

"analogue delays are rare and expensive"



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German-based audiophile vinyl reissue outfit, Speakers Corner (www.speakerscornerrecords.com), has just reissued a batch of vinyl. Each one has something in common, see if you can spot it.

There's the Duke Ellington And His Orchestra 'Newport 1958' a lesser known appearance compared to the 1956 outing yet also a quite brilliant concert, while Billy Holiday's 'Solitude' (1952), show-cased an older Holiday on top form. Henry Mancini's 'The Pink Panther', the music from the film score, features the classic cartoon illustration emblazoned upon the sleeve plus the Mancini soundtrack for the film, "Breakfast At Tiffany's", with the similarly classic sleeve-based photograph of Audrey Hepburn.

Got it yet? Well, I'm being rather unfair on this one because the one thing that connects all of the above records together can only be heard and not seen - an analogue delay. The evidence is in the grooves and the story goes back to two earlier issues, released by the now defunct German label Audiophile Record Service, of the same two Mancini releases. Both were produced using a digital delay, as opposed to an analogue delay. This is a crucial, little discussed, little known aspect of vinyl creation but any audiophile needs to understand what it does and doesn't do because it might affect your buying decision.

So what is this 'delay' and what is the difference between a digital delay and an analogue delay? On a normal turntable, the groove leads the tone arm into the middle of the LP. But what happens when there is no groove? When the cutting head has to dig that very first groove

into a lacquer for later pressing? You need a force to push the arm holding the cutter head. You could have a standard mechanical force to do the job but, if you did, all of the grooves would be unnecessarily large and the LP playing time would be reduced to fifteen minutes per side. An alternative solution is required.

Let's assume that you have a master tape, rolling on an open-reel. tape recorder. The solution is to use half of the signal from the master to drive the movement of the cutter head while the rest enters the groove. This is the clever bit. Just before the second half of the signal is dumped onto the new groove, the cutter does a quick preview (for the length of a single platter rotation), listening to the first half of the signal. The cutter, upon hearing the first half preview, then decides how to cut the groove. So, during that one-turn preview, if the cutter head hears a loud portion of music, it adjusts the process to cut a larger groove to cope with that second half signal while a quieter moment prompts the cutting of a smaller groove.

The second half signal, therefore, is 'delayed'. This 'delay' can be processed digitally or as analogue, as Speakers Corner MD, Kai Seemann, explained. "For the second signal, the tape travels much further, so distance creates that important delay. The problem is that, when you have a digital delay it's much easier because you can use a much simpler recorder. These digital delays, in most cases, only have a CD-quality resolution. So the signal is reduced in resolution. The previous Mancini releases both used a digital delay. We use an analogue. There are only a few companies which really care about using an analogue delay."

What Seemann is saying, therefore, is that, if a mastering facility utilises a digital delay during the cutting process, it really doesn't matter if you use a pristine, top quality, tape source. Once the signal has been through the digital delay process, the resolution is reduced to a mere digital, CD quality signal. Hence, if you buy an 'audiophile' LP derived from a master tape – but that master tape has been processed using a digital delay – then that audiophile LP can only produce CD sound quality resolution. Shocking, isn't it?

"We guarantee that we have no digital delay processing on any of our releases. They are 100% analogue except for one digital delay recording but that's it," said Seemann. "The reason that a lot of people use digital delays is that the specialist tape machines for analogue delays are rare and expensive."

Many companies use a hi-res digital source where it's possible to bypass the delay and load the information direct to the workdesk. Master tapes are a relatively rare resource and masters can go missing or degrade for various reasons.

Still, you have to be aware that, just because a company claims to use the original master tape during the production for a new LP, if that same company uses a digital delay during the cutting process, it will not be a true analogue vinyl LP.

This is why, from this time forward, Hi-Fi World will not only provide source information in every Vinyl Review Column but will ensure that analogue masters truly are analogue by securing cutting delay information. This is why my Hi-Fi World vinyl reviews are the only reviews you can really trust! ●