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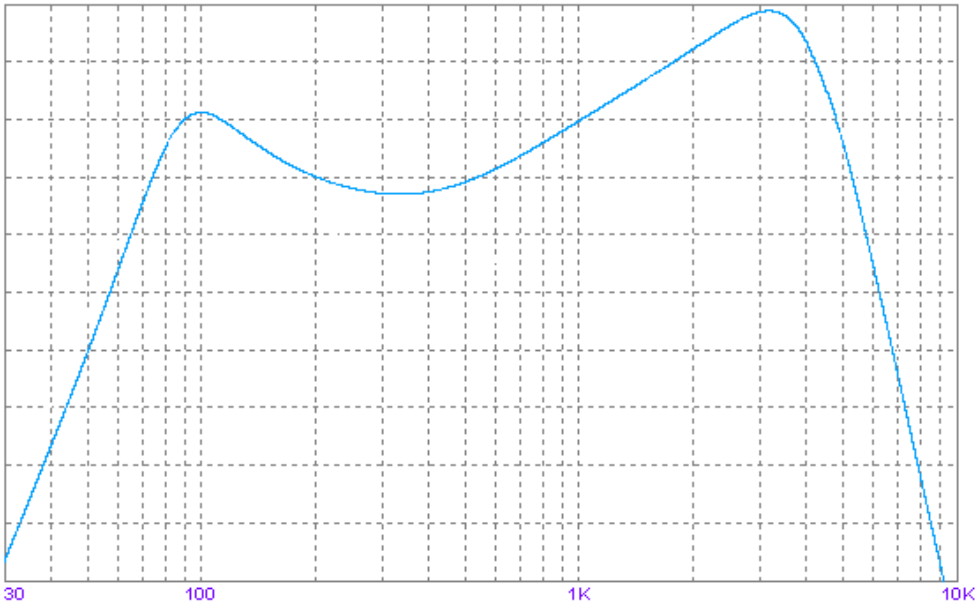
Marshall Cab Sim

If I remember correctly this circuit is taken from original Marshall amp which has speaker simulator built in and it should provide frequency response similar to Marshall 4×12″ cab. It can be handy for direct amp-less recording or used in conjunction with Line Out from amp. Below is frequency plot of this circuit.



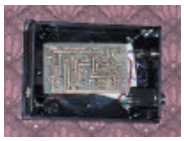
Files

Click here to download schematic and PCB layout.

Pictorial

Click on a photo to see more details

[View with PicLens]



Comments

20 Responses to “Marshall Cab Sim”

1.  *Robert* says:
   29/08/2012 at 07:43

   Any sound or demo?

   Reply

2.  *Franko* says:
   21/07/2012 at 07:40

   hi on the pcb what is the ov is that the ground for the 9v

   Reply

3.  *Ryan* says:
   04/03/2012 at 19:22

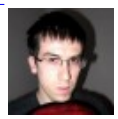
   What is the total cost to build this, and does anyone have a list of all parts so I know what to get because I am new at this

   Reply

4.  *Graham* says:
   15/01/2012 at 19:43

   I cant find a 2 nf capacitor anywhere. Could someone post a link please.

   Reply

   -  *Bancika* says:
     16/01/2012 at 00:33

2.2n is fine, I think I used that

Reply

5. *Emilio* says:
17/10/2011 at 12:02

Great pedal! Did you ever tried it also with acoustic guitar? If so, how is the sound?

Reply

6. *Rattler* says:
14/10/2011 at 21:01

Hey man, this looks really sweet and I'm looking to build it but I can't figure out from either of the diagrams where the LED goes in respect to the PCB… it's probably just me being dumb but I can't see it…

Reply

-  *Bancika* says:
14/10/2011 at 23:02

it's not on the pcb at all. I just connected it to +9V through a resistor. There's no bypass so it's always on.
Cheers

Reply

  - *Rattler* says:
15/10/2011 at 11:32

OH right, cheers man

Reply

7. *Edson Souza Lima* says:
15/09/2011 at 06:50

Is the output sound clean? or with distortion?

Tks

Reply

-  *Bancika* says:
15/09/2011 at 09:42

It's clean. This simulates only frequency response of a marshall 4×12. You'd need a bit more to simulate cone distortion.
Cheers

Reply

8. *Robocell* says:
30/06/2011 at 13:26

I have seen this circuit on another site and on it, there's a clip

Reply

9. *Simen* says:
08/06/2011 at 20:07

Hi!
I want to build one of these, but I still lack some knowledge when it comes to op-amps.
Most pedals out there use negative tip 9V power supplies, so I experimented in a Circuit simulator with -9V, and my first thought was to just flip all polarities, what goes to Op-Amp In- moved to Op-Amp In+ etc. but that didn't work as expected. So I tried flipping the Op-Amp inputs one pair at a time, ending up at the exact same configuration as in the schematic, only difference actually being the power supply being -9V instead of +9V (and the output signal having a negative DC offset instead of positive). Is this correct? Is there anything else I must consider?

Short version – Do I need to make any changes to the design/layout to use -9V instead of +9V?

Reply

-  *Bancika* says:
08/06/2011 at 20:10

I'm an op-amp noob myself, so can't help much. I just built the +9V version according to the schem.
Cheers

Reply

10. *Tom* says:
03/03/2011 at 18:52

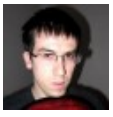
How does this speaker simulator sound? Do you have any clips of it?

Reply

11. *Snowstorm* says:
20/06/2010 at 15:19

Hello!
I'm interested in this DIY cab simulator. But I can't see any visible schematic, circuit or component list. Could you help me?
Thank you for your collaboration.

Reply

-  *Bancika* says:
20/06/2010 at 16:08

Hi there, there is a schematic and layout in “Useful links” section of the article.
Cheers

Reply

12.  *Bancika* says:
25/03/2010 at 13:43

Capacitors in pF range are mica or ceramic, nF range are box film caps and uF range are electrolytics

Reply

13.  *claudito* says:
25/03/2010 at 11:36

Hi,
Concerning capacitors, witch ones are film, etc…

Thank you

Reply

14.  *vitor* says:
09/03/2010 at 05:08

so, can you list all the components needed?

Reply

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  The idea behind this site is to share my experience with Do It Yourself approach to guitars, amplifiers and pedals. Whether you want to save a couple of bucks by performing a mod or upgrade yourself instead of paying a tech, or want to build your own piece of gear from scratch, I'm sure you will find something interesting here. Also, this is the home of DIY Layout Creator, a free piece of software for drawing circuit layouts and schematics, written with DIY enthusiasts in mind.

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