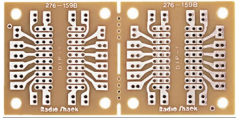




# Noisy Cricket Mark II – Building it with a Radio Shack Board

A LM386-based ½ watt guitar amplifier. Use an LM386 or JRC386 chip. Simple tone control and “grit” mod. You can power it at up to 12 volts, but it really sounds best at 9 volts. Plug into a standard 8 ohm guitar cab. This page shows how to build one using a commonly available general purpose IC board from Radio Shack.

## The Circuit Board



Radio Shack sells a nice “Dual General-Purpose IC PC Board” which you can use to make all sorts of circuits. Catalog # is 276-159B. Comes as a pair, simply snap it off in the middle and end up with two boards. They are about two and a half bucks and sturdy and easy to use.

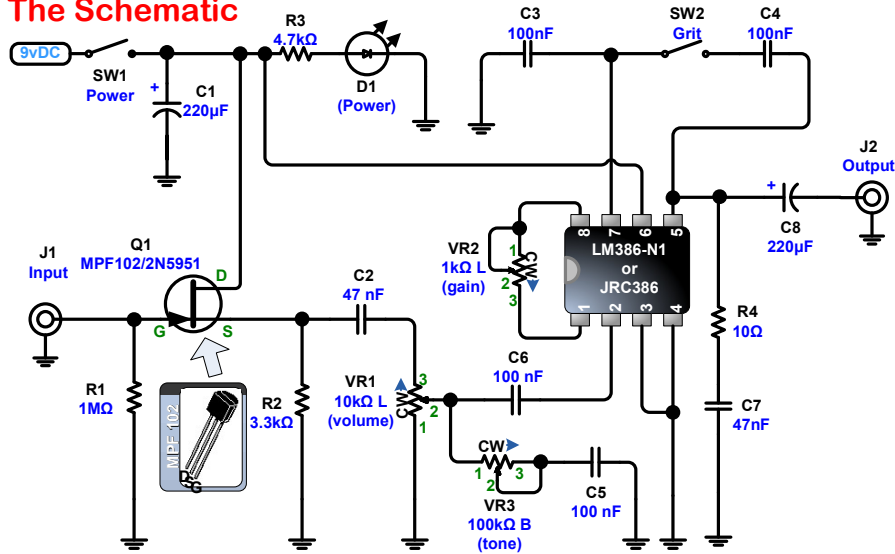
More info:  
<http://www.radioshack.com/product/index.jsp?productId=2103799&cp>

## The Parts

You can get almost all these parts at Radio Shack. All should be available also at [mouser.com](http://mouser.com) and [smallbearelec.com](http://smallbearelec.com)

Resistors: ¼ or ½ watt	Electrolytic Capacitors	Semiconductors	Hardware
<ul style="list-style-type: none"> <li>R1 1 megaohm</li> <li>R2 3.3k ohms</li> <li>R3 4.7k ohms</li> <li>R4 10 ohms</li> </ul>	<ul style="list-style-type: none"> <li>C1, C8 220µf</li> </ul>	<ul style="list-style-type: none"> <li>U1 LM386</li> <li>Q1 MPF102</li> <li>D1 5mm LED</li> </ul>	<ul style="list-style-type: none"> <li>S1,S2 SPST Switch</li> <li>J1, J2 ¼" Mono Jack</li> <li>9v Battery Clip</li> <li>2.1mm DC jack</li> </ul>
<ul style="list-style-type: none"> <li>VR1 – 10K Linear (B10K)</li> <li>VR2 – 100K Linear (B100K)</li> <li>VR3 – 1K Linear (B1K)</li> </ul>	<ul style="list-style-type: none"> <li>C2, C7 47nf</li> <li>C3-C6 100nf</li> </ul>		

## The Schematic



## Notes and Mods

**More Beta Bass:** You can replace C2 with a 100nf part for improved bass. Use a 1uf part to make the NC into a bass amp (thanks Brett!)

**LM386 and Voltage:** The LM386 comes in various versions: N1, N3, N4, etc. The higher the N rating, the more voltage you can pump into it for more output power. If you use the plain LM386 or the LM386 N1, keep to 12 volts or under.

**DC Jack:** You can add the 2.1mm DC jack to save burning through batteries. Use a plastic jack if you are using a metal enclosure to avoid shorting out!

**Grit LED:** You can add an LED to show the on/off status of the grit switch—change the grit SPST to a DPDT and wire the new LED's + to the switch to 9v and the new LED's - to ground.

## Enclosures

The sky is the limit in terms of wacky ways to box up your Noisy Cricket. You can pick up an inexpensive box at Radio Shack like one of these:



Project Enclosure (6x4x2")  
 Cat # 270-1806  
 \$4.99

You can also use other interesting things like:

- Old lunch box
- Wooden box
- Beer can
- Electrical junction box
- Cigar box
- Pencil case
- Just about anything!

## Speakers

The Noisy Cricket sounds best when plugged into a guitar speaker cabinet. 4-16 ohms should be fine but it sounds sweetest at 8 ohms. If you don't have a cab, you can try just about any speaker—smaller ones will be loud enough but probably won't sound as good.



## Parts Layout and Wiring Guide

