

## HERE IT COMES AGAIN

# Remastering: The Rolling Stones 22 SACDs... And Bob

STEPHEN MURPHY talks to Bob Ludwig about remastering the Rolling Stones back catalogue.

The recent release of ABKCO's The Rolling Stones Remastered Series has been a major force in advancing awareness of the fledgling high-res consumer SACD format. The 22-title collection of hybrid dual-layer CD/SACD discs ranges from the band's earliest recordings through 1970's live *Get Yer Ya Ya's Out!*, and also includes several compilations.

Original analogue mix-session masters were located and painstakingly transferred to Direct Stream Digital by Teri Landi of ABKCO and Steve Rosenthal of The Magic Shop in the US, with producer/mastering engineer Jon Astley providing DSD transfers from the Decca UK vaults.

The series was remastered by Bob Ludwig at Gateway Mastering & DVD in Portland, Maine. Ludwig carefully referenced previously released pressings of the material as he mastered the catalogue, 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 (eg. vinyl surface noise and scratches; cassette tape hiss, limited bandwidth, motor speed; CD PCM decimation, brick-wall filter, finite resolution and so on). An exciting prospect for a mastering engineer.

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

### Starting at the top, how were the original masters transferred?

"There was a lot of effort put into making the best transfers possible. The Decca UK transfers were done on a Studer A80 1/4-inch deck with original Decca electronics. In the US, most were transferred using either a vintage Ampex 350 or ATR-102 rebuilt by (US company) ATR-Services and outfitted with Dave Hill discrete, pure class-A Aria electronics. These electronics reveal details in a master like no other I have



Beggars Banquet — one of 22 re-issues on SACD.

personally heard.

"All tapes were converted from analogue to DSD using emm labs converters. I used the Sony 'super bit-mapped Direct' software and dCS 974 digital-to-digital format converters for the down-conversions from DSD to PCM for the standard CD layer."

### What was your process in referencing earlier vinyl releases?

"During the whole project we had access to pristine (and occasionally not so pristine) original ABKCO, London, and Decca pressings. We often checked the London and Decca singles as well if the original was mono.

"My vinyl reference system consists of a Well-Tempered turntable and Grado reference cartridge, reproduced through a Manley 'Steelhead' phono pre-amp.

"First I would put up a song and EQ it the way I thought it should be. Then I checked it against the vinyl pressings as they were originally intended and approved. Next, the 1986 CD would be checked, as this was the source for probably 90 percent of the people who know these songs.

"Often we had the originals beat right away, but occasionally there was something magical about the vinyl pressing that took a lot of effort to duplicate, and then better."

### What equalisation did you use?

"The Primary equaliser was the Manley Massive Passive tube equaliser. Also, the GML Labs (George Massenburg) Mastering Equalizer was a god send. The combination of the two is very powerful."

### 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 Vari-Mu, Millennium Media Twincom TCL-Z or NTP179-120 analogue compressors to make get the 'correct' sound. The TCL-2 Stereo Compressor/Limiter has a special common voltage control modification originally made for us so six channels of the compressor can be ganged together for surround applications without weird image shifts.

"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 analogue world, I would do it there. If not, we went to the high-resolution PCM world. If neither sounded



Bob Ludwig's vinyl reference set-up with London and Decca pressings of *Out of Our Heads*.

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 workstation, but it kept the ultimate quality we were striving for.

"The quality and 'sound stage' of the SACD layer is stunning. But it should also be mentioned that the CD layer 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 CD will have automatically purchased an SACD disc, I hope that they will seek out a friend who owns an SACD player, audition the disc on that and hear even more analogue-like warmth and clarity than the CD layer affords.

"The resulting clarity of the new masters revealed things in the records I personally never heard before: vocal doublings I never noticed, bass pedal squeaks, even talking during the takes I never heard before." □

**Aux Input**

Gateway Mastering:  
[www.gatewaymastering.com](http://www.gatewaymastering.com)  
 ABKCO: [www.abko.com](http://www.abko.com)

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 GML: [www.massenburg.com](http://www.massenburg.com)  
 Millennium Media: [www.mil-media.com](http://www.mil-media.com)  
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