
Subject: Battery Operated Preamps

Posted by [audioaudio90](#) on Fri, 26 Sep 2014 13:05:51 GMT

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Have you ever used battery operated preamplifiers? How did they compare to standard preamps? I hadn't even heard of preamps that ran on batteries until now.

Subject: Re: Battery Operated Preamps

Posted by [gofar99](#) on Sat, 27 Sep 2014 02:42:06 GMT

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Hi, Yes I have. However while some folks claim they are magical, I find them to be pretty much identical to ones with well thought out power supplies. The claims are mostly for quieter or if you use the term blacker background and better clarity. I keep a version of the IC based phono/tape preamp around that uses a pair of 9 volt batteries. Current drain is just under 10ma. It is handy to use as a test device. When compared side by side with the one just like it that uses an AC power supply I can not tell them apart. Both spec out at about -100dbv in MM/MI and -95dbv in LOMC/NAB. The noise spectrum is virtually identical. All that said....if battery powered gear is what you like, so be it I have no beef with it. Just not my thing.

Subject: Re: Battery Operated Preamps

Posted by [Wayne Parham](#) on Tue, 30 Sep 2014 15:24:52 GMT

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I'm with you, Bruce. The only benefit is the reduced noise, and any sufficiently filtered supply is equally low noise. Once you get the PS artifacts under the noise floor, you're golden.

As an aside, I've always found it way easier to get rid of the 60/120Hz noise than the switching noise that's a few thousand Hertz. But smaller bypass capacitors help in that regard.

Subject: Re: Battery Operated Preamps

Posted by [gofar99](#) on Thu, 02 Oct 2014 02:43:59 GMT

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Hi Wayne, both kinds of noise can be problems. But with my latest foray into SS preamps I use SMPS. In the ac powered one two of them. One for conversion of 90-240 VAC 50/60HZ into 12VDC and a second to turn it into +/-12 VDC. The parts count is quite low (below what a more common supply would have) cost is low, and the stability (regulated supply feeding a regulated supply is quite excellent. Noise is zilch, but easy to filter with a single 470uf bypassed with a 0.1uf on each leg. I do put the same in between the SMPS as well. The noise level in the output of the high gain phono / tape mode (60db gain with appropriate equalization) is at the noise level of my

shop in the -103 or better level. For home brew stuff I doubt it gets any better than that.

Subject: Re: Battery Operated Preamps

Posted by [audioaudio90](#) on Thu, 09 Oct 2014 12:32:11 GMT

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gofar99 wrote on Fri, 26 September 2014 22:42Hi, Yes I have. However while some folks claim they are magical, I find them to be pretty much identical to ones with well thought out power supplies. The claims are mostly for quieter or if you use the term blacker background and better clarity. I keep a version of the IC based phono/tape preamp around that uses a pair of 9 volt batteries. Current drain is just under 10ma. It is handy to use as a test device. When compared side by side with the one just like it that uses an AC power supply I can not tell them apart. Both spec out at about -100dbv in MM/MI and -95dbv in LOMC/NAB. The noise spectrum is virtually identical. All that said....if battery powered gear is what you like, so be it I have no beef with it. Just not my thing.

If the background noise level is about the same, then I guess the advantage I can see is not having to deal with a power cable but since you've got other cables anyway, it doesn't really buy you that much.

Subject: Re: Battery Operated Preamps

Posted by [gofar99](#) on Sun, 12 Oct 2014 16:25:24 GMT

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Hi, Since nearly everything else in the system will have power cords, it doesn't seem that one item not have one. Also if it is rechargeable then there still will be a power cord or else you will be buying batteries for it.
