

# DIY iPod accessories

## 1.5V iPod Microphone

Works with: 3rd & 4th Generation and the original color iPods

Does not work with: 1st, 2nd & 5th Generation, nano, mini or shuffle iPods

### Introduction

This microphone runs off a single AAA battery and turns your iPod into a convenient recording device. In order to use the mic you will need to install Linux on your iPod. *iPodLinux* turns the iPod into a dual booting machine, allowing you to run either the iPod's original operating system or the Linux OS. *iPodLinux* also enables the iPod's built-in recording hardware, permitting you to record at sample rates from 8 to 96 kHz. The mic provides relatively good response in a very small package, it is particularly suited to voice recordings. Note: all recordings will be in mono.

### Parts

3.5 mm audio connector

electret microphone insert

NPN Transistor: BC547

Capacitors: 10uF, 220nF, 33nF

Resistors: 2 x 75K, 4K7, 150ohm, 75ohm

Variable Resistor: 1K

Simple Switch (SPST)

1 x AAA battery

2 x AAA battery holder

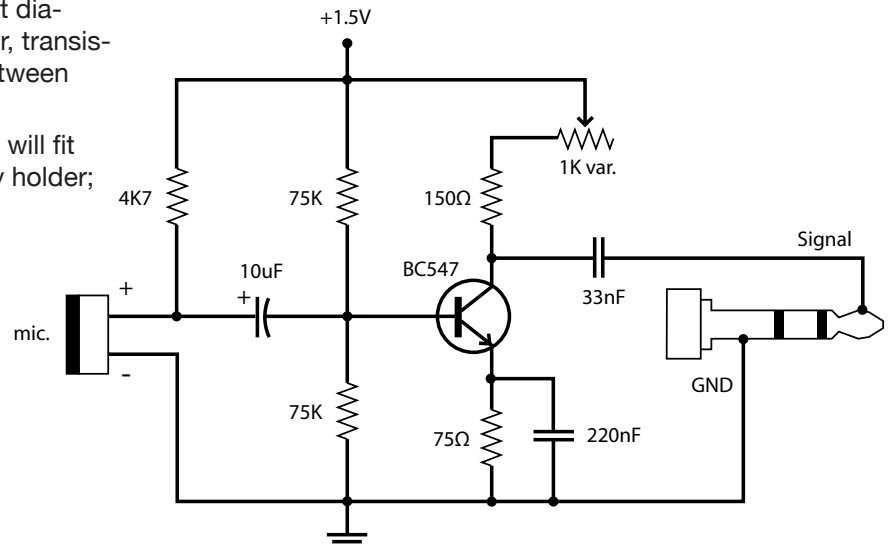
- I fitted my mic into a AAA battery box but it was quite a squeeze; you may be better off using a AA box. If you get a battery holder with a built in switch then you won't need to add your own.



### Construction

Wire up the mic components to match the circuit diagram, taking care to orientate the 10uF capacitor, transistor, and mic insert as shown. Wire the switch between the battery and the circuit's +1.5V supply line.

With a bit of effort and some planning the circuit will fit into the spare battery space in a 2 x AAA battery holder; alternatively use a AA box for extra room.



Before using the mic you will need to install *iPodLinux* onto your iPod; this is a very simple procedure, it shouldn't affect your iPod's original operation, and it's free! The *iPodLinux* project consists of two main components, the Linux (*uClinux*) kernel and a user interface called *podzilla*. These components are currently packaged in an easy to use installation program. If you're using a Mac you can get the iPodLinux installer here: [ipodlinuxinst1.sourceforge.net](http://ipodlinuxinst1.sourceforge.net), if you're running Windows or Linux you should go to this page: [www.ipodlinux.org/Installer\\_2](http://www.ipodlinux.org/Installer_2)

Once installed you can boot into Linux by holding down the 'rewind' key while the iPod is starting up.

### Use

Plug the mic into the iPod's headphone socket and boot into *iPodLinux*. Go to the 'Recording' menu, set the desired 'Sample Rate' and start the recording. Recorded files are saved in .wav format to the iPods 'Recordings' folder.

## **Warning!**

Scott Mitchell, hereafter referred to as 'the author', is an amateur practitioner in the field being presented with no formal training or professional experience in electrical engineering, iPod service and repair, or any associated disciplines.

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