Subject: Problems with DSP
Posted by ELK on Tue, 01 Nov 2005 14:59:54 GMT
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Problems with a DSP.I am having some issues with what seems to be a problem with a DSP processor. I have installed a DSP into a client's board room and every morning it has to be reset. By this I mean that after the unit has been rebooted all is well.Every morning for the last 3 weeks after install of the unit we come into the meeting room and the audio levels are spiked. What I mean by this is we have a very load noise floor and loud crackling from the 70v speakers. I check the levels on the signal meters and check all of the DSP settings and no settings have been changed.Though now I reset the DSP processor and all audio levels go back to normal with the same DSP settings stated above. I have checked every phoenix connector, xlr input jack and every RCA connections within the room. All the cable is shielded microphone except for the 14/2 from the 70v amp feeding the 6 speakers in the room.The whole rack is on a dedicated circuit (or what we specified that we needed was a dedicated circuit if the electrician provided is unknown at this time) with a Surgex SX2120. We even have a UPS on the system from the outlet to the Surgex.This anomaly seems to happen every night. This is a very basic system with a third party controller for raising the line level signals to the amp only.Does anyone have a idea of what is happening here. The engineers that made the DSP are at a loose and at this point so am I. The only thing I can rationalize at this point is that there is a bad processor within the DSP unit that over a period of hours just shuts it's self off.

Subject: Re: Problems with DSP
Posted by Wayne Parham on Tue, 01 Nov 2005 15:56:13 GMT
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I've run into things like this before on digital systems. First, check the power. Even though it's a dedicated line, there may be a problem. Check the ground and make sure it has been wired properly. Then check for things that might spike the signal lines, induce a current into their grounds and make a loop, something like that. Try to get a handle on the exact time of the malfunction if you can. Either actually watch it or monitor it in some way. You may find that it always occurs at the same time, and that time may be when a compressor kicks on or something like that.I can't tell you how many times I've run into this only to find out that a factory assembly line process happens every day at 9:00pm or something like that, and it coincides exactly with a failure. Further inspection shows a ground loop or an induced spike in a signal line. These things are 90% observation and 10% deduction. Don't guess, look.

Subject: Re: Problems with DSP
Posted by ELK on Tue, 01 Nov 2005 17:13:38 GMT
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WayneThanks for taking the time to send me your recommendations. It is very much appreciated. In working on this system I have checked and verified the power with an analog scope. This is what has been looked at so far.I measured the ac line with an oscilloscope, both the “conditioned” and the “unconditioned” circuits. Although the “conditioned” line had a slight intermittent noise pattern, it was far below a level that would interfere with the installed equipment (less than 5v of transient at approximately 4KHz). Oddly, the “unconditioned” line was cleaner than the “conditioned”; no noise at all.It looks like I am going to have to rent a digital storage oscilloscope and let it monitor the system for a period of 48 to 72 hours and check the readings daily. I think that with will be the next step in your recommendation of “These things are 90% observation and 10% deduction. Don't guess, look.”Once again Wayne, thanks for taking the time out of your day to help with a problem. It is nice to know that a few other people are willing to help in solving audio problems such as these. Sincerely ELK

Subject: Re: Problems with DSP
Posted by Wayne Parham on Tue, 01 Nov 2005 22:08:00 GMT
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That storage scope will help a lot. Watch the power and also watch the signal lines and the grounds. You may have to do traces on consecutive days to narrow things down. You'll probably find a spike somewhere in the evenings, and maybe it will correlate with an event you can control. At least you'll have a better view into what's going on.

Subject: Re: Problems with DSP
Posted by Bill Wassilak on Thu, 03 Nov 2005 15:06:40 GMT
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What kind of DSP is it? if it's a Behringer you might have to go in and check the soldering connectons on the input and output jack's I've heard of it causing problems like this.HTHBill W.

Subject: Re: Problems with DSP
Posted by ELK on Thu, 03 Nov 2005 17:54:45 GMT
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This is a Biamp Audia Flex with 1 TI-2 card, 3 AEC2 cards, 4 standard IP2 cards and 3 OP2 cards.
http://www.biamp.com/index.php?pg=audia/AudiaFLEX
