

Re: pass through headphone jack help needed

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Source: <http://sci.tech-archive.net/Archive/sci.electronics.repair/2009-02/msg00735.html>

- *From:* dd5240@xxxxxxxxxx
 - *Date:* Fri, 27 Feb 2009 07:14:00 -0800 (PST)
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On Feb 27, 8:54 am, dd5...@xxxxxxxxxx wrote:

On Feb 27, 8:49 am, dd5...@xxxxxxxxxx wrote:

On Feb 27, 5:06 am, Dave W <davew...@xxxxxxxxxxxx> wrote:

On 26 Feb, 00:25, dd5...@xxxxxxxxxx wrote:

I have a Dell Inspiron E1405 and the headphone jack was broken off the motherboard. I either need to get a replacement jack or figure out what solder points to jump in order to get the speakers to work. Here is a picture of the motherboard and the solder points.

http://i35.photobucket.com/albums/d186/derek5240/dell_headphone002_re...

Does anyone know what solder points to connect in order to get the speakers to work on the computer. Or does anyone know where to get a replacement jack?

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Thanks!

D

Help is here! I have just repaired an HP Pavilion N5412 laptop with an identical socket that had been smashed. The audio to the socket is separate to the speakers. Your pin 2 goes to the plug's ring, pin 5 goes to the tip, and ground pin 7 is common. Pin 3 makes contact with pin 5 when the plug is absent. Pins 1 and 4 are normally closed, but are open when the plug is inserted. Pin 4 goes to a logic gate pulled up to 5V via 100K, and mutes the speakers when the plug is inserted. There is a screening cover over the contacts, fixed by pins 6 and 8.

To make your speakers work, all you have to do is join pin 4 to ground.

Here in Surrey, UK, the only high street shop that has electronics components is Maplins. They have two types of 3mm stereo socket, different layouts but having only 5 pins – tip, ring, & common, plus 2 pins that make contact with the tip and ring pins when the plug is absent. They are obviously intended for circuits that feed headphones by breaking the speaker feeds, and don't fit your board.

In my case the socket was mounted on a separate board, so I used a piece of breadboard to mount the Maplin socket. As the tip and ring

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are fed via isolating capacitors to avoid putting DC on the 30 ohm headphones, I put 330 ohm resistors on the tip and ring pins to ground, to keep these pins at ground in the absence of a plug. I then connected a 6K8 resistor between one of the pins that make contact when the plug is absent, and the line to the logic gate. When the plug is absent the gate is pulled down via 6K8 and 330R, and when the plug is inserted the pull-down is disconnected, muting the speakers.

This worked, but gave trouble because audio peaks get to the muting logic and break up the speaker sound. To get round this I added a 0.1uF capacitor between the logic line and ground, to reduce the audio getting to the logic via the 6K8. However when powering up the computer, or inserting/removing the headphones, a very short squeak is produced. This is because the logic voltage rises slowly owing to the capacitor, and there is instability at the switching threshold. The capacitor value was a compromise between length of squeak and stopping speaker distortion.

My solution is obviously not as good as finding a proper socket.

Dave W

Wow... You are the man. Finding the proper socket seems like finding a needle in a haystack. I think I will connect pins 1 and 4 and be done with it. As long as i have some sound, that is what matters. If everything goes good i will paypal you. Just email me your paypal address and i will get it to you.

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thanks again.

D- Hide quoted text -

- Show quoted text -

So 1 and 4 need to be connected but you mention 3 and 5 also are connected when the plug is absent. Do I need to connect 3 and 5 or just 1 and 4?

thanks!- Hide quoted text -

- Show quoted text -

I hooked up pins 1 and 4 and I now have sound!

Dave W is the winner with the solution. Any "Fixit" websites want to grab my picture and the contents of this post feel free to do it.

Dave, send me your paypal and I will send you the \$2.

thanks again!

D

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