

Indiana University
Media Digitization and Preservation Initiative

Audio Equipment Used for Digitization

Open Reel Tape-

Playback machine - Studer A810's. There is also a Revox B-77 slow speed machine used with an Aphex 124B step up box.

Cassettes-

Playback machine – multiple Tascam 122 MKIII and one Nakamichi MR-1

Cylinders-

Playback machine -Endpoint cylinder machine

Disc transfers-

Playback machine -Technics SP-15 turntable, fitted with a SME 3012-R tonearm.

Stanton 500 cartridges.

Expert styli - 30 different styli made by the Expert Stylus Company covering a variety of sizes, both elliptical and conical, and ranging from microgroove (0.7) to coarse groove (5.0).

We use a Baerwald-Lofgren alignment calculator to determine the correct horizontal tracking angle (Zenith) for each disc.

Timestep T-01 phono preamp-

The Timestep T-01 phono preamp in use had a gain modification done by the inventor, (Dave Cawley) so that it has the ability to output a signal 10 dB higher than usual. We use this along with the Stanton 500 cartridge which has a lower output level. Both groove walls can be summed together in the analog domain to create a mono file with EQ applied if desired. It will also output a “flat” stereo file, which is used as a Preservation Master.

A/D conversion-

The A/D converter in Studio 1 is a Benchmark ADC16. The A/D converter in Studio 2 is a Prism ADA-8XR.

After the analog to digital conversion, the digital signal is split to two different recorders so we can check for Interstitial errors using a tool created by AV Preserve. The digital signal is split with a Sescom SES-DAY-MBX distribution amplifier, sending one signal to a Tascam DA3000, and

the other to a Lynx AES16e audio card connected to the desktop computer. The Interstitial software tool will match pairs of audio files, and report any discrepancies.

Desktop computers are custom Dell Precision 5810's with a build done by UITS. These machines have builds specific to audio digitization and do not include software typically used in most computers (like Microsoft Office), in order to decrease the risk of Interstitial errors.

Audio is captured, edited, and processed using Wavelab 8.5.

The audio signal is monitored through a Coleman M3PH MKII, and Genelec 8040-B active studio monitors.

OTHER GEAR USED

Signal Generator	Loftech TS-1
Headphones	Sennheiser HD 598
Digital audio meter	Dorrough 380-D
Soundcard	Lynx AES16e
Speaker stands (2)	On-Stage Stands SMS-6000P
magnetic viewer	Sigma Hi-Chemical MV95
loupe	Visible Dust Quasar sensor loupe 7x
tape thickness gauge	Mitutoyo 2804S-10
Bar code scanner	Unitech ASU-10 UCCD