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Subject: Re: Socket Splitter Problem

Posted by [Keith Larson](#) on Thu, 22 Jul 2010 02:29:04 GMT

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This is because the volume control of your headset is probably a simple potentiometer with the (headset) drivers hanging from the wiper. As you move the wiper to the full volume position, the impedance of the drivers in parallel with the potentiometer is seen. If the wiper is at minimum volume, the impedance is only that of the potentiometer.

A more sophisticated way of doing this is to use an L-Pad for the volume control. In this case there are two wipers (two for each side, so there are four for stereo). As one wiper goes up, the other goes down keeping the impedance relatively constant. Or, at least that's how the theory goes. In reality the complex impedance of the driver gets involved.

As you may expect, L-Pads are rare in headphones as the optimal solution is to not have a volume control at all. Most of the time you find L-Pads in midrange and tweeter controls. The idea is the same, to keep the impedance relatively constant (IE an L-pad is better than a simple single potentiometer), because the changing impedance can result in some odd effects in the crossover.