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## How to Benefit from Headroom

Once upon a time I was working for the original large-scale rehearsal/ rental company in Los Angeles. We got a gig for a super-high-profile show at The Century Plaza Hotel Grand Ballroom: a \$1000-a-plate benefit concert with Stevie Wonder.

We got in at 3 p.m., miked everything up quickly and got ready for soundcheck. That's when the promoter — who was also mixing front of house for the show — came up to me freaking out and saying he can't mix! All the faders are about a third of the "normal" level, the subgroups a little higher, and the masters are at 25 percent.

"Where is all the gain coming from?" he asks.

Since I had no idea and I'd have to wait 'til sound check was over to find out, I just took the output level on the house EQs and turned them off. He brought up the mains and got the faders approximately where "Normal" was and said, "OK, cool". Sound check was over and everybody went to change into their tuxedos, except Bobby and I were determined to find out what was wrong with the system. I went to the front of house and put in some music while the servers dressed the tables. I told Bobby to let me know when he saw meters on the amps or crossovers. I stared at him as I brought up the playback. It kept getting louder and louder — then way louder than was comfortable, and that's when he nodded "OK," he had meters. I brought it down as the ballroom manager walked over to tell me to never do that again.

The doors opened, and TV cameras were everywhere. Everyone came to the show: Dick Clark, Johnny Carson, Elliot Gould, anybody who was anybody.

"Ladies and gentlemen, Stevie Wonder!" says the announcer, and the crowd went wild. (As wild as they can while still eating dinner in tuxedos and expensive dresses, of course.)

Stevie played some songs and introduced each song with a little story about it: when he wrote it, what inspired it, and so on. After the intro he would hit a key on the computer running the Synclavier and all the accompanying tracks would start up; he'd play electric piano live to this accompaniment.

The show went on, and the servers start to pick up the dinner plates and bring desert.

Stevie started out, "This song is called —" and BA-BLAM! All of a sudden it's the loudest thing anyone has ever heard, at least 300 dB!

I looked out at the audience, and there were plates flying — whole trays of dessert were in the air! Everyone in the building, all 2200 guests, are jumping out of their skin! Stevie dove for the cancel button, and it stopped.

The resulting silence was quiet enough to hear all 2200 people gasp at the same time, and all 2200 airborne dinner plates come crashing down as the servers dropped them from shock. Half broke on impact; the rest just dumped their food on the celebrities.

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Unphased, Stevie said, "Sorry, I hit the wrong button. I couldn't see the right one — my eyesight must be going!"

The audience broke into laughter and Stevie proceeded to blow away the crowd with his talent only.

After we took the rig back to the shop, we tested it and found out there was nothing wrong with it — it was just a really efficient system that could produce ungodly SPL. Turns out that some of the songs on Stevie's Synclavier were at different dB levels, and Stevie chose one that was +20dB.

"I'll never forget that as long as I live — I don't think anyone else will either."

Jeff Burkhardt, Cadillac Audio, Sherman Oaks, CA