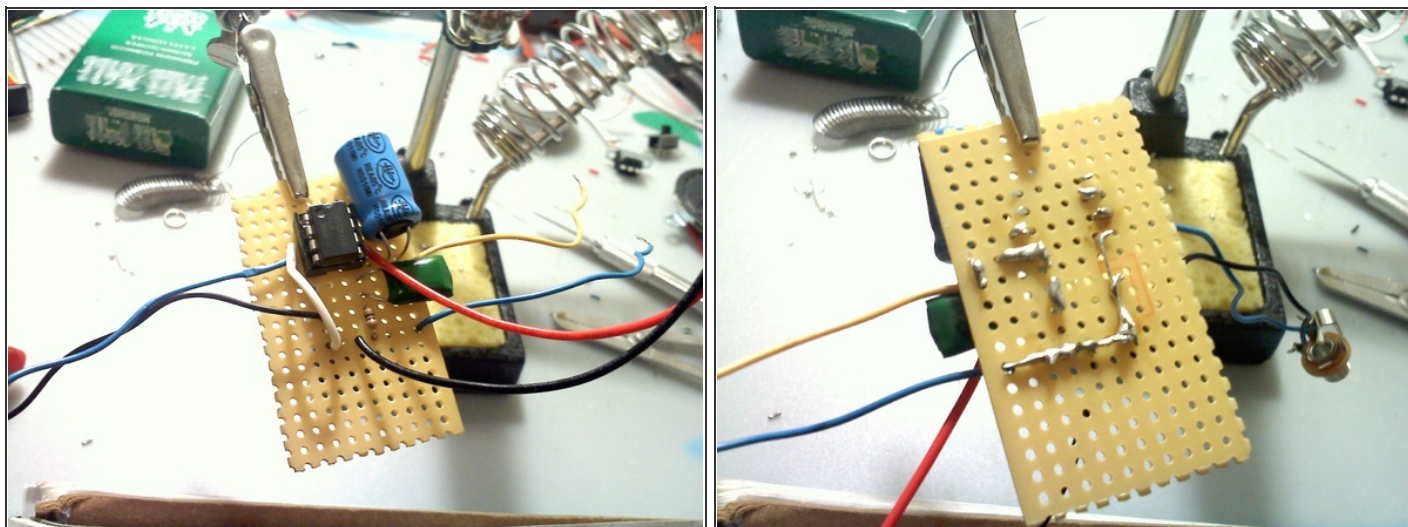


- Here is a sketch of the circuit I use. It's not drawn in any traditional sense. But it helped me visualize what I was trying to accomplish.
- The 10uf cap marked "optional" is best left out unless you're looking to use this as a guitar amp.

Step 2

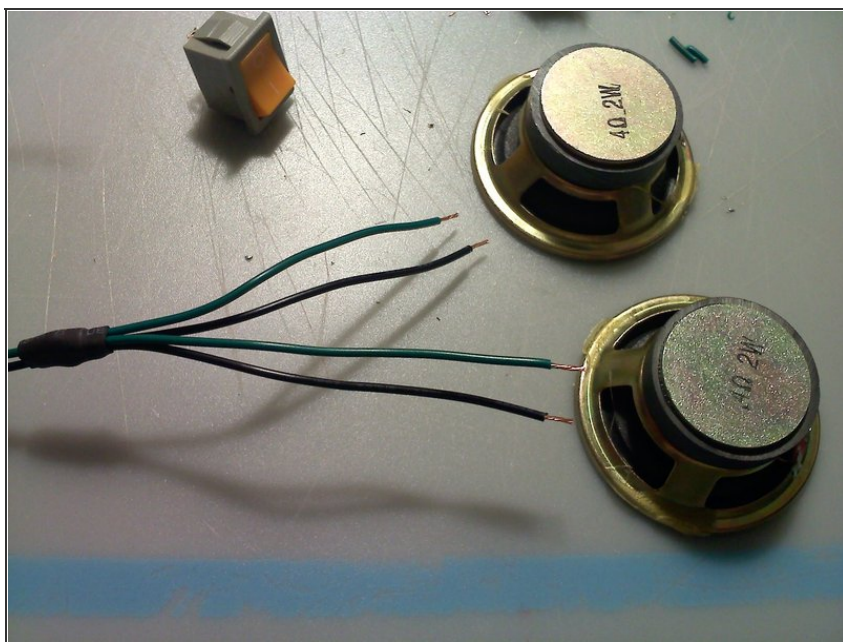
- Lay out the circuit on the perfboard.
- Make a rough guess at how much board you need.
- Score your board several times with the X-acto knife and break off what you need.

Step 3



- With everything in place, bend the leads of the components to accommodate soldering.
- Leave the LM386 out of the socket so as not to burn it up with heat (personal experience).
- Solder away!

Step 4



- Add a power source (9 volt battery)
- Audio Jack
- and speaker(s)

Step 5

- Test circuit.
- Add any last-minute items (on/off switch, LEDs, etc.).

Step 6



- Build an encasement.
- I am not promoting smoking,
- But this is a very easy and compact project box.

Step 7



- Assemble with hot glue.

This document was last generated on 2012-11-03 03:44:21 AM.