
Subject: Blu-Ray vs DVD

Posted by [jazzlover](#) on Sat, 29 Jan 2011 09:09:30 GMT

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Outside of the ability of Blu-Ray to store six times more data than DVD, I wonder if there are other technical differences worth noting.

Secondly, in another thread Adverser described the seeming superiority of vinyl records in producing sound quality for jazz music (among others):

Quote:The bottom line is that, if it is a classical recording, soft jazz or anything that requires a lot of headroom and accuracy far below it's volume threshold, Vinyl will sound far more accurate.

With the entry of Blu-Ray, would the limitations of DVD or CD be addressed?

Subject: Re: Blu-Ray vs DVD

Posted by [Adveser](#) on Sat, 29 Jan 2011 18:10:44 GMT

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The limitations of PCM audio at 16 bits is 96db and the limitations of 24-bit audio are somewhere in the realm of over 200db, which significantly reduces the noise level and I believe it eliminates the need for dithering.

Basically, all the problems with 16-bit audio do not exist on 20-bits and much less so at 24-bits.

I put a 24-bit recording sourced from the original analog tapes or the original 24-bit digital master over any vinyl any day.

So given that Blu-Ray has no technical problem with 24-bits it should be the best format for music assuming they are going back and using the original mix and not a subsequent generation stereo mix.

I must say that the original quote above would require really clean vinyl to be effective though, you really aren't doing yourself any favors using vinyl with a lot of tracking noise and artifacts, but yeah, anything that isn't hovering around the 96db range is not effectively using all 16 bits and you should really be looking for a HDCD, DVD-A, Blu-Ray or SACD for those albums. Anything like the vast majority of Rock albums or anything that has been commercially mastered in the last 10-15 years should sound better, even at 16 bits.

Start looking for the HDCD logo on CD, it makes a huge difference, even if you do not own a Panasonic DVD player that is usually the best bet to play them back at 20-bits.

The smart money is that they are not compressing audio for Blu-Ray, much like DVD uses 20-Bit Stereo PCM on most audio-centric discs as an option. The technical limitations are none by default, but that doesn't guarantee quality. The format of the audio should be on the packaging.

Subject: Re: Blu-Ray vs DVD
Posted by [jazzlover](#) on Tue, 01 Feb 2011 08:22:46 GMT
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Thanks for this info-filled reply Adverser. It's great you mentioned about the state of vinyl records to get maximum quality. Just wondering, are there still original vinyl records of classic songs of Beatles or Queen? They sang fantastic songs. Recreating them in high quality Blu-Ray is almost like a task to preserve human heritage.

Subject: Re: Blu-Ray vs DVD
Posted by [Adveser](#) on Tue, 01 Feb 2011 20:20:52 GMT
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The original master tapes converted to 24-bit digital audio would be far better than the original vinyl in my opinion. Personally, I don't hear any difference between a sampled sound and an actual original analog sound since there such a huge number of samples being taken that no matter what it is the digital conversion will be able to reproduce it accurately. That's sample rate though and anything above 48Khz is just going to give you either nothing or diminished returns. The bitrate is what is going to make it sound more accurate from an amplitude point of view.

I'm pretty skeptical about the claim that vinyl is the "original" sound even considering the RIAA equalization process and the intentional removal of frequencies vinyl can't handle because I just don't see a needle physically picking up thousands of delicate transients that appear when you look at a sound wave editor. I think vinyl does a very good job of getting "most" of the original intact.

Briefly without going into it too much, "original masters" are likely not original anymore, they have to put them in the oven and transfer them to new tape so it doesn't turn into adhesive. I have no idea how accurate this whole thing is though. What I have read seems to suggest it is "perfect."

Yeah, to sum everything up:

Original Master Tapes > 24-bit digital > Records = 16-bit digital > Cassette Tape > 192KBPS MP3 > 8-Track > 128KBPS MP3

Subject: Re: Blu-Ray vs DVD
Posted by [jazzlover](#) on Thu, 03 Feb 2011 14:48:18 GMT
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I need to understand more about original master tapes. What is its difference from the rest of the tapes or vinyl or CD? What confuses me is that you seem to be saying that 24-bit recordings could be taken from the original master tapes.

Subject: Re: Blu-Ray vs DVD
Posted by [Advser](#) on Thu, 03 Feb 2011 21:55:47 GMT
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Anything that was recorded digitally (DDD) or mixed digitally (ADD) has digital master tapes. I don't know when they started migrating to 24-bit, but these recordings should be 20-bits at worst based on the tech that existed since the late 80's.

Master Tape is a whopping 1/2 inch wide for a stereo mix and the tape runs at 30/60 inches per second. The quality surpasses anything you could go out and buy by a long shot.

You can take this tape and transfer it at 96Khz/24-bits and have as close to perfect copy as can possibly exist.

Sometimes bands hold on to the original bed tracks and 48-tracks get transferred, remixed as close to the original as possible or sometimes they only hung onto the stereo mixes. But in what is probably the majority of the cases, they made two masters, one is a stereo recording and one is an identical mix that is not mixed down at all, so it is just a 48-track version of the stereo recording.

The "Master Tape" is generally whatever the highest quality source for the recordings happens to be.

Subject: Re: Blu-Ray vs DVD
Posted by [Wayne Parham](#) on Fri, 04 Feb 2011 01:40:47 GMT
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Seems to me we have two discussions here, one about the differences between two digital formats (DVD and Blu-Ray) and another about the differences between analog and digital (tape or disk). Those are two very different things.

In a way, there's three discussions, with the side-bar being whether vinyl should be preferred over a master tape. But that one kind of answers itself, if you think about it. Of course the master is better, since the vinyl was pressed from it. It's a generation thing, with the vinyl being a copy. Better to have the first recording than a second or third copy, no matter how good those copies are.

For more discussion about analog verses digital, let's make a new thread:
Analog vs Digital Regarding the Blu-Ray vs DVD discussion, to me, Blu-Ray is just plain better than DVD in just about every way. The only thing that isn't better is the price, and even that is becoming less an issue. The sound and picture of Blu-Ray is just so much better, and the prices have fallen to the point there isn't much difference anymore.

I really think the discussion is rapidly becoming moot. Everyone is producing Blu-Ray disks and players at a price point that makes DVD obsolete. If you have old DVD players that can't play Blu-Ray, that's an inconvenience but good Blu-Ray players are so affordable now that it probably

makes sense to upgrade.

Subject: Re: Blu-Ray vs DVD

Posted by [SiliconChip](#) on Tue, 01 Mar 2011 11:47:44 GMT

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I'm interested in knowing more about this topic as well. So, other than the fact that Blu-Ray can hold just over 5 times more data than DVD, can it actually hold a wider range of frequencies, and/or more frequencies at a time? Also, is this what is meant when people talk about a number of audio tracks (such as "8-track"), or is that something different?

Thanks.
