

Announcing the upcoming release of Sonic Youth's 2009 album *The Eternal*, Matador Record's founder and co-president Gerald Cosloy stated, "We've not had a record in our recent history that's been the subject of nearly as much speculation and anticipation."¹ Much of that speculation was surely driven by the three-year gap since their previous release *Rather Ripped*, their longest break in recording since the mid-1990s. That three year break saw the band performing their groundbreaking 1988 record *Daydream Nation* in its entirety, ending their sixteen year tenure on a major label, Geffen Records, and welcoming bass player Mike Ibold as a member of the band. *The Eternal* was the first Sonic Youth album released by Matador Records, a return to an independent label for the band described as liberation². Recorded in November and December of 2008 with producer John Agnello and engineer Aaron Mullan, this was the first time the band used their new Hoboken-based recording studio Echo Canyon West. This paper will examine the recording process of *The Eternal*, outlining the production workflow from inception to distribution and pinpoint issues of preservation for the materials created during this process.

Previous Sonic Youth records began with extensive recordings of demos and improvisations by the band. In the band's archive space, shelves are filled with with hours of demos and various other recordings from the band's history.³ These were recorded to audiotape, predominately 2-inch, in the bands previous studio, Echo Canyon NYC. This practice was

¹ The Management, "Coming June 9 : Sonic Youth's 'The Eternal'," *Matablog* (blog), February 12, 2009, www.matadorrecords.com/matablog/2009/02/12/coming-june-9-sonic-youths-the-eternal/.

² "Sonic Youth The Eternal," press release, February 2009, 1, www.sonicyouth.com/mediakit/Sonic-Youth-Eternal-bio.pdf.

³ The number of recordings for each record varies, but the largest appeared to be for the 2004 album, *Sonic Nurse*, which took up many shelves with demos, improvisations, as well as the raw tracks and final mixes.

abandoned as tape stock became scarce and the use of digital recording became more popular. Songs were written and rehearsed either at Thurston Moore's Ecstatic Peace Folk + Cinema Basement in Northampton, MA or Echo Canyon West. The band composed two to three songs in one weekend and would record the songs the following weekend.⁴

The Eternal was tracked on 2-inch tape using a Studer A800 with 16-track heads at Echo Canyon West. The band preferred a straightforward recording of their instruments, recording straight to tape with no (or little) digital manipulation of audio signal. The signal path for most tracks passed from mic to preamp to outboard to tape. For snare and bass drum, the recordings were combined using the "sum bus" method to compress the sound. To complete this process, the signal was routed through the Neve 5106 mixing console; these tracks went mic to preamp to outboard to Neve channel in to Neve output bus to tape. Pro Tools was locked to SMPTE timecode, creating a digital copy of the entire session. No plug-ins were used during recording, meaning there was no analog or digital manipulation of the audio signal, besides amplification via the preamp.⁵

Agnello used equipment, not digital plug-ins or software, to equalize and compress vocal tracks for creating specific texture and tone in the recordings. Again, the signal path remained relatively unaltered between microphone and tape. Kim Gordon's vocals, recorded in Massachusetts at the Bisquiteen studio, were processed by the singer using an Electro-Harmonix Memory Man, an effects pedal that created delay and reverb in real time. Despite recording remotely, Agnello decided to keep the signal as simple as those at Echo Canyon West.⁶

⁴ "Sonic Youth The Eternal," press release, February 2009, 1, www.sonicyouth.com/mediakit/Sonic-Youth-Eternal-bio.pdf.

⁵ Ken Micallef, "Now and Zen: Sonic Youth Sharpens Its Focus on Songwriting," *EQ Magazine*, August 2009, www.eqmag.com/article/now-zen-/August-2009/98791.

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Mixing of *The Eternal* took place at Water Music Recorders, a studio near Echo Canyon West. Once again, the band and Agnello used analog equipment, mixing the tracks down to half-inch tape using a Neve 8108 mixing console connected to an Ampex ATR-102 tape recorder. Again the equipment was routed through a Pro Tools HD system to create a digital record of the mixing process.⁷ Mixing was completed in ten days, at the end of the January 2009, before being sent for mastering.

Greg Calbi at Sterling Studios in New York mastered *The Eternal*. Similar to the recording setup at Echo Canyon West, Calbi uses a combination of analog and digital equipment to achieve his desired sound. The process of mastering uses equalization and compression to unify the sound of the stereo-mixed tracks created during production. Following equalization and compression, Calbi digitizes the mixed tracks using an A/D converter and placing them in his digital workspace.⁸ Once the tone and loudness of the record are at their proper setting, the mastering engineer adds any fades or the gaps between tracks, preparing it for a master copy.

