



Doe-Ray-Mi-Casa

The Sound Of The Sound Of Music...

In an interview originally commissioned by Sonnox, Rich Tozzoli talks to Brant Biles about Mi Casa's work on the restoration of *The Sound Of Music* and the studio's application of the Sonnox toolset.



Brant Biles of Mi Casa.

MI CASA MULTIMEDIA, located in the Hollywood Hills of Southern California, has a demanding client base that ranges from 20th Century Fox and New Line Cinema to Stevie Wonder and The Rippingtons. Living their theme "Hi Def Audio for Hi Def Video", they are one of the leaders in surround sound audio mixing and production for motion picture, music, and HD video. Founded in 1997 by producer/synthesist Robert Margouloff and engineer/musician Brant Biles, Mi Casa delivers the highest quality audio, regardless of its original condition.

Rich Tozzolo: Where did work on the *Sound Of Music* restoration start?

Brant Biles: We worked from the original Mag print master that was created in 1964. A few years ago Fox put out a 40th anniversary of *The Sound Of Music* and a company called Chase did the restoration.

At that time, it was deemed that the original Mag was unplayable. There was too much vinegar damage and too much instability in the geometry of the Mag itself. Vinegar damage is something that happens as Mag sits and ages. The chemicals that compose the tape itself break down and turn into vinegar. It actually crystallises on the Mag making things unplayable and irretrievable.

So along comes this gentleman Nicholas Berg, who is one of the most studious and diligent analogue-to-digital transfer engineers I've ever met. He is someone who truly cares about the art. So he told Fox he could get this original master to play back. He went ahead and built his own head stack assembly with a pressure plate he designed that pressed down on the back side of the Mag, to make sure as it travelled over the playback head that it had continuous pressure all the way across the surface of the head. He did things like wash the Mag and spray it with this special silicone and so on. But the quality that came off that transfer, versus the previous release, was night and day. It was just astounding.

RT: How about the audio?

BB: Well, the *Sound Of Music* was mixed originally in a format you would call 6.0. It had five channels across the front and a mono surround. So we had that as a starting point, but we were asked to do a 7.1 mix on it.

We also had a 24-track music stem available to us, and I was able to go in and take some of the orchestral elements and work with them. So it will be a true 7.1 mix with the five in the front represented properly. The two side channels have supplementation by the original music stem, and then the rear has a little bit of that pulled into it but also the mono sitting back there. So it's a true 7.1 mix from a 1964 film – and it's outstanding.

RT: How did you get the 24 tracks of music?

BB: Multiple Mag stripes were made. So you would have something like Reel 1A, 1B, 1C, 1D, and so on. For example, the first six tracks on the Mag would be orchestral recording. The next three on set number two might be a mix-down of that with a Julie Andrews solo vocal on track 8 and a solo guitar on track 9. Then there might be another sub-mix that had just the kids singing on it. This is an element that Fox still has in their library, and it's the multi-track of the instrumental and orchestral recordings with the vocals.

The problem is, how do you take an analogue source, such as the original print master and layer the strings and violas, violins, cellos and so on, on top of it, without it flanging and phasing? We went ahead and used a Bricasti reverb to decorrelate it from the original print master – and kind of make those side channels and extra pair of room mics if you would. It actually worked out brilliantly. The whole team at Mi Casa made this happen.

RT: Tell us a little bit about your usual restoration process.

BB: Well, when doing restoration, we first use a number of tools to go through and fix things that are egregious, such as dropouts,



clicks, and pops. Once you go ahead and do a static noise reduction pass, you all of a sudden unveil the differences from cut to cut. When examining one shot to another shot, there might have been a layer of noise on top of the scene, which made the transition from shot to shot unnoticeable. But once you remove this first 'layer of the onion', suddenly all these other artefacts come out.

The thing that's great about the Sonnox tools is that they have automateability inside the Pro Tools environment. That is the "key to the lock". Beyond that, it's really about sound quality. The people at Fox, when they are sitting here listening, are almost in disbelief that it can be cleaned up that accurately. At the cut, you drop into a certain noise reduction curve and it just cleans it right up.

What we've learned is that if you have a constant noise background, it doesn't really bother you. It's when things shift instantaneously that it really perks your ears up and you realise something happened there. That's where Restore's automation is just fantastic.

RIDING THE N-CURVE

As well as the usual restoration tools that help bringing the oldies into the naughties, Brant Biles and Mi Casa have a couple of tricks up their sleeves, armed only with the Sonnox SurEsser plug-in.

Brant Biles: "I can't tell you how great that is. So often, with these older films, the dialogue that comes off a playback track might have all this 3-5kHz spiking and sibilance. The SuprEsser can track that incredibly well and literally just suppress it. But it doesn't do it to the point where you're actually degrading the overall sonics of the mix. It just lightly steps on the dialogue sibilance, and things that might make your ear turn.

"Also, there was a thing back in the day called the N-curve, which was a theatrical playback curve which started cutting off about 2kHz. In the theatre, it would drop 14dB at 8kHz from 2kHz. It's quite a severe cutoff. It was applied in the B-chain of theatrical audio playback systems for older movies.

"The interesting thing is that when you pull up these old print masters; there is audio data above that frequency range which sounds nice. If you can get it to sit in its proper proportion to the rest of the timbre of the mix, you can actually improve the top end of these movies quite a bit.

"That's because you're not being limited by this playback curve. So these issues of upper mid-band 'spikes' might not have been heard in the original playback because of that curve. But in an attempt to keep the original top end of the mix, these elements unfortunately come out and make themselves very apparent. The SuprEsser software does an amazing job of keeping it at bay and making sure that it doesn't get out of hand.

"Overall, our workflow is different for every single project we do. It's kind of like walking down a road that you build yourself. Sometimes you back yourself into a corner and sometimes it's a glorious path. But the thing that I absolutely love about this whole suite of Sonnox Restoration plug ins is the automateability, and the fact that you can quickly go in there and surgically set it up to hit specific points. All the while, you're not affecting the rest of the audio. That is truly invaluable."

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