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Subject: Low Cost Phono Preamp for MM and LOMC  
Posted by [gofar99](#) on Sun, 11 Aug 2013 03:26:28 GMT

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Hi Everyone, To do some low noise testing I needed to build a solid state phono preamp. The results exceeded my expectations sufficiently that I wrote it up for diyers. So here it is....

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### File Attachments

1) [IC phono preamp.doc](#), downloaded 542 times

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [Wayne Parham](#) on Sun, 11 Aug 2013 15:25:13 GMT

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Bruce, that's awesome. Thanks for posting the design here!

I really like that op amp, and I think I'll give this circuit a try.

Thanks again!

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [gofar99](#) on Sun, 11 Aug 2013 16:25:11 GMT

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Hi Everyone, This is an easy build and very nice sounding. I listened to it again today and it is better than the SS one I use for comparison (a Simaudio Moon LP3). The sound is not as clinical as the Moon. It is warmer and smoother at least in my system. I believe the LP3 has an edge on S/N but then it is the quietest device I have ever run into with a S/N on MM of -106 dbv and -90 on LOMC. This one is the same for LOMC, but not that quiet for MM. As FYI, anything over about -80 dbv is so quiet in an audio system that the background noise in the listening room will be far higher. I design for a minimum of -90 in all my projects as that gives a really comfortable margin.

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [gofar99](#) on Sun, 10 Nov 2013 23:08:43 GMT

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Hi Everyone, an update. I attached a revised schematic. One small change for gain (300R vs 330R) but the thing can do NAB tape playback if you have a reel to reel player now as well.

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## File Attachments

1) [LOMC IC Phono NAB Preamp November 10 2013.jpg](#), downloaded 5993 times

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [Wayne Parham](#) on Mon, 11 Nov 2013 14:43:56 GMT  
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Oh, dude, that's awesome. Thanks!

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [gofar99](#) on Wed, 13 Nov 2013 03:45:44 GMT  
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Hi, As promised....it works great. Low noise, clean sound and sufficient gain. Either the high or low gain can be used and it seems to work best into the 47K load.

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [Nico](#) on Mon, 18 Nov 2013 19:11:46 GMT  
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These look at interesting schematics. I've been looking for some ideas for my next project and it looks like I've found it. I'll let you know how it turns out.

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [gofar99](#) on Wed, 11 Dec 2013 03:19:07 GMT  
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Hi, I don't know if this should be here or in source with the reel to reel recorder....anyhow I rewired the tape recorder (yes I know it was really nice and new to me only about two weeks ago). The change was to make it possible to send the output from the tape play back heads to an external preamp...yup the one that was the subject of this thread. I can switch from internal preamps to external now.

This was a major improvement in an already good machine. The S/N is about 6 db better and the sound is every bit as good or perhaps even better than before. I used the high gain setting, NAB

equalization and 47K input loading. Works great. A really worthy upgrade to most any recorder.

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [Wayne Parham](#) on Wed, 11 Dec 2013 16:58:36 GMT  
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I've been really busy this season, but as soon as the dust settles, I really want to build one up and try this out.

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [smartt](#) on Sat, 17 Apr 2021 03:00:35 GMT  
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Anybody try this one?

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Subject: Re: Low Cost Phono Preamp for MM and LOMC  
Posted by [gofar99](#) on Sat, 17 Apr 2021 13:41:29 GMT  
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Hi, Actually several. For a while I made some for friends and still have two here. A buddy in Australia makes them as well. I believe at last count he has sold over a dozen. You can get more info if you ask on diyaudioprojects.com forums. There is a project and lengthy thread on that site. There is only really one part that can cause sonic issues and that is the output capacitor. The design shines with good ones there. I still use the tape one any time I need to listen to R-R tapes. It is far better than the OEM built in one. The preamps run fine on a pair of 9 volt batteries and you can eliminate pretty much all of the power supply. Just two batteries and two 100uf caps (one across each battery) and it works fine. The guy in Australia does that. The second one I kept uses lithium rechargeable batteries for +/- 14 volts. I figure the batteries should run for about 1500 hours. Maybe twice that. They are type 18500/ 1500ma at 3.7v. Really clean sound, extremely low noise and flat response well past anything else you might have. Use a socket on the IC. This makes it easier if you bung up and fry one.

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