
Subject: ULN-8 3D DSP maxed out
Posted by [JP82](#) on Mon, 10 Jan 2022 15:18:23 GMT
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It's possible that this could be normal operation of the ULN-8 3D units, but I want to check against the forum.

I was doing an 8 channel summing mix where I found myself running out of DSP rather quickly. I had about 2 instances of character in addition to Channel Strip before I noticed the DSP nearly maxed out, so I got rid of any instance of character to reduce DSP usage. I decided against using any instance of character as it seemed to use more DSP than other plug ins.

I ended up only using 8 instances of Channel Strip, 5 Instances of Halo Verb, and then 1 instance of MBeq, Multi Band dynamics, and Mio Limiter on the master channel. (See attached screen shot). This put my DSP between 99-100% without any crackling.

I had to compromise on certain plug ins, and removing certain ones (character, dirt delay) in order to have an intelligible mix without it crackling from maxing out the DSP.

My question to you is: Is this normal? If so, it seems that it's a bit of a limitation when trying to use the ULN as a summing mixer. There may be a better way to go about this, or a setting that I am over looking.

If this is normal operation, I can live with it, and figure some work around, but if it isn't normal, please advise.

Thank you MH community.

File Attachments

1) [Screen Shot 2022-01-10 at 10.12.15 AM.png](#), downloaded 160 times

Subject: Re: ULN-8 3D DSP maxed out
Posted by [JP82](#) on Wed, 12 Jan 2022 17:13:12 GMT
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Subject: Re: ULN-8 3D DSP maxed out
Posted by [adingley](#) on Thu, 25 Aug 2022 02:41:43 GMT
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I know it's been a while since you posted, but I just got my first MH unit, and a) it's lovely! b) I think what you're seeing in the unit you posted about in January is probably expected behavior.

I actually emailed MH support before my unit arrived with a question about the expected DSP usage for the plug-ins. I was told the following:

"Running the current software on a 3d unit we are able to insert 72 instances of MIOStrip (compressor, EQ and gate) at 96 Khz on the default mixer, and that brings the DSP usage up to about 97%. Figure roughly double that at 44.1 kHz."

My experience with the MIO software is that I'm able to add 32 MIO strips and the DSP% goes up to about 60%. If I add 72 strips (at 96KHz) and put MIOStrip across each of them (in mono), then the DSP maxes out (bouncing between 98%-100%)... and the audio starts to sound crackly & distorted no matter what signal I'm pushing through the mixer. If I delete 8 of those (so that puts me at 64ch), the DSP usage drops to only 95%, and the mixer passes clean audio at 96KHz.

... Now, on to the newer/shinier Channel Strip3 plug-in: That plug-in chews through DSP way faster.

8 ch. of ChannelStrip 3 (m/m -- 96KHz) = takes the DSP usage up from the baseline (I see 17% usage with no plug-ins instanced) up to ~41%

1 Stereo Aux ch. of HaloVerb on that mixer adds another ~16% of DSP usage. So,

16CH of ChannelStrip 3 + a stereo Aux of Halo verb (at 96KHz) takes up ~91% of a single ULN-8mkIV's DSP. Honestly... I'm good with that. And thankfully (if shipping dates hold) I'll have 3 boxes by year-end. So that's a pretty powerful set of DSP's for all my input processing.
