

# PARfiles

## Remastering The Rolling Stones

BY STEPHEN MURPHY

**FACILITY:** Gateway Mastering & DVD  
**MASTERING ENGINEER:** Bob Ludwig  
**RECORD LABEL:** ABKCO Records  
**TRANSFER DECK:** ATR Ampex 350 1/4" with Dave Hill *Aria* electronics;  
Studer A80 with Decca electronics  
**PHONO REFERENCE:** Well-Tempered Labs/Grado cartridge/Manley  
Steelhead preamp  
**DYNAMICS:** Millennia Media Origin STT-1, Manley Vari-Mu, NTP 179-120  
**EQUALIZATION:** Manley Massive Passive, GML 9500 Mastering EQ  
**NOISE PROCESSING:** Cube-Tec AudioCube, CEDAR DH-2, Weiss DS1  
**DSD WORKSTATION:** Sony Sonoma



*The entire 22-title Rolling Stones catalog was recently remastered and released on hybrid CD/SACD discs. Original UK and US analog mix-session masters were painstakingly transferred to Direct Stream Digital by Teri Landi of ABKCO and Steve Rosenthal of The Magic Shop in the US, with mastering engineer Jon Astley providing masters from the Decca UK vaults.*

*Bob Ludwig carefully referenced previously released pressings of the material as he mastered the catalog, first to DSD (for SACD layer) and then down-sampled to create the PCM master (for standard CD layer).*

*The SACD layer is the first time listeners can hear the studio mixes without significant detrimental influence of the consumer medium itself (e.g. vinyl surface noise and scratches; cassette tape hiss, limited bandwidth, motor speed; CD PCM decimation, brick-wall filter, finite resolution) or the specific mastering processes required of those media.*

*I spoke to Bob Ludwig about the process and processing he used to master this unprecedented release:*



Bob Ludwig

### ***What was your general process in mastering the Stones project?***

I would put up a song and EQ it way I thought it should be. Then we checked it against the original London and Decca pressings as originally intended and approved. We also checked the singles if the original was mono. Next, the 1986 CD would be checked, as this was the source for probably 90% of the people who know these songs. Often we had the originals beat right away, but sometimes there was something magical about the vinyl pressing that took a lot of effort to duplicate, and then better.

### ***How did you approach the use of dynamic processing?***

Even 35 years ago, records were compressed to make the music *rock!* For some tracks I used my vintage Neumann Disk Mastering console and Manley, Millennia Media or NTP analog compressors to make get the "correct" sound.

Compressing them further for mere level sake alone was *not* done. Thus, they are compressed as needed, but not squished! I wanted these re-issues to have as much musical longevity as possible, and high compression tires the ear.

### ***Did you use much noise reduction?***

Very little. When there were spots that required its use, if it was possible in the analog world, I would do it there. If not, we went to the high-resolution PCM world. If neither sounded that great, we just let the noise be.

The only PCM in the whole series are those parts that were really necessary. Each corrected part was meticulously excerpted and edited back into the DSD master. One song had some significant sibilance problems, and I think 23 individual de-essed attacks of a word were edited back in by hand! A true pain in the neck, especially on the Sonoma DSD work station, but it kept the ultimate quality we were striving for.

### ***The quality of the SACD layer is stunning. The CD layer also sounds far and away better than any previous releases I've heard.***

The down-sampling from SACD to PCM used the latest Sony sbmD (Super Bit Map Direct) process, so the CD layer sound is a break-through as well. Being that everyone who buys a re-mastered Stones disc will have automatically purchased an SACD disc, I hope that they will seek out a friend who owns an SACD player, hear the disc on that and get even more analog-like warmth and clarity than the CD layer affords.

[www.gatewaymastering.com](http://www.gatewaymastering.com)  
[www.abkco.com](http://www.abkco.com)

*PAR Studio Editor Stephen Murphy has recorded over one hundred vinyl and CD releases, including Grammy Award-winning and gold and platinum-selling albums. Steve can be reached at [editor@smurphco.com](mailto:editor@smurphco.com).*