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Announcing a Cure for Reflectophobia

Reflectophobia, a debilitating mental condition was first reported in an AES paper in the early 70's by Helmut Haas, and became known as the Haas Effect. Highly infectious, this impaired judgment condition reached epidemic levels in mid 70's spread to nearly every recording engineer, producer and AE instructor in the industry. It impacts the hearing judgment of engineers, causing them to record talent in acoustic sterile environments, notably devoid of any early reflections. The evidence of its insidious presence becomes clearly evident whenever listening to modern recording tracks or mixes.

Long gone are those early recording days when everybody got together in one big room, opened up 15 mics went direct to tape in 2 takes, without headphones or isoboosts. No one was worried much about catching early reflections then, because they couldn't. It isn't a social disease, it is a disease born of isolation. Those early sessions just happened to be self-inoculated. Flush with hundreds of low-level cross talk signals and early reflections, the engineers got some of the sweetest the musical noise floors ever recorded in history and made great sounding records.

Nonetheless, justified by the Haas report and fueled by paranoid fears of comb filter coloration, every single reflection near the mic has systematically been exterminated over the last 30 years in most recording studios. "The only good early reflection is a dead early reflection." With this purge of early reflections nearly complete, today's music is now completely composed out of separate sterile, dry tracks, spiced up after the fact with the FX rack. Mixing has essentially become the work of a sonic funeral parlor technicians, trying to bring dead sound back to life, for just one more show.

Fortunately, a cure to modern, lifeless sound recording has been found. Inoculation process requires that tracks be recorded in a Haas Saturated Signal Format, the exact opposite from a Haas Sterile Signal Format (reflection free zone, RFZ). It requires introducing some 30 to 60 random time offset Specular Reflections accompanying each direct signal within the first 30 ms. The resultant signal complex (statistical assembly of discrete, off axis reflections) has absolutely no comb filter effect and the track is completely full of acoustical life, the instrument, voice and the music.

Formerly dead mixes can be remixed through an acoustic process of sweetening by playing the dry mix through an acoustic package that creates a similar plethora of early reflections. Caution, the RT-60 of the Haas Saturated early reflection package needs to be in the range of 1/10 second and a very early time gap is generally set at about 3 ms.

This cure was discovered when big studio recording engineers started fooling around with TubeTraps in the mid 80's, endorsed early on by Pete Townshend (Eel Pie Synclavier Sampling Room) and for the last 10+ years with Studio Traps by Bruce "You've got to hear this" Swedien. ASC remains dedicated to teaching reflection saturated recording methods and providing acoustic inoculation packages to recording engineers who recognize that their work suffers from the debilitating influence of Reflectophobia.

—Acoustic Engineer/Inventor Art Noxon has developed numerous acoustic products, testing and design techniques for recording and playback environments. He has delivered five AES papers, holds five acoustic patents and has written numerous articles on performance-based (intelligibility) acoustic design. He founded and remains president of Acoustic Sciences Corporation in Eugene, Ore.

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