The final stage of the record's creation is in the hands of the label. Before manufacture, Matador Records first received CD-Refs, a high-quality recording, for approval by the label. Upon approval, Sterling Sound recorded the mastered tracks onto a PreMaster CD (PMCD). The PMCD was the source for the creation of a glass master at Cinram, a CD replication plant in Pennsylvania. The glass master is then used for creation of the CD release copies. Cinram also cut lacquers for the manufacture of vinyl copies from the PMCD. These lacquers were then shipped to a vinyl pressing plant, RTI, in California. Finally, Matador created WAV file digital masters from the PMCD, which were then uploaded to the label's digital distributor Consolidated

⁷ Ken Micallef, "Now and Zen: Sonic Youth Sharpens Its Focus on Songwriting," *EQ Magazine*, August 2009, www.eqmag.com/article/now-zen-/August-2009/98791.

⁸ "Mastering Engineer Greg Calbi Explains the Equipment Used in the Mastering Process," Artists House Music video, 6:56, www.artistshousemusic.org/node/5369/4613#fragment-16.

Independent in London. After a quality assurance check, the company delivers the digital copies to retailers such as iTunes, Amazon, and the label's store.⁹

In addition to the final release of *The Eternal* is the entire record of its lifecycle from pre-production to manufacture. Figure 1 outlines the production process and the resultant outputs and records created at each step. Beginning with pre-production, the creation of digital recordings already begins to raise issues of preservation. A Pro Tools Session is stored in a unique file directory containing folders for Audio files, Video files, Fade files, Region Group files, and Session File Backups. The PTF file is a proprietary format, which stores metadata necessary to load and manage a session in the Pro Tools interface. Audio files are saved in WAV formats and stored in the Audio files folder within the Session directory.¹⁰ For the production of *The Eternal*, sessions files consist for each take of a song from rehearsals through the final mix. These files are currently stored on a hard drive at Echo Canyon West. These are the unique recordings—outtakes, rehearsals, and demos—not all recorded to tape, that represent the unheard results of *The Eternal* recording sessions. This rationale serves for the Pro Tools files generated during the mixing process as well. As the final mixdown of *The Eternal* exists on only two reels of half-inch tape, it is assumed that only the final mixes of each track were transferred to tape and there is a possibility of alternate mixes saved as Pro Tools sessions. Preservation of the Pro Tools sessions requires considerations of information migration due to proprietary format of the session metadata stored in the PTF file. It is to the benefit of a preservationist that the band elected not to use software or plug-ins to manipulate the recordings, as these would somehow need to be replicated in the future if they were no longer compatible with Pro Tools or another DAW. Issues of obsolescence are less of a concern with the software's use of the WAV format, but these files'

⁹ Patrick Armory, General Manager of Matador Records, email message to author, October 26, 2011.

¹⁰ Avid, "Pro Tools Reference Guide," version 10.0, http://akmedia.digidesign.com/support/docs/Pro_Tools_Reference_Guide_v10_73478.pdf, 14-16.

relationship with the proprietary PTF file is troublesome considering matters of compatibility with later versions of Pro Tools or other DAW software in the event that Pro Tools is no longer viable.

The physical carriers used in the production and manufacture of *The Eternal* raise fewer preservation concerns. The nine 2-inch and two half-inch reels of audio tape from production of the record (a remarkably small amount of tape compared to the multiple shelves full of tape from previous records, such as *Sonic Nurse*) require ideal storage conditions for long-term preservation, but are less susceptible to loss than the digital formats created through Pro Tools. Together with these analog records, the paper materials (notes, track sheets, lyrics, equipment settings, etc.) created during production need to be retained and preserved to properly recreate the playback settings for the tape. Storing the mastered materials on a PMCD is precarious as the medium is susceptible to degradation if not stored properly and, most importantly, obsolescence of the medium.¹¹ Previous storage mediums for album masters, predominately digital tape, are already inaccessible due to the obsolescence of the format. This will be the case with the PMCDs or glass discs if their content is not transferred to viable storage means in the future.

Sonic Youth are not ignorant of the value of their unreleased recordings. Deluxe editions of *Daydream Nation* and *Dirty* feature live recordings, b-sides, and demo/rehearsal recordings that were unavailable for years and the band recently compiled b-sides, compilation tracks, and outtakes on *The Destroyed Room*. These recordings were likely culled from the tape archives or other analog content carriers. Future collections of rare recordings may not have the luxury of pulling from tape sources and the band must look to digital preservation to maintain the record of its recent recording sessions. Whereas the band previously had the luxury to record anything and

¹¹ Fred R. Byers, "Care and Handling of CDs and DVDs: A Guide for Librarians and Archivists," copublished by the Council on Library and Information Resources and National Institute of Standards and Technology, October 2003, www.clir.org/pubs/reports/pub121/contents.html

everything to tape, the emergence of digital recording and the lack of available tape requires a production process that combines the analog and digital. Such a hybrid process increases the complexity in preserving the recordings made for *The Eternal*. It will be interesting to see how the band proceeds with future recording projects (if any); whether improvements in digital recording technology will negate the need for recording to tape or if recording to tape remains the method by which Sonic Youth maintain their records' unique aesthetic.

Figure 1

