
Subject: Recording in DAW has latency (MHLINK)
Posted by [Torsten Lang](#) on Wed, 15 Dec 2021 22:10:19 GMT
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Since the last mio-firmware update a new problem occurred for me. When I record with the network cable / mhlink connection the recorded signal ends up delayed in the daw. This does not happen when using usb. Tried both studio one and logic.
I am using an i-tec USB 3.0 Slim HUB 3 Port + Gigabit Ethernet Adapter.
What can I do?

Subject: Re: Recording in DAW has latency (MHLINK)
Posted by [bj](#) on Wed, 15 Dec 2021 23:19:11 GMT
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How much is it delayed?

Subject: Re: Recording in DAW has latency (MHLINK)
Posted by [Torsten Lang](#) on Thu, 16 Dec 2021 10:04:57 GMT
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I measured 2000 samples sending out the click from the daw and routing it back in with a cable to a line in input.
When using USB instead of mhlink it's 67 samples.

Subject: Re: Recording in DAW has latency (MHLINK)
Posted by [bj](#) on Thu, 16 Dec 2021 10:18:24 GMT
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That's definitely not what it is supposed to be...

What is the MHLINK driver channel count (from the I/O menu) and are you using a non-standard MTU on the network interface?

Subject: Re: Recording in DAW has latency (MHLINK)
Posted by [Torsten Lang](#) on Thu, 16 Dec 2021 11:01:40 GMT
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channel count is 2.

Indeed! The MTU was not standard and set to 4088. Jon Stern recommended me to try jumbo ethernet packages a couple of months ago, because I have trouble with dropouts in slightly larger projects. Now I set it to standard 1500, but now the latency seems to be overcompensated

somehow? The re-recorded click now ends up 51 samples before the actual click in the daw.
Strange...

Subject: Re: Recording in DAW has latency (MHLINK)

Posted by [bj](#) on Thu, 16 Dec 2021 11:18:04 GMT

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The low channel count + large MTU can lead to the Ethernet HW buffering for so long that the ring buffer in the HW wraps around, and you wind up having the packets come into the buffer right after the read head rather than right before, and as a result you get the maximum latency of the HW packet buffer rather than the minimum latency. We are still working on how to detect this condition. But its probably best not to use the combination of small channel counts and large MTUs. The Large MTU is really for the case of large channel counts + high sample rated.

With respect to the audio coming in early, are you doing an analog loop or are you just looping through the mixer? Also which unit are you using?

Subject: Re: Recording in DAW has latency (MHLINK)

Posted by [Torsten Lang](#) on Thu, 16 Dec 2021 18:46:37 GMT

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Ok, thanks for this info!

Yes, I did an analog loop with a cable. Host:Direct Out->Line In

When I do the loop directly though the mio console (host 1/2 -> To Host: Pre: 3/4) the negative latency is even more: 172 samples

I'm using a 3D ULN-8.

Could the quality of the network interface affect the performance? And if so, are there recommendations for good usb-ethernet adapters for the metric halo interfaces?

Subject: Re: Recording in DAW has latency (MHLINK)

Posted by [Dafish](#) on Sat, 08 Jul 2023 03:16:29 GMT

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I too found that using the network cable was VERY problematic. I was getting weird and inconsistent latency and having the signal arrive early when reamping. I was also getting random dropouts. But what really bothered me was the microphonics when recording with high end valve outboard gear. Spending hours going through the signal chain to find the source was frustrating. After reading this post I swapped out to a USB C and instantly all my issues were resolved. Currently on an IMac running Catalina with 16 gig of ram 6 core intel. Now everything seems bulletproof.

Sure do love the sound quality of the ULN2 3d.
