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Subject: External Summing  
Posted by [method1](#) on Fri, 25 Jan 2013 18:50:26 GMT  
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Hi

Wondering if anyone has some tips for setting up external summing with the LIO/ULN?

I have 2 LIO-8 which I'd like to set up for external summing. What's the best way to go about this?

Since analog 1-2 are taken up with monitor outs, I'd start sending my stems out from channel 3, however the main outputs on 1+2 would then also be going through the summing unit unless I mute those inputs on the external box.

Is there a workaround for this using the mio console? Or perhaps using the headphone as the main monitor output?

Secondly - what would be the best way to integrate the 2nd LIO into this setup? Aggregate device? Or sending the channels from LIO 1 via AES to LIO 2?

If anyone has any experience with this and has some advice to offer I'd really appreciate it!

Thanks

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Subject: Re: External Summing  
Posted by [Allen](#) on Mon, 28 Jan 2013 16:10:05 GMT  
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Don't patch the monitor outputs into the summer. You can also reassign those signals to another output pair if you'd prefer to start patching at output 1.

If you connect the LIOs via AES you'll avoid the processing overhead of an aggregate.

I can't give much practical advice, as I do not use an external summer.

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Subject: Re: External Summing  
Posted by [method1](#) on Mon, 28 Jan 2013 19:58:59 GMT  
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Thanks Allen

As far as outputs 1+2 - because the summer also has DSUB those signals would be going into the box by default, I assume they'd have to be muted on the summing mixer. Alternately could monitors be assigned to the 2nd MIO?

Is it possible to split the AES into 2 outputs? For example if I wanted to send 4 channels to a MIO and 4 channels to another DAC?

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Subject: Re: External Summing  
Posted by [Allen](#) on Mon, 28 Jan 2013 20:47:12 GMT  
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method1 wrote on Mon, 28 January 2013 14:58 Thanks Allen  
As far as outputs 1+2 - because the summer also has DSUB those signals would be going into the box by default, I assume they'd have to be muted on the summing mixer. Alternately could monitors be assigned to the 2nd MIO?

Yes. This is most easily done if both boxes are in an aggregate device, but can also be done if you are subbing one box into the other via AES.

Quote:

Is it possible to split the AES into 2 outputs? For example if I wanted to send 4 channels to a MIO and 4 channels to another DAC?

Yes, use a DB25 to XLR fanout.

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Subject: Re: External Summing  
Posted by [method1](#) on Tue, 29 Jan 2013 21:20:31 GMT  
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Thanks for the helpful replies.

Will sending the monitor mix over AES to the 2nd lio introduce any sort of appreciable latency? I'm assuming not but would be interested to know if there's any sample offset on the 2nd box which would be receiving it's input over AES.

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Subject: Re: External Summing  
Posted by [Allen](#) on Wed, 06 Feb 2013 19:25:12 GMT  
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There is approximately 2-3 samples of latency in the AES input and output, meaning that signals passed from box 1 to box 2 will be around 4-6 samples behind signals from box 2 that did not

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pass over AES.

In practice, this delay does not need to be compensated as long as phase coherent signals are kept in the same box. For example if you are mixing a stereo signal make sure that both channels are sent to one box or the other, not split between them.

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Subject: Re: External Summing

Posted by [lvandovich](#) on Sun, 25 Oct 2020 03:06:34 GMT

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Hey, I realize this is an old thread, but I was wondering how you, the OP, ended up solving the summing and LIOs..

I have one LIO-8 and just bought a summing mixer, also wondering about how to deal with channel 1-2 also being the monitor out (my summing mixer also has DSUB connections). Also have been wondering if I could use the headphone outs as the main monitor outs since they are in addition to the 8 outs, but wouldn't quite know how to set that up.

Any advice much appreciated!

Thanks!

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